2020 LA RIVER MASTER PLAN

DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

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LOS ANGELES COUNTY

COUNTY OF LOS ANGELES
CALIFORNIA

ICF

2020 LA River Master Plan

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Acronyms and Abbreviations

µPa	micropascals
°C	degrees Celsius
°F	degrees Fahrenheit
1996 Master Plan	1996 Los Angeles River Revitalization Master Plan
2017 Scoping Plan	California's 2017 Climate Change Scoping Plan
303(d)-list	Clean Water Act Section 303(d) List of Water Quality–Limited Segments Requiring Total Maximum Daily Loads
AB	Assembly Bill
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
ADT	average daily traffic
AETP	Archaeological Evaluation and Treatment Plan
AF	acre-feet
AFY	acre-feet of water per year
AHMP	All-Hazards Mitigation Plan
AMP	Archaeological Monitoring Plan
API	area of potential impact
AQMP	air quality management plan
ARB	California Air Resources Board
BA	Biological Assessment
Basin	South Coast Air Basin
Basin Plan	*Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
Bcf	billion cubic feet
BERD	Built Environment Resource Directory
BGEPA	Bald and Golden Eagle Protection Act
Bgs	below ground surface
BMP	best management practice
BO	Biological Opinion
Board	Los Angeles County Board of Supervisors
BP	before present
BTU	British thermal unit
BUG	backlight, up-light, and glare
BWP	Burbank Water and Power
BWRP	Burbank Water Reclamation Plant
C&D	construction and demolition
C.F.R.	Code of Federal Regulations
CAA	Clean Air Act
CAAP	Climate Action and Adaptation Plan

CAAQS	California Ambient Air Quality Standards
CAER	Community Awareness and Emergency Response
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal OSHA	California Division of Occupational Safety and Health
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CalGEM	California Department of Conservation, Geologic Energy Management Division
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CalWORKs	California Work Opportunity and Responsibility to Kids
CAP	Climate Action Plan
CAER	Community Awareness and Emergency Response
CARB	California Air Resources Board
CBC	California Building Code
CBMWD	Central Basin Metropolitan Water District
CCAA	California Clean Air Act
CCAP	Community Climate Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEC	California Energy Code
CEHC	California Essential Habitat Connectivity Project
Central Basin	Central Basin within the Coastal Plain of Los Angeles
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
Channel	LA River Flood Channel
CHL	California Historical Landmark
CHRIS	California Historical Resources Information System
CIMP	Coordinated Integrated Monitoring Plan
CIU	California Immigrant Union
CLG	Certified Local Government

CLOMR	Conditional Letter of Map Revision
CMP	construction management plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Commission	California Building Standards Commission
Construction General Permit	General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
County	Los Angeles County
County Guidelines	Los Angeles County Department of Public Works Transportation Impact Analysis Guidelines
County MS4 Permit	Waste Discharge Requirements for MS4 Discharges Within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSC	Species of Special Concern
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DCFS	Department of Children and Family Services
Design Guidelines	2020 LA River Master Plan Design Guidelines
DHS	Department of Health Services
DLRP	Division of Land Resource Protection
DMH	Department of Mental Health
DMR	Division of Mine Reclamation
DOGGR	Division of Oil, Gas, and Geothermal Resources
DPM	diesel particulate matter
DTSC	Department Toxic Substances Control’s
EAP	Energy Action Plan
EFH	essential fish habitat
EFZ	Earthquake Fault Zone
EIM	Energy Imbalance Market
EIR	environmental impact report
EMS	emergency medical services

EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPCA	Energy Policy and Conservation Act of 1975
ESA	environmentally sensitive area
ESHA	environmentally sensitive habitat area
ESCP	erosion and sediment control plan
EWMP	Enhanced Watershed Management Program
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
Fire Code	Los Angeles Fire Code
FIRM	flood insurance rate map
FPP	fire protection plan
FRA	Federal Responsibility Area
Framework	Citywide General Plan Framework, an Element of the City of Los Angeles General Plan
FSS	Family Solutions System
FTA	Federal Transit Administration
FTE	full-time equivalent
FY	Fiscal Year
General Permit	General Permit for Storm Water Discharges Associated with Construction Activity
GGRP	Burbank2035 Greenhouse Gas Reduction Plan
GHG	greenhouse gas
GIS	geographic information system
gpm	gallons per minute
GSWC	Golden State Water Company
Guidelines	Transportation Impact Analysis Guidelines
GWh	gigawatt-hours
GWP	Glendale Water and Power
GWP	global warming potential
HA	Homeless Assistance
HACLA	Housing Authority of the City of Los Angeles
HACoLA	Housing Authority of the County of Los Angeles
HAPC	Habitat Areas of Particular Concern
HCM	Historic-Cultural Monument
HCP	habitat conservation plan
Heavy Industrial	MH
HFCs	hydrofluorocarbons
HMP	Hazard Mitigation Plan

HOPICS	Homeless Outreach Program Integrated Care System
"Hot Spots" Act	Air Toxics "Hot Spots" Information and Assessment Act of 1987
HPO	Historic Preservation Ordinance
HPOZ	Historic Preservation Overlay Zone
HRA	health risk assessment
HRMP	Historical Resources Mitigation Plan
HUD	Housing and Urban Development
HVAC	Heating, Ventilating, and Air Conditioning
Hz	Hertz
I-	Interstate
I-5	Golden State Freeway
IBC	International Building Code
IEPR	Integrated Energy Policy Report
IES	Illuminating Engineering Society
IFC	International Fire Code
in/s	inches per second
IPaC	Information, Planning, and Consultation System
IPCC	Intergovernmental Panel on Climate Change
IPP	Intermountain Power Project
IRA	Identified Resource Area
IRP	integrated resource plan
IRWMP	Integrated Regional Water Management Plan
ITP	Incidental Take Permit
IWRP	Integrated Water Resources Plan
JPA	Joint Powers Authority
kHz	kilohertz
KOP	kit of parts
kV	kilovolt
LA River	Los Angeles River
LAA	Los Angeles Aqueducts
LACFCD	Los Angeles County Flood Control District
LACFD	Los Angeles County Fire Department
LACoFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation Districts
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAGWRP	Los Angeles – Glendale Water Reclamation Plant
LAHSA	Los Angeles Area Homeless Services Agency
LAPD	City of Los Angeles Police Department
LARRMP	Los Angeles River Revitalization Master Plan
LASAN	City of Los Angeles Bureau of Sanitation
LASD	Los Angeles County Sheriff's Department

LASHP	Los Angeles State Historic Park
LAUSD	Los Angeles Unified School District
LAX	Los Angeles International Airport
LBER	Long Beach Energy Resources Department
LBFD	Long Beach Fire Department
LBMC	Long Beach Municipal Code
LBPD	Long Beach Police Department
LBUSD	Long Beach Unified School District
LBWD	Long Beach Water Department
LBWRP	Long Beach Water Reclamation Plant
LCFS	low carbon fuel standard
L_{dn}	day/night noise level
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent continuous sound level
LID	Low-Impact Development
LLARRP	Lower Los Angeles River Revitalization Plan
L_{max}	maximum noise level
LOMR	Letter of Map Revision
Long Beach MS4 Permit	Waste Discharge Requirements for MS4 Discharges from the City of Long Beach
LOS	level of service
LRA	Local Responsibility Area
LRTP	Long Range Transportation Plan
LST	localized significance threshold
LT	long-term
LUST	leaking underground storage tank
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
Main Basin	Main San Gabriel Groundwater Basin
Manufacturing Light	ML
MATES	Multiple Air Toxics Exposure Study
MBTA	Migratory Bird Treaty Act
MCV	Manual of California Vegetation
MEP	maximum extent practicable
Metro	Los Angeles County Metropolitan Transportation Authority
mgd	million gallons per day
Mineral Resources Project	California Geological Survey Mineral Resources Project
MLD	Most Likely Descendant
MMA	Marine managed area
Mmax	maximum moment magnitude
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Plan

$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MOU	Memorandum of Understanding
mph	mile per hour
MPO	Metropolitan Planning Organization
MRCA	Mountains Recreation and Conservation Authority
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
$MTCO_2e$	metric tons of carbon dioxide equivalent
MUTCD	Manual on Uniform Traffic Control Devices
MW	megawatt
MWD	Metropolitan Water District of Southern California
MWh	megawatt-hour
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NBC	National Broadcasting Corporation
NCCP	natural communities conservation plan
Needs Assessment Study Areas	Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment Study Areas
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administrative
NMFS	National Marine Fisheries Service
NNL	National Natural Landmarks
NO	nitric oxide
NO_2	nitrogen dioxide
NOAA	National Oceanographic and Atmospheric Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NPS Program Plan	*Plan for California's Nonpoint Source Pollution Control Program*
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O&M	operations and maintenance
O_3	ozone
OA	operational area
OAERP	Operational Area Emergency Response Plan

OEM	Office of Emergency Management
OHWM	ordinary high-water mark
OPR	California Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OurCounty Sustainability Plan	OurCounty Los Angeles Countywide Sustainability Plan
PAD	Passage Assessment Database
Pb	lead
PBV	Project-Based Voucher
PEIR	program environmental impact report
PFCs	perfluorocarbons
pLAn	City of Los Angeles Sustainable City pLAn
PM	particulate matter
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
POLB	Port of Long Beach
Porter-Cologne	Porter-Cologne Water Quality Control Act
ppm	part per million
PPV	peak particle velocity
PRC	Public Resources Code
Project	2020 LA River Master Plan
PSH	Permanent Supportive Housing
Public Works	Los Angeles County Public Works
PV	photovoltaic
quad	quadrangle
RARE	Rare, Threatened, or Endangered Species
RCNM	Roadway Construction Noise model
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
Regional Water Board	Regional Water Quality Control Board
RHNA	Regional Housing Needs Assessment
RIO	River Improvement Overlay
River Ranger Plan	Los Angeles River Ranger Program Establishment Plan
RMC	San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy Rivers and Mountains Conservancy
ROW	right-of-way
ROWD	Report of Waste Discharge
RPS	Renewables Portfolio Standard
RPZ	Runway Protection Zone
RTP	regional transportation plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient

SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCS	sustainable communities strategy
SCSC	Southeast Churches Service Center
SDS	Safety Data Sheet
SEAs	Significant Ecological Areas
SEMS	Standardized EMS
sf	square feet
SF_6	sulfur hexafluoride
SFHA	special flood hazard area
SFM	State Fire Marshal
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	short-lived climate pollutant
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMMC	Santa Monica Mountains Conservancy
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SQMP	Stormwater Quality Management Plan
SR-	State Route
SRA	source receptor area
SRA	State Responsibility Area
SRO	Single Room Occupancy
SSMP	Sewer System Management Plan
ST	short-term
State	State of California
STIP	Statewide Transportation Improvement Program
Strategies	Chief Executive Officer's Homeless Initiative’s 47 strategies
STRMU	Short Term Rent, Mortgage, and Utility Assistance
SVP	Society of Vertebrate Paleontology
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SZ	Scientific Resource Zones
TAC	toxic air contaminant

Tanner Act	Toxic Air Contaminant Identification and Control Act
TBSH	Tenant Based Supportive Housing program
TCR	tribal cultural resource
TDM	transportation demand management
the Board	Board of Forestry and Fire Protection
the Ports	Port of Los Angeles and Port of Long Beach
TIA	Transportation Impact Analysis
TISG	Transportation Impact Study Guide
TMDL	Total Maximum Daily Load
TNM	Traffic Noise Model
TNW	traditional navigable water
TPA	transit priority areas
TPD	tons per day
USEPA	Environmental Protection Agency
UBC	Uniform Building Code
UCLA	University of California, Los Angeles
UPRR	Union Pacific Railroad
US	United States Route
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGBC	United States Green Building Council
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume-to-capacity
VA	Veterans Affairs
VAMCs	Veterans at VA medical centers
VH FHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
VPU	Vernon Public Utilities
Walkability Checklist	City of Los Angeles Walkability Checklist Guidance for Entitlement Review
WCA	Watershed Conservation Authority
WDR	waste discharge requirement
WEAP	worker environmental awareness program
West Coast Basin	West Coast Basin within the Coastal Plain of Los Angeles
WQS	water quality standard
WMP	wildfire mitigation plan
WMP	Watershed Management Program

Working Group	Lower Los Angeles River Working Group
WUI	Wildland-Urban Interface

Executive Summary

ES1.1 Introduction and Background

ES1.1.1 Background and Overview

This draft program environmental impact report (PEIR) has been prepared by Los Angeles County (County) through Los Angeles County Public Works (Public Works) to assess the potential environmental impacts that could result from the implementation of the proposed *2020 Los Angeles (LA) River Master Plan* (hereafter referred to as the proposed Project/Project/*2020 LA River Master Plan*) in Los Angeles County, California. The County is the lead agency for the proposed Project, pursuant to the California Environmental Quality Act (CEQA). Design information for the proposed *2020 LA River Master Plan* is at a conceptual level; therefore, the environmental impact analysis is presented at a programmatic level and does not include project-specific or site-specific analysis.

The proposed Project is along a 51-mile-long, approximately 2-mile-wide corridor (i.e., 1 mile on each side) of the LA River in the County and spans through 18 jurisdictions (17 cities and unincorporated County areas). The river encompasses an 834-square-mile watershed and flows from its headwaters at river mile 51.0 in Canoga Park within the City of Los Angeles to river mile 0.0 in Long Beach, where the river meets the Pacific Ocean. The LA River was channelized between the late 19th and mid-20th centuries to protect lives and property from flooding as the Los Angeles region rapidly grew and transformed to a largely urbanized area. Today, 1 million people live within 1 mile of the river.

ES1.1.2 LA River Master Plan History

The proposed *2020 LA River Master Plan* is the culmination of planning efforts spanning 90 years. In the past 30 years, planning efforts including technological advances, geographic information systems (GIS), new data sources, new regulatory requirements, climate data, advanced mapping, needs assessments, and health surveys have helped contribute to the goals, actions, and methods of the *2020 LA River Master Plan*. These early and more recent plans are briefly described below.

Planning for recreation and open space in the Los Angeles region formally started with the 1930 Olmsted-Bartholomew Plan, commissioned by the Los Angeles Chamber of Commerce and titled *Parks, Playgrounds and Beaches for the Los Angeles Region.* The plan identified the ways in which the region was then lacking in open space and laid out a detailed plan for creating new parks, parkways, and permanent "reservations." The plan—which recognized that parks, open spaces, and connection to nature would be essential to the health, environment, and economy of the region—foresaw the rapid urbanization that was to come in the Los Angeles Basin and was published just before the catastrophic floods of the 1930s.

Although the plan was considered visionary and sweeping for its time, priorities were shifted following the flooding of the 1930s, when the U.S. Army Corps of Engineers (USACE) and the Los Angeles County Flood Control District (LACFCD) channelized the river in an effort to protect the growing population and property from flooding. The channelization tended to focus on the single-purpose benefit infrastructure (i.e., flood management facilities) and did not follow the broad-based

approach to open space, health, and the economy outlined in the 1930 Olmstead-Bartholomew Plan. It was not until the 1980s that efforts to integrate the flood management functions of the river with broader water resources management, open space, recreation, and communities began to emerge. Public interest in improving river conditions expanded, and Friends of the LA River was founded in 1986, with the intent of improving river stewardship and restoring community connections to the river in an ecologically, equitable, and sustainable manner.

ES1.1.3 1996 Master Plan and Early Planning Efforts

In 1996, the County approved the first LA River master plan, which expanded the originally single-purpose flood management efforts on the river to a multi-benefit community amenity that reflected aesthetic, environmental, economic, and recreational values of local residents. The 1996 *Los Angeles River Master Plan* (1996 Master Plan) identified ways to revitalize public rights-of-way (ROWs) along the LA River while ensuring the continued primary purpose of the LA River as a flood risk reduction facility. The 1996 Master Plan was a first step in developing an inclusive vision of shared open spaces and parks, stewardship of water resources, and safety from hazardous floods.

Since the approval of the 1996 Master Plan, numerous planning studies have been conducted and plans adopted that call for a more integrated approach to improving water quality, stormwater, flood management, habitat, open space, and recreation conditions along the LA River:

- *Common Ground from Mountains to the Sea: Watershed and Open Space Plan San Gabriel and Los Angeles Rivers* was jointly developed by the California Resources Agency and the Rivers and Mountains Conservancy, in conjunction with the Santa Monica Mountains Conservancy. The document identified continuous tracts of open space, trails, and recreation areas along the San Gabriel and LA River corridors.
- *The Los Angeles River Revitalization Master Plan* was adopted by the City of Los Angeles in 2007, and identified four core values for the stretch of the LA River that flows through the city: revitalize the river, green the neighborhoods, capture community opportunities, and create value.
- *Long Beach River Link* was also developed in 2007, by the City of Long Beach, and called for restoring native habitat along the LA River, creating pedestrian and bike pathways, and improving aesthetics of the river.
- *The Stormwater Capture Master Plan* was prepared nearly a decade later, in 2015, by the City of Los Angeles, and identified new projects, programs, and policies in the city, including along reaches of the upper and lower LA River, that could substantially increase stormwater capture for water supply before it flowed into storm drains and to the ocean through 2035.
- The *Los Angeles River Ecosystem Restoration Integrated Feasibility Report* was also developed in 2015, by the City of Los Angeles and USACE, to develop several ecosystem restoration projects along approximately 11 miles of the LA River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the river to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountain ranges while maintaining existing levels of flood risk management. A secondary objective was to provide recreational opportunities consistent with the restoration projects.

- The *Countywide Parks and Recreation Needs Assessment* was prepared by the County in 2016 and inventoried and assessed the need for parks and recreation facilities in cities and unincorporated County communities. The report established a new way to understand parks, recreation, and open space by identifying parks as key infrastructure needed to maintain and improve the quality of life for all County residents, using a new series of metrics to determine park need, supporting a need-based allocation of funding for parks and recreation, and emphasizing both community priorities and deferred maintenance projects.
- The *LA River Low Flow Study* was prepared in 2017 by the City of Los Angeles as part of the *One Water LA 2040 Plan*. The study identified considerations, assumptions, and areas of future study necessary to determine optimal flow conditions in the LA River. These conditions would balance the City's water supply needs with the LA River's water-dependent uses and regulatory requirements. The study summarized LA River inflow sources, low-flow conditions, and adaptive water management alternatives, as well as the benefits, challenges, limitations, and costs of different alternatives.
- The *Los Angeles Sustainable Water Project: Los Angeles River Watershed* report (2017) was released by the University of California, Los Angeles (UCLA), in conjunction with the City of Los Angeles and the Colorado School of Mines, and identified the potential to improve water quality standards while integrating the City of Los Angeles' One Water Management practices that can increase potential local water supplies for the City of Los Angeles in the highly urbanized LA River watershed. The report was undertaken as part of a larger goal of the Sustainable LA UCLA Grand Challenge, which is a necessary step toward realizing 100 percent locally sourced water for the County by 2050.
- The *Lower LA River Revitalization Plan* was completed in 2017 and encompasses areas within 1 mile on each side of the 19-mile section of river starting from the City of Vernon to its outlet in the City of Long Beach, including unincorporated County communities and 14 southeast County cities. This plan describes opportunities for improving the environment and residents' quality of life along the river and ensures locals' input as the lower river is reimagined and revitalized into an integral part of a healthy, equitable, and sustainable community.
- The *Los Angeles County Annual Affordable Housing Outcomes Report,* published in 2018, provides an understanding of housing needs and investments in the County, and highlights the County's shortfall of more than a half million affordable housing units. The report includes recommendations of public expenditures to support production and preservation of affordable housing.
- The *Upper Los Angeles River and Tributaries Revitalization Plan* was released April 16, 2020, and assessed the needs of communities along the upper LA River channel and its six key tributaries within its upper watershed. The plan developed project concepts to enhance the quality of life of the communities with a focus on people, recreation, water, and the environment.

ES1.1.4 Proposed Project Summary

ES1.1.4.1 Project Location

Regional Location and Right-of-Way

The LA River Watershed covers a land area of 834 square miles. The eastern portion of the watershed spans from the Santa Monica Mountains to the Simi Hills and the western portion spans from the Santa Susana Mountains to the San Gabriel Mountains. The watershed encompasses and is shaped by the path of the LA River, which flows from its headwaters in the Santa Susana Mountains eastward to the northern area of Griffith Park. Here the channel turns southward through the Glendale Narrows before it flows across the coastal plain and into San Pedro Bay near Long Beach. The LA River has evolved from an uncontrolled, meandering river providing a valuable source of water for early inhabitants to a major flood management system. Channelized to protect lives and property from flooding during the late 19th through the mid-20th centuries, the LA River has largely been separated from the region's social, cultural, and ecological communities. Out of the approximately 5 million people who live within the watershed, 1 million live within 1 mile of the river itself. The LA River study corridor (1 mile on each side of the river) passes through 18 local jurisdictions (17 cities and unincorporated County areas) along its 51-mile journey from the Santa Susana Mountains to the Pacific Ocean in Long Beach.

The LA River is a channelized river. Although most of the river length within the channel (bank to bank) is concrete lined along its sides and bottom, areas of the river near the Estuary, Sepulveda Basin, and the Glendale Narrows have a "soft bottom" (earthen channel) where soil and plants form the bottom of the channel. The other areas of the river have concrete walls forming a rectangular channel, often called a box channel, or a trapezoidal channel formed by levees. The areas immediately adjacent to the top of the channel bank (e.g., the top of the levee in levied sections) are often used as an access road or recreational trail. Together the channel, top of levee, and landside area make up the river ROW. The outside edge of the river ROW is typically referred to as the *fenceline* in the *2020 LA River Master Plan*.

The typical LA River ROW includes flood management structures such as the channel, levees, and access roads, which are primarily maintained by LACFCD and USACE. Currently, LACFCD and USACE each maintain approximately half of the LA River. Permits for projects along the LA River are issued by these two entities depending on project typology and location. Ownership of the approximately 2,300 acres of land within the LA River ROW varies. LACFCD owns large portions of the ROW, but municipal and private owners also own portions of the ROW. Where municipal or private interests own parcels within the ROW, easements for operations and maintenance exist that authorize LACFCD and USACE to operate and maintain the flood management structures within the ROW. The *2020 LA River Master Plan* discusses how potentially underutilized spaces such as utility and railroad ROW could be repurposed to increase access, connectivity, and park space.

Study Area and Potential Location of Subsequent Projects

Although the LA River ROW is confined to its channel, top of levee, and immediately adjacent landside areas (within the fenceline), a larger study area was identified to consider current conditions and potential opportunities up to 1 mile on each side of the river centerline to allow for overall improved access to the river from nearby communities. Therefore, for the purposes of CEQA and consistency with the *2020 LA River Master Plan*, the study area is defined as a 2-mile-wide

corridor—1 mile on each side of the river—that follows the centerline of the LA River for its entire 51 miles. While the study area is limited to the 2-mile-wide corridor, this PEIR uses a data-based methodology informed by an extensive collection of data that describes the physical, social, and cultural attributes of the LA River; its surroundings; and its watershed including ecosystem, demographic, and hydrologic studies that were conducted for the entire 834-square-mile watershed and Los Angeles County.

After the *2020 LA River Master Plan* is approved, subsequent project-specific activities identified in the *2020 LA River Master Plan* would be designed and implemented over time by any one of the 18 jurisdictions or others, tiering from the PEIR. These subsequent projects could be anywhere in the 2-mile-wide corridor study area, including the river channel, between the top of the levee to the fenceline, or beyond the fenceline (i.e., outside of the river ROW).

LA River Planning Frames

A series of nine distinct geographical sections, or planning frames, related to jurisdictional, hydraulic, and ecological zones have been identified along the LA River and are included in the *2020 LA River Master Plan*. The use of the frame illustrates how the areas adjacent to a river reach are critical to planning and implementing a connected and accessible river corridor. As the *2020 LA River Master Plan* is implemented and subsequent projects are designed and proposed for location along the river in the future, the characteristics of each frame would provide useful information on local needs, projects, and programs that reflect the river ROW and adjacent land uses.

The nine planning frames are numbered sequentially, beginning at river mile 0.0 in Frame 1 in the City of Long Beach, where the LA River outfalls to the Pacific Ocean, and ending at river mile 51.0 in Frame 9 in Canoga Park, where the river begins in the City of Los Angeles. These planning frames span 18 local jurisdictions, and a single frame can include one to several jurisdictions.

ES1.1.5 Proposed Project

ES1.1.5.1 2020 LA River Master Plan Objectives

The *2020 LA River Master Plan* has the following nine objectives (referred to as goals in the *2020 LA River Master Plan*), which are summarized in Chapter 1, *Introduction*, of this PEIR:

1. Reduce flood risk and improve resiliency.
2. Provide equitable, inclusive, and safe parks, open space, and trails.
3. Support healthy connected ecosystems.
4. Enhance opportunities for equitable access to the river corridor.
5. Embrace and enhance opportunities for arts and culture.
6. Address potential adverse impacts on housing affordability and people experiencing homelessness.[1]

[1] The aim of the *2020 LA River Master Plan* objective 6, "Address potential adverse impacts on housing affordability and people experiencing homelessness," is to maintain strategies for ensuring continuing housing affordability in LA River–adjacent communities. Therefore, the use of "impacts" in objective 6 is distinct from the use of "impacts" under CEQA where, per State CEQA Guidelines Section 15358 (b), impacts analyzed under CEQA must be related to a physical change in the environment.

7. Foster opportunities for continued community engagement, development, and education.
8. Improve local water supply reliability.
9. Promote healthy, safe, clean water.

ES1.1.5.2 Elements of the 2020 LA River Master Plan and their Organization for CEQA

The *2020 LA River Master Plan* is intended to be a visionary and practical document for all 18 local jurisdictions within the study area. The *2020 LA River Master Plan*'s framework begins with community needs and aims to provide guidance and resources for jurisdictions and others to implement subsequent projects in the study area. Rather than requiring one set of fixed solutions for all 51 miles, the *2020 LA River Master Plan* allows for a consistent approach throughout the study area but with frame-specific identity within the greater whole. Ecology, habitat, and art reflect the physiography and culture of an individual frame of the river. Other elements, such as signage, access points, and lighting, were developed to ensure a consistent approach to connectivity, wayfinding, and equitable access. In all cases, the adjacent communities are considered for improvements along the river corridor to have the appropriate scale and feel for the neighborhood.

This PEIR analyzes two Typical Projects that are most likely to be proposed throughout the 51-mile-long corridor: Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project. The Typical Projects could be sited between the top of levee and the fenceline at any location in the study area. The analysis of these Typical Projects assumes that no in-channel disturbance would occur under these Typical Projects.

In addition to common elements that projects need to include to achieve the nine objectives, the *2020 LA River Master Plan* proposes six categories of project improvements, or kit of parts (KOP) categories, consisting of infrastructure and urban river design typologies that illustrate the range of possible strategies that the proponents of subsequent projects, including the County, can use along the river. The six KOP categories include:

- KOP Category 1: Trails and Access Gateways
- KOP Category 2: Channel Modifications
- KOP Category 3: Crossings and Platforms
- KOP Category 4: Diversions
- KOP Category 5: Floodplain Reclamation
- KOP Category 6: Off-Channel Land Assets

Each of these six KOP categories includes a recommended collection of design components and can be implemented individually or in any combination as subsequent projects, as driven by the local jurisdiction's needs, funding, and policy decisions.

Table ES-1 shows the six KOP categories and their respective multi-benefit design components included in the *2020 LA River Master Plan*. It also notes the applicability of the smaller common elements and *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) across the multi-benefit design components, as needed under future subsequent projects.

The *2020 LA River Master Plan* also includes Design Guidelines that have been developed as a framework to support the development of specific design and technical solutions for subsequent projects to be implemented under the *2020 LA River Master Plan* while presenting a unified, cohesive identity along the 51-mile-long connected open space corridor and promoting best practices and resiliency.

ES1.1.5.3 Overall 2020 LA River Master Plan Implementation

The *2020 LA River Master Plan* includes up to 107 potential projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) that would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the two Typical Projects (Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project) that would be constructed at a specified cadence, or spacing, along the river to ensure equitable distribution of facilities throughout the 51-mile-long corridor and help improve access and safety; and additional subsequent projects from the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

Table ES-1. Proposed Project: 2020 LA River Master Plan—Six Categories of the Kit of Parts with Design Components

Kit of Parts	KOP Category 1: Trails and Access Gateways	KOP Category 2: Channel Modifications	KOP Category 3: Crossings and Platforms	KOP Category 4: Diversions	KOP Category 5: Floodplain Reclamation	KOP Category 6: Off-Channel Land Assets
Multi-Benefit Design Components Elements	River gateway	Terraced bank	Pedestrian bridge	Diversion pipe	Side channel	Urban agriculture/ composting
	Pedestrian trail	Check dam	Bike bridge	Side channel	Wetland	Solar power
	Bike trail	Levee	Equestrian bridge	Pump	Naturalized bank	Natural treatment system
	Equestrian trail	Armored channel	Multi-use bridge	Diversion channel	Braided channel	Wetland
	Equestrian facility	Storm drain daylighting	Cantilever	Diversion tunnel	Field	Recreation field
	Multi-use trail	Vertical wall	Platform	Overflow weir	Recreation field	Surface storage
	Light tower/water tower	Channel smoothing	Habitat/wildlife bridge	Underground gallery	Storage (surface)	Subsurface storage
	Lookout	Texturizing or grooving		Storm drain interceptors		Injection well
	Boardwalk	Concrete bottom		Wetland		Water treatment facility
	Channel access	Soft bottom/ concrete removal				Purple pipe connection
	Vehicular access	Sediment removal				Dry well
	Underpass and overpass	Bridge pier modification				Spreading ground
	Vegetated buffer	Access ramp				Storm drain daylighting
	Habitat corridor	Reshape low flow				Affordable housing
		Deployable barrier				Art and culture facility
	Common elements and Design Guidelines, including best management practices					

Note: The multi-benefit design components can be implemented individually or in combination with others as subsequent projects under the *2020 LA River Master Plan*. Subsequent projects could be sited in the LA River channel (bank to bank), between the top of the levee to the fenceline, or beyond the fenceline (i.e., outside of the river ROW) but within the *2020 LA River Master Plan* 2-mile-wide study area along the 51-mile LA River.

ES1.1.6 Alternatives Considered

The following alternatives to the proposed Project were considered and are evaluated in Chapter 5, *Alternatives*, of this PEIR:

Alternative A – No Project: The No Project Alternative assumes that development along the LA River would continue in accordance with the adopted 1996 Master Plan. Under the No Project Alternative, comprehensive improvements, guided by the nine multi-benefit goals of the proposed *2020 LA River Master Plan*, consistent with the six KOP categories and common elements would not occur. Rather, the original 1996 Master Plan that was adopted by the Los Angeles County Board of Supervisors in 1996 will continue to serve as the framework for enhancing the LA River. The 1996 Master Plan included 101 potential projects, including development of new or improved bikeways, trails, parks, bridges, and signage as well as developing studies, Earth Day events, landscape improvements, nursery gardens, rental facilities, and food concessions. Since 1996, over $100 million has been designated for the development of projects along the river.

Alternative B – Channel Avoidance Alternative: Under the Channel Avoidance Alternative, no channel modification associated with the *2020 LA River Master Plan* would occur. As such, no improvements would occur within bank-to-bank of the LA River. Later activities under the Channel Avoidance Alternative would occur from top of levee up to the 1-mile study area boundary on each side of the LA River. There would be no *2020 LA River Master Plan* projects within the channel. Alternative B would include implementation of only five of the six KOP categories compared to the *2020 LA River Master Plan*; these include KOP Category 1: Trails and Access Gateways, KOP Category 3: Crossings and Platforms, KOP Category 4: Diversions, KOP Category 5: Floodplain Reclamation, and KOP Category 6: Off-Channel Land Assets. These would be implemented only between top of levee and up to the boundary of the 1-mile study area on each side of the LA River. The Channel Avoidance Alternative would not include KOP Category 2, which includes channel modifications, and would also not include implementation of the channel access design component under KOP Category 1.

ES1.2 Issues to Be Resolved

As described in Chapter 2, *Project Description*, of this PEIR, the proposed Project is intended to be a visionary and practical document for all 18 local jurisdictions within the study area that would serve as a framework for improvements along the LA River for the next 25 years. The *2020 LA River Master Plan* framework begins with community needs and aims to provide guidance and resources for jurisdictions and others to implement subsequent projects in the study area. Rather than requiring one set of fixed solutions for all 51 miles, the *2020 LA River Master Plan* allows for a consistent approach throughout the study area but with frame-specific identity within the greater whole. Accordingly, the proposed six project improvement categories are conceptual in nature, and the two Typical Projects, while more defined, are still not project- or site-specific. The designs for proposed improvements, including the specific locations and footprints, scale, and detailed design, will be developed in the future when individual subsequent projects are proposed as driven by the local jurisdiction's needs, funding, and policy decisions.

ES1.3 Areas of Controversy

During the Draft EIR public scoping meeting and other public meetings held for the *2020 LA River Master Plan EIR*, the following issues of concern were identified:

- Potential impacts on existing operation and maintenance of flood management facilities and capacities associated with action involving modification of the river channel related to the integration of recreation and habitat elements
- Safe connectivity of bike paths and multi-use trails along the river
- Potential impacts on housing and people experiencing homelessness
- Potential impacts on notable recreation areas and river recreation zones; impacts on regional, neighborhood, and local parks and those in planning, trails, and other local recreational facilities and uses
- Potential impacts on biological resources from implementation of the *2020 LA River Master Plan* on the existing ecosystems and biodiversity
- Potential hydrological impacts from impervious surfaces, application of stormwater infrastructure, and discharges; effects on sensitive habitats such as the estuary

ES1.4 Summary of Environmental Impacts

The proposed project would result in environmental impacts. Table ES-2 provides a summary of the environmental impacts that would occur and the mitigation measures that would be implemented under the Project and identifies the level of significance of impacts before and after implementation of proposed mitigation measures. Proposed mitigation measures will be implemented by the County for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, as seen in the table below, where this PEIR concludes a less-than-significant impact with mitigation for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

Note that the Mitigation Measures column in Table ES-2 **below includes mitigation measures that apply to all elements of the *2020 LA River Master Plan*, i.e., both Typical Projects, KOP Categories 1 through 6, and the overall *2020 LA River Master Plan*, unless specified otherwise.**

Table ES-2. Summary of Environmental Impacts of the Proposed Project

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
Aesthetics				
3.1(a): Would the proposed Project have a substantial adverse effect on a scenic vista?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Potentially significant	Construction **Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.** For construction of a project component lasting longer than 30 days, the implementing agency will require contractors 1) to install solid green or blue fabric perimeter fencing of a minimum height of 6 feet around construction areas to screen and provide security to pedestrians and other trail and park users and reduce views of construction staging areas, grading, and site disturbance, and 2) to conduct regular visual inspections of fencing to ensure fencing is in good working order and any visual breaks are repaired. **Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.** Detailed in Impact 3.10(a). **Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.** Detailed in Impact 3.15(a). Operation *Typical Projects and KOP Categories 1–5:* None required.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant	Operation *KOP Category 6 and Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure AES-2: Minimize Obstruction of Scenic Vistas.** During project design, the implementing agency will minimize visual intrusions from public views of designated scenic vistas by following local jurisdictions' applicable policies and ordinances that protect views of designated scenic vistas by taking into consideration sightlines, scale and massing of structures, and materials used for construction, and other measures as needed. To the extent practicable, the implementing agency will maintain the scenic vistas' visual quality and comply with the applicable jurisdiction's general plan and design guidelines to preserve scenic vistas and minimize visual intrusions.		*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
3.1(b): Would the proposed Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
3.1(c): In non-urbanized areas, would the proposed Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would it conflict with applicable zoning and other regulations governing scenic quality?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction **Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.** Detailed in Impact 3.1(a). **Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.** Detailed in Impact 3.10(a). **Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.** Detailed in Impact 3.15(a). Operation None required.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
3.1(d): Would the proposed Project create a new source of substantial light or glare that would adversely affect day	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:*	Construction None required.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:*	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
or nighttime views in the area?	Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Operation **Mitigation Measure AES-3a: Design Exterior Lighting to Minimize Nighttime Illumination Spillover.** Exterior lighting will be designed to shield and direct illumination to the subsequent project sites and minimize light spillover to any adjacent residential uses. **Mitigation Measure AES-3b: Design Exterior Structures to Minimize Glare.** The exterior of the proposed buildings/structures will be constructed of materials such as high-performance, tinted, non-mirrored glass; painted metal panels; and pre-cast concrete or fabricated wall surfaces.	Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Air Quality				
3.2(a): Would the proposed Project conflict with or obstruct implementation of the applicable air quality plan?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Less than significant		*Overall 2020 LA River Master Plan Implementation:* Less than significant	*Overall 2020 LA River Master Plan Implementation:* Less than significant
3.2(b): Would the proposed Project result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area with respect to the applicable federal or State ambient air quality standard?	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction *Typical Projects:* None required. Construction *KOP Categories 1 through 6 and Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.** In the event that construction-period emissions exceed regional or localized emissions standards in effect at the time that subsequent project details are known, implementing agencies will implement the following or more effective measures to achieve emissions reductions: • For exceedances of PM or NO_X regional or localized significance thresholds, the implementing agency (or its contractors) will: ○ **Require at Least Tier 4 Final Engines on Construction Equipment.** All off-road equipment greater than 50 horsepower and operating for more than 20 total hours over the entire duration of construction activities will operate on at least an EPA-approved Tier 4 Final or newer engine.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		○ **Require Best Available Control Technology on Construction Equipment.** All construction off-road equipment must be outfitted with Best Available Control Technology devices including, but not limited to, CARB-certified Level 3 Diesel Particulate Filters. ○ **Require Use of Diesel Trucks with 2010-Compliant Model Year Engines.** Diesel trucks that have 2010 model year or newer engines, but no less than the average fleet mix for the current calendar year as set forth in CARB's EMFAC database, must be used. In the event that 2010 model year or newer diesel trucks cannot be obtained, a rationale explaining why and showing that a good-faith effort to locate such engines was conducted must be documented. ○ **Require Low-VOC Coatings during Construction.** To reduce construction-related fugitive VOC emissions beyond the requirements of SCAQMD Rule 1113, low-VOC coatings that have a VOC content of 25 grams per liter or less will be used during construction. Evidence must be submitted to SCAQMD detailing the use of low-VOC coatings prior to the start of construction. **Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(b). <u>Operations</u> *Typical Projects:* None required.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Operations *KOP Categories 1 through 6 and Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.** The implementing agency will verify if operations air pollutant emissions exceed regional or localized VOC emissions standards in effect at the time that subsequent project details are known. In the event that operations emissions under subsequent projects exceed regional or localized VOC emissions standards, the implementing agency will implement the following to achieve VOC emissions reductions during operations. ● Use low-VOC coatings (VOC content less than or equal to 25 grams per liter) for periodic painting and facility upkeep. **Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(a). **Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.** Detailed in Impact 3.16(b).		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
3.2(c): Would the proposed Project expose sensitive receptors to substantial pollutant concentrations?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction **Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.** For subsequent projects that (1) exceed the SCAQMD LSTs and (2) are within 1,000 feet of existing sensitive receptors, as defined by SCAQMD (e.g., residences, daycares), the implementing agency will prepare a site-specific construction and operational HRA. The HRA must identify whether the health risk exposures for adjacent receptors will be less than the SCAQMD project-level thresholds. If the HRA demonstrates that the health risk exposures for adjacent receptors will be less than SCAQMD project-level thresholds, then additional mitigation will be unnecessary. However, if the HRA demonstrates that health risks will exceed SCAQMD project-level thresholds, additional on- and offsite mitigation will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable. Mitigation Measures AQ-1 and GHG-2 would be required. **Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.** Detailed in Impact 3.2(b). **Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(b).	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Operation **Mitigation Measure AQ-2: Implement Operations Emissions-Reduction Strategies.** Detailed in Impact 3.2(b). **Mitigation Measure AQ-3: Require Future Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.** Detailed above. **Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(a). **Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.** Detailed in Impact 3.16(b). Operation *KOP Category 6 and Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure AQ-4: Require Subsequent Projects with Sensitive Receptors within 1,000 Feet of Existing Toxic Air Contaminant Hazards to Perform a Health Risk Assessment.** For subsequent projects with sensitive receptors (e.g., affordable housing) within 1,000 feet of existing TAC hazards (e.g., heavily traveled roadways, stationary sources), the implementing agency will prepare a site-specific construction and operational HRA. If the HRA		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		demonstrates that the health risk exposures for onsite receptors will be less than SCAQMD project-level thresholds, then additional mitigation would be unnecessary. However, if the HRA demonstrates that health risks will exceed SCAQMD project-level thresholds, additional feasible onsite mitigation (e.g., air filters with a higher Minimum Efficiency Reporting Value rating) will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable. **Mitigation Measure AQ-2: Implement Operations Emissions-Reduction Strategies.** Detailed in Impact 3.2(b). **Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(a). **Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.** Detailed in Impact 3.16(b). In the event that the emission thresholds are exceeded, apply the following mitigation measure: **Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.** Detailed above.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
3.2(d): Would the proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Category 1:* Potentially significant *KOP Categories 2–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction None required. Operation *Typical Projects, KOP Categories 2–6:* None required. Operation *KOP Category 1 and Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure AQ-5: Implement Equestrian Manure Management.** Equestrian activities may generate odors due to improper handling of manure and soiled bedding. The implementing agency will comply with the following measures: ● The facility, including animal stalls and warmup and training areas, will be cleaned at least once per day, including the removal of manure and soiled bedding. ● Manure and soiled bedding will either be incorporated into composting by the end of the day or temporarily stockpiled prior to incorporation into the composting system. ● Stockpiled material in containment vessels will be covered with a lid or tarp. Containment vessels will be located at the farthest feasible distance from nearby residents and/or sensitive receptors.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Category 1:* Less than significant *KOP Categories 2–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Category 1:* Significant and unavoidable *KOP Categories 2–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
Biological Resources				
3.3(a): Would the proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Construction *Typical Projects:* Potentially significant *KOP Categories 1– 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1– 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction **Mitigation Measure BIO-1: Conduct Literature Review, Habitat Assessment, and Project Surveys.** The purpose of BIO-1 is to begin the process of making a determination of whether or not the proposed individual subsequent project would have a significant environmental impact on biological resources. BIO-1 is the first step, and in some cases, the final step, in reaching the goal of a no impact, less-than-significant impact, or significant impact determination for each of the six biological thresholds of significance (see Section 3.3.3.2, *Criteria for Determining Significance*). During the design of individual subsequent projects and prior to construction, the implementing agency will employ a qualified biologist to review the proposed subsequent project. The qualified biologist will conduct a site-specific literature review, which will consider, at a minimum, the proposed subsequent project, site location, GIS information, and known sensitive biological resources. The review will assess the site for special-status plants and/or wildlife, aquatic resources, sensitive natural communities, wildlife corridors or nurseries, biological resources protected by local ordinances policies such as protected trees, or other regulated biological resources pursuant to CEQA, FESA, or CESA could be affected by the project. In some cases, a literature review will be sufficient for the biologist to make a no impact and/or a less-than-significant impact determination for all six of the thresholds of significance (Section 3.3.3.2) of biological resources. In this case, no further work will be required, and a summary report	Construction *Typical Projects:* Less than significant *KOP Categories 1– 6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1– 6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1– 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

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		stating the basis for these findings, identifying each threshold of significance with a CEQA finding, will be the only requirement. If, during the literature review, it is determined that potential biological resources exist in the individual subsequent project area that could be affected, then a habitat assessment survey will be required unless a qualified biologist determines that a field review/habitat assessment is not needed. If needed, this survey will consist of a site visit conducted by a qualified biologist, where the proposed subsequent project and adjacent buffer (as appropriate for the target species relative to the potential project direct and indirect impacts) will be assessed for candidate, sensitive, or special-status plants and/or wildlife, aquatic resources, sensitive natural communities, wildlife corridors or nurseries, biological resources protected by local ordinances policies, such as protected trees or other regulated biological resources, while identifying and mapping all vegetation communities and land-cover types (initial study). If suitable habitat is present for candidate, sensitive, or special-status plants or animals and could not be avoided, then focused protocol surveys may be required, as determined by a qualified biologist, with appropriate reporting. If aquatic resources are present and could not be avoided, a jurisdictional delineation per Mitigation Measure BIO-21a may be required. Mitigation Measure BIO-1 will include an analysis of all of the biological resources identified in the thresholds of significance, with a determination made regarding significance for each threshold. Reporting will include regulatory assessment, construction and operation impact analyses, and identification and implementation of appropriate		

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		measures based on the presence of biological resources. Impact analyses will also include appropriate assessment of project-specific disturbances (e.g., recreational effects, night lighting, noise). If, following the literature review and project surveys, it is determined that the project will not directly or indirectly affect any species listed as endangered, threatened, or candidate by CDFW or USFWS, then the impact will be less than significant for listed species, and no further mitigation for listed species will be required. If, however, it is determined that impacts on federally or State-listed plant or animal species will occur and therefore will be considered significant, then Mitigation Measure BIO-2 will be required to reduce impacts to less-than-significant levels. **Mitigation Measure BIO-2: Avoid or Minimize Effects on Federally or State-Listed Species, Consult with Wildlife Agencies, and Implement Permit Requirements.** The implementing agency will avoid "take" of species, if applicable/occurring, within the action area (i.e., project area and buffer for species that USFWS and CDFW list as endangered, threatened, or candidate). The *action area* is a FESA term that refers to the area directly and indirectly affected by the proposed action and is based on the range of impacts (e.g., ground disturbance, water quality, air quality, lighting, noise). If avoidance of take is not possible, then the implementing agency will initiate the process of consultation with the wildlife agencies (i.e., USFWS, NMFS and/or CDFW, as appropriate based on species habitat present). During informal consultation, it may be determined that the proposed action is not likely to affect any federally		

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		listed species or critical habitat in the project area, with no requirement to consult formally with the USFWS, this will complete the consultation process. If the proposed action may affect listed species or critical habitat, and the action has a federal nexus, then Section 7 of the FESA process applies. Under FESA Section 7, the project proponent will need to prepare a Biological Assessment (BA) to assist the USFWS in its determination of the project's effect on species and/or critical habitat. If the action is likely to adversely affect a listed species, then a request for formal consultation is submitted. Pursuant to FESA, formal consultation may last up to 90 days, after which the USFWS has 45 days to prepare a Biological Opinion (BO). These timelines may be extended through a request from USFWS. The conclusion of the BO will state whether or not the proposed action is likely to: 1. Jeopardize the continued existence of the listed species; and/or 2. Result in the destruction or adverse modification of critical habitat that appreciably diminishes the value of critical habitat as a whole for the conservation of the listed species. If the action is reasonably certain not to jeopardize the continued existence of the listed species or diminish the value of critical habitat as a whole for the species, then the BO will include an incidental take statement with the BO. *Incidental take* is subject to the terms and conditions provided in the incidental take statement. Examples of terms and conditions included within a typical BO are included below. FESA section 10(a)(1)(B) consultation occurs for non-federal actions. An HCP is prepared by the project		

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		proponent and accompanies the application for an ITP. The USFWS prepares the ITP and a BO. The elements of the HCP are made binding through the ITP. The timelines for HCP completion are project-specific. If a species is listed by both FESA and CESA, Fish and Game Code Section 2080.1 allows an applicant who has obtained a federal incidental take statement (FESA Section 7 consultation) or a federal ITP (FESA § 10(a)(1)(B)) to request that the Director of CDFW find the federal documents consistent with CESA. If the federal documents are consistent with CESA, a consistency determination is issued, and no further authorization or approval is necessary under CESA. For species that are listed by CDFW, but not the USFWS, as endangered, threatened, candidate, or a rare plant, and where take would occur, the project proponent will apply for a State ITP under Section 2081(b) of the Fish and Game Code. CDFW typically requires that the project proponent seek a 2081(b) ITP rather than a 2080.1 consistency determination because of inconsistencies between FESA and CESA, particularly conditions of approval. For example, FESA does not prohibit the take of listed plants on private lands, whereas CESA does. When the 2081(b) ITP is issued, terms and conditions will be specified by CDFW within the 2081(b) ITP, and these terms and conditions will ensure that the items 1 through 5 below are met. 1. The authorized take must be incidental to an otherwise lawful activity. 2. The impacts of the authorized take must be minimized and fully mitigated.		

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		3. The measures required to minimize and fully mitigate the impacts of the authorized take: a. Are roughly proportional in extent to the impact of the taking on the species; b. Maintain the applicant's objective to the greatest extent possible; and c. May be successfully implemented by the applicant. 4. Adequate funding is provided to implement the required minimization and mitigation measures and monitor compliance with the effectiveness of the measures. 5. Issuance of the permit will not jeopardize the continued existence of the CESA-listed species. As a part of the above described processes, examples of mitigation for impacts on listed species through the following pathways are included below: ● If suitable habitat for listed species is present within the action area, the project will be designed to avoid impacts (direct and indirect). Through the avoidance of impacts on listed species, the project proponent will avoid the FESA/CESA permitting process. o Informal consultation with the wildlife agencies may be required to complete the process. ● For impacts on federally listed species and a federal permit or federal funding is involved, Section 7 consultation (if available through federal nexus) will be required. This may include consistency determination from CDFW for State-listed species. o A "May Affect and Is Likely to Adversely Affect" BA will be prepared and submitted to USFWS, and		

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		initiation of formal consultation will be requested. The BA will include applicant proposed mitigation measures that are often included in the required Terms and Conditions in the BO. These conditions depend on the species under consideration, as well as severity of the project impacts, but typically include avoidance and minimization measures, as well as compensatory mitigation to reduce take to the extent feasible. ○ Conservation measures or similar requirements may be required within the BO that specify conservation, minimization, and compensation measures to avoid, minimize, or offset effects to listed species. Examples include: • Biological monitoring • Worker environmental awareness program (WEAP) training • Minimization of construction-related impacts • Preconstruction clearance surveys • Weed management surveys • Compensation for loss of habitat – Protection of lands in perpetuity – Mitigation ratios for impacts (e.g., 1:1 mitigation for suitable habitat, 3:1 for riparian habitat, 5:1 for critical habitat) – Permanent protection and management of compensation lands – Costs to acquire and manage lands – Financial assurances ○ Terms and Conditions within the Incidental Take Statement in the BO will include mitigation measures for listed species. Examples include:		

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		• Immediate notification of wildlife agencies in the event of the permit's listed species being killed or injured as a result of project activities • Re-initiation of consultation if more than a specified number of listed species are killed or injured as a result of project activities • Reporting requirements ● For impacts on federally listed species for which no federal permit or federal funding is involved, Section 10(a)(1)(B)) consultation (if no federal nexus) will be required. This may include consistency determination from CDFW for State-listed species. o Applicant-prepared HCP that includes mitigation measures: • Preservation (via acquisition or conservation easement) of existing habitat • Enhancement or restoration of degraded or former habitat • Creation of new habitat • Establishment of buffer areas around existing habitats • Restrictions to access o The USFWS then issues an ITP and prepares a BO, and the HCP mitigation measures become legally binding. USFWS ITP measures will be similar to those described above for Section 7. ● For impacts on State-listed species, a 2081 (b) ITP will be issued. The BO conservation measures are often included in the BO in order to meet CESA requirements and allow CDFW to make a consistency determination. For this reason, the 2081 (b) ITP requirements are often similar to the BO		

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		conservation measures and may include other measures, such as: o CNDDB Observations (reporting of any CNDDB species) o Traffic speed limits o Habitat acquisition, permanent protection, and perpetual management of compensatory habitat In addition to the measures listed above, additional measures may be required through agency consultations and/or permits that are deemed necessary for the recovery of a listed species. If it is determined that there is suitable habitat present for special-status species of nesting birds, raptors, or eagles, or if construction involves non-incidental take of migratory birds that are not special-status, and if construction is to occur during the nesting season within suitable habitat, then the following mitigation measures will be implemented. **Mitigation Measure BIO-3a: Conduct Preconstruction Nesting Bird Surveys.** Prior to any ground-disturbing activity, including vegetation removal or structure disturbance/ demolition, during the bird breeding season (February 1 to August 31), a qualified biologist will conduct nesting bird surveys within 7 days prior to construction for any activities that could disturb nesting birds within the subsequent project area and its 500-foot buffer area for nesting birds and active nests (i.e., nests with eggs or young) of non-raptor species listed under the MBTA or CFGC. If active bird nests are observed, the biologist will establish an appropriate ESA buffer based on the		

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		species, work activities, and the tolerance of the species to disturbance. No entry or work will occur within the ESA nest buffer unless approved by the qualified biologist. The ESA nest buffer will be maintained until nestlings have fledged and are no longer reliant on the nest or parental care for survival, or the biologist determines that the nest has been abandoned. **Mitigation Measure BIO-3b: Conduct Preconstruction Raptor Nest Surveys.** If construction is scheduled to occur during the breeding season for raptors (January 1 to September 1), then no more than 7 days before the start of the activities, a qualified biologist will conduct a pre-construction survey for nesting raptors in areas where suitable habitat is present within the project area and up to a 500-foot buffer, as determined by a qualified biologist. If active raptor nests are found, then the biologist will delineate an ESA buffer of sufficient size or utilize a buffer as determined by regulatory authorizations for species listed under the FESA or CESA, around the nest. The ESA buffer will be maintained until the young have fledged from the nest and are no longer reliant on the nest or parental care for survival or until such time as the biologist determines that the nest has been abandoned. **Mitigation Measure BIO 3c: Active Eagle Nest Avoidance Measures.** If an occupied nest (as defined by Pagel et al. 2010) is detected within 4 miles of the work areas, the implementing agency will notify USFWS and will follow the specified line-of-sight and no line-of-sight no-work buffer requirements during the breeding season to ensure that construction activities do not result in injury		

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		or disturbance to eagles. The implementing agency in coordination with the project biologist, will coordinate with the USFWS regarding any modifications to these proposed buffers. It is not anticipated that activities during operations will disturb eagle nesting, but should operations activities have the potential to disturb eagle nesting, then this measure will be required. ● The no-work buffer will be maintained throughout the breeding season or until the young have fledged and are no longer dependent on the nest or parental care that includes nest use for survival. ● Buffers around occupied nests may be reduced if a qualified biologist determines that smaller buffers will be sufficient to avoid impacts on nesting eagles. If it is determined that suitable habitat is present for burrowing owls, then then the following mitigation measure will be implemented. **Mitigation Measure BIO-3d: Conduct Burrowing Owl Preconstruction Surveys.** Prior to any ground-disturbing activity or any activity that could disturb burrowing owl burrows or nesting, a qualified biologist will conduct protocol-level surveys for burrowing owl within suitable habitat located in the work area or extending 500 feet from the boundary of the work area, where access is available. Surveys will be conducted in accordance with guidelines in the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If it is determined that suitable habitat is present for bats, then the following mitigation measure will be implemented to avoid potentially significant impacts.		

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		Mitigation Measure BIO-3e: Conduct Preconstruction Special-Status Bat Surveys. No earlier than 30 days prior to the start of ground-disturbing activities or activities that could disturb bat roost sites in a work area, a qualified bat biologist will conduct a visual and acoustic survey (over the course of one day and one evening at a minimum) for roosting bats in the work area and extending a distance deemed appropriate by the qualified biologist from the boundary of the work area, where access is available. Such surveys will be conducted only in those areas in which bridges, abandoned structures, or trees with large cavities or dense foliage are present. The qualified bat biologist will also visually inspect for crevice dwelling birds (e.g., nesting, overwintering swifts) and note any observations. If bat roost sites are identified and could be disturbed, then the following mitigation measure will be implemented. **Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.** Prior to any ground-disturbing activity or activities that could disturb bat roost sites, a qualified bat biologist will survey for active bat colonies, such as hibernacula or maternity roosts. If active hibernacula or maternity roosts are identified in the work area or in the buffer area (as defined by the qualified bat biologist, based on site conditions, planned work, and anticipated indirect impacts on bats), they will be avoided. If avoidance is not feasible, then a qualified bat biologist with experience conducting bat evictions, exclusion, and mitigation will prepare a mitigation plan detailing the eviction, exclusion, and relocation of the bat colony and		

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		will provide for construction of an alternative bat roosting habitat outside of the work area. Alternative bat habitat may be required to be constructed and installed up to 2 years prior to any bat eviction and exclusion and must be approved by CDFW. The qualified bat biologist will implement the mitigation plan for a period of time determined by the qualified bat biologist to be sufficient for the bats to adjust to the disturbance before the commencement of any ground-disturbing activities that will occur within the buffer area of the hibernacula. All bat colony and roost management will be conducted in accordance with accepted exclusion and deterrent techniques. If non-breeding or non-hibernating individuals or groups of bats are found roosting within the work area, cannot be avoided, and would be affected by the proposed Project, then the following will be implemented: • **Implement Bat Exclusion and Deterrence Measures**. A qualified biologist will facilitate the eviction of the bats by either opening the roosting area to change the lighting and airflow conditions or installing one-way doors or other appropriate methods. To the extent feasible, the roosts will remain undisturbed by project activities for a minimum of 1 week after implementing eviction and exclusion activities. Evictions will not occur to active maternity or hibernacula. If it is determined that suitable habitat is present for American badgers, and impacts on badgers could not be avoided and would therefore be significant, then the following mitigation measure will be implemented.		

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		Mitigation Measure BIO-3g: Conduct Preconstruction Surveys for American Badger. Prior to ground disturbance, the implementing agency will require a qualified biologist to conduct preconstruction surveys for American badger den sites within suitable habitat located within the project site. These surveys will be conducted no less than 14 days and no more than 30 days prior to the start of ground-disturbing activities in the project site. As required by CDFW, the biologist will establish a no-work buffer around occupied maternity dens throughout the pup-rearing season (February 15 through July 1) and an ESA buffer around occupied dens during other times of the year. If non-maternity dens are found and cannot be avoided during construction activities, they will be monitored for badger activity. If the biologist determines that dens may be occupied, passive den exclusion measures (outside the pupping season) will be implemented for 3 to 5 days to discourage the use of these dens prior to disturbance activities. If it is determined that sensitive habitat (e.g., wetlands, habitat for special-status species, wildlife movement corridors, nest sites) is present, and the impacts of the project have been determined to be potentially significant, then the following mitigation measure will be implemented. **Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.** Prior to any ground-disturbing activity, the implementing agency will require the construction area, including access roads and staging areas, to be delineated through the use of construction flagging and signage under the supervision of a qualified biologist. To		

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		prevent the inadvertent disturbance of habitat, vehicle traffic and construction personnel will be restricted to established roads, construction areas, and other designated areas. Any ESAs, such as wetlands, habitat for special-status species, wildlife movement corridors, and/or nest sites, will be delineated, and no access will be allowed into these areas. Delineation of ESAs will include fencing, flagging, and other methods of demarcation sufficient to prevent entry into the ESA. No grading or fill activity of any type will be permitted within ESAs. In addition, no construction activities, materials, or equipment will be allowed within ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby preserved areas. Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the limits of disturbance and designated staging areas and routes of travel. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities. ESA fencing and exclusion fencing will remain in place and be maintained until project construction is completed. Equipment storage, fueling, and staging areas will be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive natural communities. These designated areas will be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions will be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials will be reported to appropriate regulating entities including, but not limited to, the applicable jurisdictional city and RWQCB and will be cleaned up		

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		immediately and contaminated soils removed to approved disposal areas. If sensitive biological resources are identified within the project footprint or surrounding buffer, but will not be affected by the proposed Project, then those resources must be marked clearly with permanent signage to promote avoidance of the resource by the public and operations and maintenance staff. If there is ground disturbance that could result in the establishment of invasive plant species, and this impact has been determined to be potentially significant, then the following mitigation measure would be implemented. **Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.** Prior to construction on all projects, a weed abatement plan will be prepared and implemented by the project proponent to minimize the spread and importation of nonnative plant material during and after construction and will include the following: ● Any exotic species removed during construction will be properly handled to prevent sprouting or regrowth. Methods will be developed to avoid spreading exotic plant seeds during plant removal and ensure plants will be removed prior to flowering, if feasible. ● An herbicide use protocol will be included within the weed abatement plan. Anyone using herbicides will be required to complete a "Report of Chemical Spray Form" per the LA County Department of Public Works BMP Manual (Public Works 2010). Hazardous waste management practices will apply to the use of		

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		all herbicides. The application of all herbicides will be performed by a licensed applicator. ● Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site or at the nearest staging area during the course of construction. Cleaning of equipment will occur in a designated area distant from ESA fencing. ● Trucks carrying loads of vegetation removed from the project footprint will be covered and disposed of in accordance with applicable laws and regulations. ● Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control. Fill material will be obtained from weed-free sources. ● After construction, any disturbed areas remaining as bare ground will be returned to original grade (unless the design incorporated permanent grade changes), soils will be decompacted, and areas will be revegetated with native hydroseed and/or container plantings to match existing sensitive habitats as detailed in design plans or a project-specific restoration plan. All revegetated areas will avoid the use of species listed in Cal-IPC's California Invasive Plant Inventory. If it is determined that special-status plants, wildlife, and/or aquatic resources, sensitive habitat, or protected trees have the potential to be present at the project site, then the following mitigation measures will be required. **Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.**		

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		In sensitive areas or adjacent to special-status plants, wildlife, and/or aquatic resources, sensitive habitat, protected trees, a biological monitor will be required to monitor construction activities for the duration of construction activities to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and special-status species outside of the project footprint. Biological monitoring will include items such as monitoring activities associated with the installation of protective barriers (e.g., ESAs fencing, silt fencing, sandbags, fencing); ensuring that the removal of vegetation near sensitive biological resources is limited to the proposed disturbance area; monitoring of active bird nests; ensuring that all food related trash items are enclosed in sealed containers and removed from the site; ensuring that construction employees strictly limit their activities, vehicles, equipment and construction materials to the proposed project footprint, designated staging areas, and approved routes of travel, with construction areas being the minimal area necessary to complete the proposed Project as specified in construction plans; ensuring that equipment storage, fueling, and staging is located in upland sites to protect riparian habitats and other sensitive habitats; ensuring that brush, loose soils, and other debris materials will not be stockpiled within stream channels or on banks; checking potential wildlife pitfalls; contacting CDFW (and USFWS as appropriate) regarding any dead or injured federally or State-listed wildlife; and disposal of road-killed animals. The biological monitor will conduct WEAP training to train construction contractors and other site personnel. The purpose of WEAP training is to provide training		

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		regarding the avoidance and minimization measures for biological resources, the laws and regulations related to biological resources, and the fines and penalties for violating those laws. The biological monitor will monitor construction within the vicinity of any riparian habitats or other sensitive natural community areas prior to and during vegetation removal to ensure that vegetation removal, best management practices (BMPs), ESAs, and all avoidance and minimization measures are properly implemented. ESA fencing will be inspected by the biological monitor at a frequency necessary to ensure that it is in place and properly maintained. As part of this effort, the biological monitor will document compliance with applicable avoidance and minimization measures, including measures set forth in regulatory authorizations. **Mitigation Measure BIO-7: No Intentional Collection and/or Killing of Plants or Wildlife.** During construction, the biological monitor will ensure that intentional killing or collection of any plant or animal species unrelated to lawful construction activities does not occur. Construction crews will attend WEAP training (as specified in BIO-1), where field crews will be educated regarding biological resources and the avoidance of impacts on these resources, including the prohibition of collecting and killing of plant and animals. The fines and penalties for the collection and killing of special-status species and nesting birds will be explained in the WEAP training and will be enforced. In addition, purposeful collection and killing of plants and animals unrelated to lawful construction could result in		

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		a construction noncompliance and/or a stop work order. **Mitigation Measure BIO-8: Work Stoppage.** The biological monitor, under the direction of the Resident Engineer or Construction Inspector, has the authority to stop work to protect biological resources, including but not limited to, aquatic resources, special-status wildlife and plants, and protected trees. If aquatic resources or protected trees are identified in the work area and are not adequately protected, the biological monitor will have the authority to halt work in the area to prevent impacts on the resource. Any such work stoppage will be limited to the area necessary to protect the resource. Work will be resumed as quickly as possible once the appropriate the course of action has been determined. In the event that any special-status plant or wildlife species is found in a work area, the biological monitor will have the authority to halt construction to prevent the death or injury to the species. Any such work stoppage will be limited to the area necessary to protect the species and work may be resumed once the biologist determines that individuals have moved out of harm's way or the biologist has relocated them out of the work area. **Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.** **Construction BMPs** The implementing agency will require all construction contractors to prepare and implement a construction		

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		BMP plan and stipulate the requirement in construction bid documents. The construction BMP plan will include, at a minimum, the following measures. ● All construction contractors and all construction personnel will be responsible for promptly cleaning up any fuel or other hazardous materials spills, and any leaks from equipment will be stopped and repaired immediately. Vehicle and equipment fluids that are no longer in use will be transported to an appropriate offsite disposal location. Fuel and lubricant storage and dispensing locations will be constructed to fully contain spilled materials until disposal can occur. Hazardous waste, including used motor oil, hydraulic fluid, and coolant, will be stored and transferred in a manner consistent with applicable regulations and guidelines. ● Dust-control measures will be implemented by the contractor to reduce excessive dust emissions. Dust-control measures will be carried out during periods of grading or other activities that will disturb soils and may include wetting work areas, using soil binders on dirt roads, and wetting or covering stockpiles. ● Fire-suppression capability, including extinguishers, shovels, and water tankers, will be available on site whenever construction occurs during the fire season (as determined by the Los Angeles County fire department) to help minimize the chance of human-caused wildfires. Activities that may produce sparks, including welding or grinding, will use protective gear, such as shields and protective mats, to reduce fire risks. ● Available ESA data and information will be reviewed prior to placement of deposition and stockpiling of		

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		any material, such as erodible materials, vegetation, loose soils, or other debris material. No erodible materials will be deposited into aquatic features (e.g., rivers, channels, drainages, ditches, drains, ponds, lakes) or areas demarcated. ● Construction and maintenance activities will be timed during sensitive periods with ESA fencing, and materials will not be stockpiled within such areas. **Operations Recreation Plan** The Operations Recreation Plan will include requirements for the following measures (as applicable) to be implemented for areas of the *2020 LA River Master Plan* where recreational opportunities will be created: ● Signage requiring pets to be on leash ● Pet dropping/waste bag dispensers and disposal stations ● Foot-wiping stations with signage explaining the purpose of the station (to prevent the spread of invasive weeds that degrade natural habitats that species depend on) ● Wildlife-proof waste bins ● Educational interpretive kiosks/signage (e.g., how to respect wildlife and habitats, stay on trail signs, identifying sensitive areas, pick up trash and fishing line, pick up after pets; opportunities to view wildlife) ● Incorporation of signage to avoid ESAs around sensitive wildlife/habitat features ● Seasonal closures during sensitive periods (will occur if there were a significant biological impact that could not be mitigated except through avoidance)		

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		• Improvement (i.e., restoration) of affected habitat areas • Seasonal restrictions on certain uses (e.g., no kayaking during least Bell's vireo nesting if vireo are present) • Prevention of fertilizer runoff • Management of unauthorized uses through coordination with local resources • Proper handling of any exotic plant species removed during operations and maintenance activities to prevent sprouting or regrowth; development of methods to ensure that exotic plant seeds are not spread during plant removal and that plants will be removed prior to flowering, if feasible If it is determined that there is the potential for special-status wildlife, including special-status mammals, reptiles, or amphibians, that could become entrapped in construction materials or excavations, then the following mitigation measures will be implemented. **Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.** Any excavated steep-sided holes, pits, or trenches more than 12 inches deep with sidewalls steeper than 45 degrees will be covered with plywood or similar materials at the end of the day or have escape ramps, with at least one ramp per 100 feet of trenching, and slopes of escape ramps of no greater than 3:1. All construction pipe, culverts, or other structures with a diameter of 3 inches or greater that are stored overnight will either be elevated at least 1 foot above the ground, screened, or covered each night.		

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		Mitigation Measure BIO-11: Restrict Monofilament Materials. The implementing agency will restrict the use of monofilament materials. Plastic monofilament netting (i.e., erosion control wattles or matting) or similar material will be prohibited as part of erosion-control activities. Alternative materials that could be used include, but are not limited to, geotextiles, fiber rolls, geomembranes, tackified hydroseeding compounds, loose-weave mesh, such as jute, hemp, and coconut (i.e., coir) fiber, and rice straw wattles (e.g., Earthsaver wattles: biodegradable, photodegradable, burlap). If it is determined that special-status birds (or those protected by the MBTA and CFGC) and special-status mammals, reptiles, or amphibians have the potential to occur, then the following mitigation measures will be required. **Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.** Construction and/or facility lighting will be designed to minimize or lessen the attraction of birds, bats, or their prey to the project site. Best practices for lighting for avian species conflict with those for bats. Best practices for avian species include using non-steady burning lights (e.g., red, dual red, and white strobe-like flashing lights) using motion or heat sensors and switches to reduce the time when lights are illuminated, using appropriate shielding to reduce horizontal or skyward illumination, and avoiding the use of high-intensity lights (e.g., sodium vapor, quartz, halogen). Best practices for lighting for bat species include avoiding green and red lights, as these interfere with migration patterns. White lighting tends to attract prey species		

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		and increase foraging. Lighting adjacent to wildlife areas should be limited to an upper limit of 3,000 on the Kelvin color temperature scale and shielded to prevent light from entering the wildlife area. Night lighting will be designed for best practices for both avian and bat species, while also considering special-status reptiles and amphibians. Some design measures could include construction and facility lighting designed to prevent casting light toward surrounding wildlife habitats and the riverbed and using non-steady burning lights and avoiding green and red lights. **Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.** Biological monitors will ensure that any installed poles, whether temporary or permanent, will not have openings that could entrap birds or bats. Construction contractors will be required to seal and cap all openings in poles or provide for escape routes (i.e., openings accommodating escape for various species). Installation of poles will not begin until it is demonstrated that the poles can be adequately capped and/or sealed on installation. If it is determined that special-status wildlife, nesting birds, raptors, or eagles could occur, then the following mitigation measure will be implemented. **Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.** The implementing agency will incorporate setbacks, berms, walls, or similar noise-attenuating method to avoid and minimize the effects of noise on special-status wildlife, nesting birds, raptors, or eagles in noise-generating activities affecting areas where special-		

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		status wildlife has been identified. Wildlife habitat areas occupied by sensitive species will not be subject to noise that will exceed residential noise standards as specified in Section 3.12, *Noise*. If the biological monitor determines that noise generation by construction activities may affect nesting, the biological monitor may require the monitoring of noise by a qualified technician, if attenuation is not possible. Setbacks or other structures will be sufficient to ensure noise attenuates adequately to avoid disturbance of special-status wildlife, nesting birds, raptors, or eagles. If noise standards cannot be met, other measures may be incorporated, such as delaying construction until nesting is completed (for nesting birds) or until special-status species are no longer present or until a take permit for special-status species is obtained. Construction *KOP Categories 1–6:* **Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.** Where habitat reclamation opportunities exist (e.g. floodplain reclamation, creation of naturalized banks, braided channels, habitat blocks for crossing and platforms, wetlands through diversions, wetland terraces and planting trays), restoration BMPs will be used. These will include the following: ● Planting of invasive species will be prohibited, as specified in Mitigation Measure BIO-18, Invasive Species, Operations. ● The plant palette for restoration will be composed of native species that will be expected within the project area.		

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		• If special-status plant species were removed prior to reclamation efforts, where feasible, these will be replanted within the reclamation site. • A qualified biologist will assist in the design of habitat reclamation efforts. The biological goal of each reclamation site may differ (e.g., one site may function mainly as a wildlife corridor, whereas another may provide foraging habitat for special-status mammals), but given the limited amount of reclamation opportunities in the LA River, the wildlife and botanical goals that each reclamation site can achieve will be maximized. • Upstream hydrological regimes and conditions and their impacts on the project area will be assessed. <u>Operation</u> **Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.** The implementing agency will require that all installed trash canisters will be wildlife proof/animal tamper resistant. The design will ensure that the trash will be securely stored to keep wildlife from being attracted to the project site. Trash containers must be resistant to mountain lions. **Mitigation Measure BIO-16: Use Wildlife Safety Glass.** The implementing agency will require that glass used in the design of buildings and other facilities is bird safe. Bird-safe glass is designed specifically for making glass a visible obstacle to birds, while still being transparent to humans.		

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		Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan. The implementing agency will require that a pest management plan be developed by a qualified biologist. To prevent the inadvertent poisoning of raptors and non-target animals during operations, pest-control measures will prohibit the use of rodenticides. Other methods of rodent control, such as resetting lethal rat traps (https://goodnature.co.nz/), will be used. As a part of the pest-management plan, the use of neonicotinoid pesticides will be prohibited, as these are known to be harmful to bumble bees. To avoid the spread of invasive species and encourage the use of native plant species, the following mitigation measure will be implemented. **Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.** The implementing agency will require landscape plans to prioritize the use of native plant species and will prohibit the use of invasive, nonnative plant species. The species on the invasive plant species listed on the Invasive Species of California website (http://ice.ucdavis.edu/invasives/home/species) will be prohibited within or adjacent to the LA River or within wildlife corridors or sensitive habitat.		
3.3(b): Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:*	Construction **Mitigation Measure BIO-20a: Avoid Riparian and Sensitive Natural Communities.** Prior to construction, mapped riparian and sensitive natural communities will be delineated using ESA staking in the field and removal or disturbance of	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:*	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	riparian habitats or other sensitive natural communities will be avoided. If the proposed Project cannot avoid direct impacts on either riparian habitats or other sensitive natural communities, then the following mitigation measure will be implemented. **Mitigation Measure BIO-20b: Implement Riparian Mitigation and Restoration.** Prior to start of construction, the implementing agency will mitigate permanent impacts on riparian habitats or other sensitive natural communities at a ratio the resource agencies determine, through payment into an agency-approved in-lieu fee mitigation program, applicant-sponsored mitigation site, or other approved mitigation method as determined during the project-specific environmental document or permitting phase. Onsite restoration of temporarily affected riparian habitats or other sensitive natural communities will occur in-kind at their current locations on completion of construction and will consist of returning affected areas to original contour grades, decompacting the soil, and replanting with a plant palette composed of native species found onsite prior to disturbance. **Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.** Detailed in Impact 3.3(a).	Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan. Detailed in Impact 3.3(a). **Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.** Detailed in Impact 3.3(a). <u>Operation</u> **Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.** Detailed in Impact 3.3(a).		

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3.3(c): Would the proposed Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction **Mitigation Measure BIO-21a: Conduct a Jurisdictional Delineation.** Prior to the start of project construction with aquatic resources present within or directly adjacent to the limits of disturbance, a formal jurisdictional delineation will be performed within the proposed project footprint and appropriate surrounding buffer to identify and map all wetlands and jurisdictional aquatic resources subject to the jurisdiction of the USACE, SWRCB or RWQCB, CDFW, and, if the project footprint is within the Coastal Zone, the CCC or appropriate city or county. A desktop review and/or field review may be sufficient to determine if a formal delineation is needed. If any wetlands and/or jurisdictional aquatic resources are identified, then implement the following mitigation measures. **Mitigation Measure BIO-21b: Flag Wetland ESA.** If wetlands or jurisdictional aquatic resources are identified within the project footprint, but will not be affected by the project, then those resources must be clearly marked for avoidance using flagging, fencing, or other appropriate avoidance method prior to project implementation. **Mitigation Measure BIO-21c: Obtain Wetland Permits.** If wetlands or jurisdictional aquatic resources are identified within the project footprint and would be affected by construction of the project, the appropriate permits will be obtained from the USACE, SWRCB or RWQCB, CDFW, and/or the CCC, as required. The	Construction *Typical Projects:* Less than significant KOP Categories 1–6: Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant KOP Categories 1–6: Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		permittee will implement all measures and conditions included in those permits. **Mitigation Measure BIO-21d: Restore Temporary Wetland Impacts.** Immediately following completion of construction, temporary impacts on wetlands and jurisdictional aquatic resources will be restored to preconstruction elevation and conditions, or as specified by the aquatic resource permits. **Mitigation Measure BIO-21e: Implement Mitigation for Permanent Loss of Wetlands or Jurisdictional Aquatic Resources.** Prior to the start of construction, impacts that result in a permanent loss of jurisdictional aquatic resources within a concrete channel or bank will be mitigated as specified in the aquatic resource permits. Impacts that result in a permanent loss of jurisdictional aquatic resources within an earthen channel, bank, or associated riparian will be mitigated at a minimum 2:1 ratio, or as specified in the aquatic resource permits. **Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.** Detailed in Impact 3.3(a). <u>Operation</u> **Mitigation Measure BIO-22a: Implement Permanent Wetlands Signage.** If wetlands or jurisdictional aquatic resources are identified within the project footprint or surrounding buffer, but will not be affected by the proposed Project, then those resources must be clearly marked with		

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		permanent signage to promote avoidance of the resource, including by the public and operations and maintenance staff. **Mitigation Measure BIO-22b: Obtain Wetland Permits for Operations.** If wetlands or jurisdictional aquatic resources are identified within the project footprint or surrounding buffer and would be affected by the proposed Project, then operations activities, including any recreational activities that could temporarily or permanently affect aquatic resources, will be included in the appropriate permits to be obtained from the USACE, SWRCB or RWQCB, CDFW, and/or the CCC, as required for construction. If operations activities are not covered by the appropriate permits issued for construction, separate permits will be obtained from the USACE, SWRCB or RWQCB, CDFW, and/or the CCC, as required. The permittee will implement all measures and conditions included in those permits.		
3.3(d): Would the proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of	<u>Construction</u> *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:*	<u>Construction</u> **Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.** All subsequent projects will be planned in coordination with a qualified biologist with demonstrated expertise in wildlife connectivity and wildlife crossing design in order to ensure that all projects, during design, construction, operations, and maintenance, at a minimum maintain current existing ecological connectivity function and value and prevent unintended deleterious consequences to wildlife species, connectivity, and nursery sites. The qualified biologist	<u>Construction</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u>	<u>Construction</u> *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
native wildlife nursery sites?	Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	will provide recommendations and design alternatives that can be implemented to avoid impacts on connectivity and nursery sites, prevent wildlife-human conflicts, and avoid other effects on connectivity and nursery site function and value. If project components are intended to have ecological function and/or maintain wildlife connectivity, then the qualified biologist will participate in their planning and design. **Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-11: Restrict Monofilament Materials.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.** Detailed in Impact 3.3(a).	*Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Mitigation Measure BIO-16: Use Wildlife Safety Glass. Detailed in Impact 3.3(a). **Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.** Detailed in Impact 3.3(a). <u>Operations</u> **Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.** Detailed in Impact 3.3(a) **Mitigation Measure BIO-11: Restrict Monofilament Materials.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.** Detailed in Impact 3.3(a).		

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		Mitigation Measure BIO-16: Use Wildlife Safety Glass. Detailed in Impact 3.3(a). **Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.** Detailed in Impact 3.3(a). **Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.** Detailed in Impact 3.3(d).		
3.3(e): Would the proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<u>Construction and Operation</u> *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	<u>Construction and Operation</u> **Mitigation Measure BIO-24: Implement Avoidance, Transplantation, and Compensatory Mitigation Measures for Protected Trees.** During the conceptual design of each individual subsequent project, all applicable local policies and ordinances, including tree preservation policies, will be followed, and protected trees will be avoided where possible. If protected trees have been identified and their removal cannot be avoided, then prior to ground-disturbing activities, where local tree policies exist and trees are present in the work area, a qualified biologist or arborist will conduct surveys in the work area to identify protected trees.	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	<u>Construction and Operation</u> *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		The biologist or arborist will establish ESAs around protected trees that have the potential to be affected by construction activities, but do not require removal. ESAs will be based on local government ordinances, policies, and regulations. Compensatory mitigation for impacts on protected trees will be required, including impacts associated with removing or trimming a protected tree, based on requirements set out in applicable local government ordinances, policies, and regulations. Compensatory mitigation based on these local ordinances, policies, and regulations may include, but is not limited to, the following: ● Transplantation of protected trees to areas outside of the work area ● Replacement of protected trees onsite or offsite, based on the number of protected trees affected, at a ratio required by local government ordinances or regulations		
3.3(f): Would the proposed Project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<u>Construction and Operation</u> *Typical Projects:* No Impacts *KOP Categories 1–6:* No Impacts *Overall 2020 LA River Master Plan Implementation:* No Impacts	None required.	<u>Construction and Operation</u> *Typical Projects:* No Impacts *KOP Categories 1–6:* No Impacts *Overall 2020 LA River Master Plan Implementation:* No Impacts	<u>Construction and Operation</u> *Typical Projects:* No Impacts *KOP Categories 1–6:* No Impacts *Overall 2020 LA River Master Plan Implementation:* No Impacts

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
Cultural Resources				
3.4(a): Would the proposed Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Construction and Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction **Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.** For later activities under the *2020 LA River Master Plan*, during design and prior to construction, the implementing agency will conduct a cultural resources assessment to determine the potential for presence of historical/built, archaeological, and tribal cultural resources. As part of this assessment, the implementing agency will identify sensitive historical resources that physically may be outside the construction area, but could be affected by changes in noise levels or alterations to visual continuity, if these features are important to the significance of the historical resources. During the design phase of the Project, the implementing agency will conduct a records search/literature review. The records search will be conducted at the South Coastal Central Information Center and will cover a quarter-mile around the location-specific project study area. The records search will provide background information on cultural surveys and site identification and will be supplemented by reviewing the maps/tables of identified historical resources. For the literature review, additional background research conducted online and in person will be conducted. Required information sources will include, at a minimum:	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)

		• NRHP National Park Service online website (https://www.nps.gov/subjects/nationalregister/database-research.htm and https://www.nps.gov/subjects/nationalregister/database-research.htm)
		• Office of Historic Preservation (https://ohp.parks.ca.gov/?page_id=30338)
		  ○ California Historical Landmarks
		  ○ California Points of Historical Interest
		  ○ California Historical Resource Inventory System
		  ○ California Register of Historical Resources (CRHR)
		• Local historical societies
		• Local registers and general plans
		• Sacred Land File Search at Native American Heritage Commission
		Supplemental information sources that could be consulted include:
		• Sanborn maps (available at the Los Angeles Public Library)
		• Historic U.S. Geological Survey quadrangles
		• Historic aerial maps
		• Ethnographic data
		• Surface geological data
		In addition to conducting literature review and searches, the implementing agency tiering from the PEIR will coordinate with the applicable California Native American Tribe, to verify the presence/absence of tribal cultural resources (TCRs) in the API. The California Native American Tribe will identify TCRs and provide substantial documentation of the TCR per PRC Section 5024.1. All TCR documentation and information		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		obtained during consultation will be confidential and not included in public documents. If, following the records search, literature review, sacred land file search, and coordination with the tribe, it is determined that there are no historical/built, archaeological, and TCRs present in the API, then the impact would be less than significant and no further action is required. If, following the records search, literature review, sacred land file search, and coordination with the tribe, it is determined that historical/built, archaeological, or TCRs are present in the API, then Mitigation Measure CR-1b would be implemented. **Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.** ● **Conduct Field Survey of API:** The implementing agency will hire qualified architectural historians and/or historians and archaeologists to physically inspect the API, verify the presence or absence of known historical resources, and document potentially historical resources. This will be accomplished through intensive pedestrian surveys, photo-documentation, and written notes, at a minimum. ● **Record and Identify Cultural Resources:** Each historical resource and archaeological site that has been previously identified will be recorded with an updated California Natural Resources Agency – Department of Parks and Recreation DPR form (Continuation Sheet, DPR 523-L). Newly identified		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		historical resources and archaeological sites will be recorded on DPR 523A (Primary Record), DPR 523B (Building, Structure, Object Record), and DPR 523J (Location Map), with recordation on DPR 523D (District Record), DPR 523E (Linear Feature Record), and DPR 523L (Continuation Sheet) completed as appropriate. DPR forms will be completed by a qualified architectural historian, historian, or archaeologist. • **Prepare Technical Report and Evaluate Identified Resources:** The report will include the background, research, methods, results, and evaluation of any identified cultural resources. All cultural resources identified in the project area will be evaluated for their inclusion in the CRHR and, if determined to be historical resources (eligible), then a determination of impacts would occur. Each technical report, which includes proposed subsurface work elements, will need to include a buried site sensitivity analysis, which assesses the potential for the location-specific subsequent project study area to contain buried cultural deposits. For areas determined to be sensitive for buried deposits, archaeological monitoring will be required. If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would not* cause an adverse change in the significance of a significant historical resource, then the impact would be less than significant, and no further action is required. If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would* cause an adverse change in the significance of a significant historical resource, then the		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		impact would be significant and Mitigation Measures CR-2a through CR-2c will be implemented. **Mitigation Measure CR-2a: Avoid or Relocate Historical/Built Resources.** If significant impacts are identified for historical/built resources after completing Mitigation Measures CR-1a and CR-1b, the implementing agency will implement one of the following measures: ● **Avoidance/Redesign:** Avoid historical resource impacts during the design process and require redesign of the Project to avoid impacts. ● **Relocation**: If a historical resource cannot be avoided but can be relocated (if location, setting, and association are not important aspects of its integrity or support the significance of the resource), then the following actions are required: o Contact local historical societies, community resource groups, and/or local groups with an interest in the type and/or style of the historical resource who may have a suitable site for relocation. o Contact specialized movers of historical resources to develop a plan for preparing of and moving of the resource from its original location and for conducting groundwork necessary for the transplanting of the resource to the new location. o Conduct photo documentation of the resource in the original and new locations.		

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		Mitigation Measure CR-2b: Prepare and Implement Historical Resources Mitigation Plan during Construction. If historical resources are present in the API and cannot be avoided in the design stages, nor relocated, then the implementing agency will prepare a Historical Resources Mitigation Plan (HRMP) for Construction. The following actions are required in the preparation of the HRMP: ● Survey or photographic documentation of the historical resource before construction begins as a baseline condition for assessing damage ● Preparation of protocols for the documentation of inadvertent damage, should it occur, as well as notification to the appropriate owner and/or jurisdiction ● Strategy for repair of historical resource in accordance with the SOI's Standards **Mitigation Measure CR-2c: Prepare Noise and Vibration Plan for Construction.** If noise and/or vibration are considered a potential significant impact of construction, then instrumentation that will capture those impacts will be installed at a suitable location, as necessary (i.e., noise and/or vibration monitors), and qualified preservation architects and/or historic preservation specialists will review the feedback from those instruments on a regular basis. These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, or inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		preconstruction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially affected features. Instrumentation may be physically attached to building/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, preconstruction noise surveys will establish base levels of noise if a quiet setting is a character-defining features of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds will be determined on a case-to-case basis. If impacts are discovered due to noise and vibration, then a strategy for repair in accordance with the Standards would be required. See Mitigation Measure CR-2b. <u>Operation</u> **Mitigation Measure CR-3a: Avoid Impacts on Historical/Built Resources During Operations.** If historical resources are identified within a project API during design of subsequent projects, indirect effects during operations will be avoided, including redesigning project elements. Specific steps to be taken during operations include but are not limited to the following: ● Secure resource from accessibility or visitation. ● Prepare an operations and maintenance/restoration plan to avoid degradation of resource. Identify a baseline of conditions (e.g., photo-documentation, written documentation) that is stored with the appropriate jurisdiction (e.g., Los Angeles County or		

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		other implementing agency) in the plan, with a requirement that the implementing agency or project proponent conduct visual inspection of the historical resource at least twice a year. The baseline condition report must be supplemented with yearly photographs, yearly updates on condition, and any additional reports related to vandalism, accidental damage due to humans or animals, and damage due to weather or earthquakes. **Mitigation Measure CR-3b: Prepare and Implement Historical Resources Mitigation Plan for Operations.** If historical resources are present in the API and potential effects cannot be avoided in the design stages or the resource cannot be relocated, then the implementing agency will prepare an HRMP for operations. The following actions will be implemented for the HRMP: ● Survey or photographic documentation of the historical resource will be completed before construction begins as a baseline condition for assessing damage. ● Protocols for the documentation of inadvertent damage, should it occur, will be prepared, and notification made to the appropriate owner and/or jurisdiction. ● Strategy for repair of historical resource will be developed in accordance with the SOI's Standards. **Mitigation Measure CR-3c: Prepare Noise and Vibration Plan for Operations.** If it is determined that noise and/or vibration are considered a potential significant impact of operations,		

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		then instrumentation that will capture those impacts will be installed (i.e., noise and/or vibration monitors), and the feedback from those instruments will be reviewed on a regular basis by qualified preservation architects and/or historic preservation specialists. These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, or inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A preconstruction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially affected features. Instrumentation may be physically attached to buildings/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, preconstruction noise surveys will establish base levels of noise if a quiet setting is a character-defining feature of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds would be determined on a case-to-case basis. If impacts are discovered, then a strategy would be required for repair in accordance with the Standards. See Mitigation Measure CR-2b.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
3.4(b): Would the proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Construction and Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction **Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.** Detailed in Impact 3.4(a). **Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.** Detailed in Impact 3.4(a). **Mitigation Measure CR-4a: Retain a Qualified Archaeologist.** The implementing agency will retain a qualified archaeologist defined as an archaeologist who meets the SOI's Standards for professional archaeology to carry out all mitigation measures related to prehistoric and historic period archaeological resources. The qualified archaeologist will be the subsequent project's Principal Investigator and will oversee and direct all archaeologists working on the subsequent project. For TCRs, a Native American Monitor, as determined by the appropriate Native American Tribe(s) during consultation, will coordinate with the Qualified Archaeologist as needed for mitigation measure implementation. **Mitigation Measure CR-4b: Avoid Significant Archaeological Sites or TCRs through Establishment of Environmentally Sensitive Areas.**	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		If significant archaeological sites or TCRs are identified in the API, avoidance, where feasible, is the preferred method of treatment. Impacts on significant archaeological resources can be avoided through establishing fencing around the known boundaries of these resources and delineating these locations as Environmentally Sensitive Areas (ESAs). Preservation in place of archaeological materials will maintain the critical relationship between archaeological artifacts and their archaeological context. Additionally, should sacred objects or objects of religious importance to Native American groups be identified, preservation in place avoids conflicts with traditional values of groups who ascribe meaning to these resources. **Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.** If avoidance is not feasible, and if the subsequent project-related ground disturbance is anticipated to occur at archaeological sites identified as a result of the archaeological fieldwork and inventory efforts, an archaeologist will be present to monitor ground-disturbing activity. If ground-disturbing activities are to proceed at archaeological sites that contain Native American cultural materials, a Native American monitor will be retained, in addition to an archaeological monitor. Prior to the commencement of fieldwork, an Archaeological Monitoring Plan (AMP) will be developed to guide archaeological monitoring work during ground-disturbing activities. The AMP will be prepared and the Native American Consulting Tribes will be provided the opportunity to review and provide comments. The AMP will outline the		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		requirement to conduct Cultural and Tribal Cultural Resource Awareness Training for construction workers and the qualifications necessary for archaeological monitors. The plan must also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP must include roles and responsibilities for cultural resources staff and contact information for the Archaeological Principal Investigator, archaeological and Native American monitors, and appropriate management staff. The AMP must detail monitoring procedures, discovery protocols, and general procedures for documenting and recovering archaeological materials, artifact identification, repository institution identification, associated repository fees, guidelines for preparing the archaeological monitoring, and the mitigation final report. The AMP must also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present. The AMP must require attendance by construction personnel at a preconstruction meeting led by a Qualified Principal Investigator/Project Archaeologist. The Principal Investigator/Project Archaeologist will explain the likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (who to call, construction diversion away from the find, etc.). The AMP must include a sample proposed letter regarding transfer of salvaged materials to an appropriate museum curation facility, a sample daily		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		monitoring report form, and recordation and analysis forms for all other pertinent archaeological resources. The Native American monitor should be affiliated with a local Native American tribe. At a minimum, the archaeological monitor will meet the Society for California Archaeology professional qualification standards for an archaeological crew leader and will work under the direction of an individual that meets the Secretary of the Interior's Standards and Guidelines for Archaeology. If unanticipated discoveries are made during archaeological monitoring, then the unanticipated discoveries protocol described in Mitigation Measure CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consultation with the lead agency and Native American representatives (if the find is Native American in origin), development of a mitigation plan, and potential development and implementation of a data recovery plan. In the event of an unanticipated discovery of human remains, the archaeological monitor will follow the HSC 7050.5 (Mitigation Measure CR-7), described in Section 3.4.2.2, *Regulatory*. **Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan (AETP) to Evaluate Potentially Significant Archaeological Discoveries**. If an existing archaeological resource cannot be avoided and has not been evaluated for the CRHR, then evaluation, testing excavations, recovery, and treatment will be needed to reduce the impacts on the resource. The implementing agency will develop an Archaeological Evaluation and Treatment Plan (AETP)		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. Implementation of such a plan may include mechanical and/or manual excavations to provide data on the cultural constituents at the site and the depositional context of such materials (if found to exist). These data can be used to determine the integrity of the site and make a formal evaluation based on the eligibility criteria set forth in CEQA and Section 106 of the National Historic Preservation Act for inclusion in the CRHR and NRHP. The AETP should define the parameters of archaeological testing at the site and the extent of excavation and analysis of any materials recovered. The AETP must also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the AETP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment will be completed. The AETP will be approved by the implementing agency and should involve consultation and review by interested Native American groups, if applicable. **Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.** If buried cultural resources of potential significance are discovered inadvertently during ground-disturbing activities, work will be temporarily halted in the area and within 50 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the implementing agency. If the find is		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest and concern regarding the proposed Project will be undertaken. The implementing agency's Principal Investigator will notify the implementing agency to discuss the significance determination and will also submit a letter indicating next steps required. If the discovery is determined to be not significant in consultation with the implementing agency, work will be permitted to continue in the area. If, in consultation with the implementing agency, a discovery is determined to be significant, the implementing agency will prepare a mitigation plan to be carried out in accordance with state guidelines. If the resource cannot be avoided, the implementing agency will develop a data recovery plan to ensure collection of sufficient information to address archaeological and historical-period research questions, with results presented in a technical report describing field methods, materials collected, and conclusions. The qualified archaeologist will treat recovered items in accordance with current professional standards by properly proveniencing (i.e., establishing the in-situ location at the time of archaeological discovery), cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the SOI's Standards, as promulgated in 36 CFR 79. <u>Operation</u> **Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas (ESAs) During Operations.** The implementing agency will avoid significant archaeological resources through establishment of ESAs		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		specific to Typical Projects' operations. If physical portions of previously identified archaeological resources are left in place after construction, then ESAs will be established to protect any remaining physical portions of the resource from further direct or indirect effects that may result as part of operations of Typical Projects. The implementing agency will establish ESAs in coordination and consultation with Native American Tribes, as necessary. As part of the operational avoidance activities, the implementing agency will: ● Prepare an operations and maintenance plan to minimize degradation of archaeological resources still extant in the API. ● Design and develop interpretive exhibits to provide education and understanding of the importance to avoid the resource. **Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.** As described above.		
3.4(c): Would the proposed Project disturb any human remains, including those interred outside of dedicated cemeteries?	Construction and Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant	Construction and Operation *Typical Projects:* **Mitigation Measure CR-7: Avoid or Minimize Impacts to Human Remains and Associated or Unassociated Funerary Objects.** If human remains are found, no further disturbance will occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98 (State of California Health and Safety Code Section 7050.5). In the event of an unanticipated discovery of human remains, all work within 50 feet of	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant	the find will be halted until the remains have been evaluated by the county coroner, and appropriate action taken in coordination with the NAHC, in accordance with Section 7050.5 of the California Health and Safety Code or, if the remains are Native American, Section 5097.98 of the PRC. If the human remains are determined to be prehistoric, the county coroner will notify the NAHC, which will determine and notify a Most Likely Descendant. The Most Likely Descendant will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. <u>Construction</u> *KOP Categories 1–6:* **Mitigation Measure CR-7: Avoid or Minimize Impacts to Human Remains and Associated or Unassociated Funerary Objects.** As described above. <u>Operation</u> *KOP Categories 1–6:* **Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.** Detailed in Impact 3.4(b) **Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas (ESAs) During Operations.** Detailed in Impact 3.4(b)	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Construction *Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure CR-1:. Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources.** Detailed in Impact 3.4(a). **Mitigation Measure CR-4a: Retain a Qualified Archaeologist.** Detailed in Impact 3.4(b). **Mitigation Measure CR-4b: Avoid Significant Archaeological or TCRs Sites through Establishment of Environmentally Sensitive Areas (ESAs).** Detailed in Impact 3.4(b). **Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.** Detailed in Impact 3.4(b). **Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan (AETP) to Evaluate Potentially significant Archaeological Discoveries.** Detailed in Impact 3.4(b). **Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.** Detailed in Impact 3.4(b).		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Mitigation Measure CR-7: Avoid or Minimize Impacts to Human Remains and Associated or Unassociated Funerary Objects. As described above. Operation *Overall 2020 LA River Master Plan Implementation:* **Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.** Detailed in Impact 3.4(b). **Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas (ESAs) During Operations.** Detailed in Impact 3.4(b).		
Energy				
3.5(a) Would the proposed Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
3.5(b) Would the proposed Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Geology, Soils, and Paleontological Resources				
3.6(a): Would the proposed Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on*	Construction and Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction and Operation **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.** Prior to final design of subsequent projects that would feature load-bearing structures (e.g., Tier III pavilions), the implementing agency will ensure that a licensed geologist and engineer will prepare a design-level geotechnical investigation prior to construction. The investigation will include subsurface soil sampling, laboratory analysis of samples collected to determine soil characteristics and properties (including identifying and defining the limits of unstable, compressible, and collapsible soils), and an evaluation of the laboratory testing. Recommendations based on the results will be used in the design specifications for the proposed subsequent projects. The report will include	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
other substantial evidence of a known fault? *Strong seismic ground shaking?* *Seismic-related ground failure, including liquefaction?* *Landslides?*		recommendations to avoid potential risks associated with seismic hazards (including ground shaking and fault rupture, seismically induced landslides, liquefaction, and the other seismic effects described in this section), in accordance with the specifications of CGS's Special Publication 117A, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, and the requirements of the Seismic Hazards Mapping Act. The geotechnical study will provide detailed project-specific recommendations for design and construction, and implementation of those recommendations will be required during construction of relevant projects. Mitigation to address potential fault rupture, seismic ground shaking, ground failure, and liquefaction hazards can include (but are not limited to) the following: ● **Fault rupture**: Studies will evaluate the location and relative activity of potentially active fault splays at the project site and the feasibility of locating future site improvements will be conducted by geologic consultants as part of the geotechnical study. Fault investigations will be conducted by a California State Certified Engineering Geologist and submitted to CGS. Appropriate building setback zones will be established in locations deemed not feasible for construction of occupied structures. ● **Seismic ground shaking**: Structural elements of subsequent projects will be designed to resist or accommodate appropriate site-specific ground motions and conform to current seismic design standards, including those set forth by prevailing building codes. ● **Liquefaction/ground failure**: Assessment of liquefaction potential at subsequent project sites will be conducted as part of the geotechnical study.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Structural design will be developed to reduce the potential impacts of liquefaction, including the incorporation of techniques such as structural design, in-situ ground modification, or supporting foundations with piles at depths designed specifically for seismically induced settlement. ● **Landslides**: Where applicable, assessment for landslide potential and/or potential for surficial failure will be performed as part of the geotechnical study with measures to be incorporated into the design, as appropriate. Mitigation measures in areas subject to a landslide hazard could include the following measures: excavation of potentially unstable material for a more stable slope configuration; reduction of landslide-driving forces by removal of earth materials at the top of the landslide; construction of a buttress and/or stabilization fills; construction of retaining walls installation of rock bolts on a slope face, and/or installation of protective wire mesh on a slope face; construction of debris impact walls at the toe of the slope to contain rock fall debris, or other such measures. The following measures could be recommended in the site-specific geotechnical study to mitigate the potential effects of unstable and/or expansive soils: ● **Groundwater:** Excavations for improvements in areas with shallow perched groundwater may need to be cased, shored, and/or dewatered to maintain stability of the excavations and adjacent improvements and provide access for construction. ● **Collapsible soils/settlement:** Assessment of soil settlement will be performed as part of the		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		geotechnical study and techniques will be recommended, as appropriate, to reduce impacts related to settlement. Assessment of settlement potential of onsite natural soils and undocumented fill will include drilling of exploratory borings or test pits and laboratory testing of soils. Possible mitigation measures for soils with the potential for settlement could include removal of the compressible/collapsible soil layers and replacement with compacted fill, surcharging to induce settlement prior to construction of improvements, allowing for a settlement period after or during construction of new fills, and utilization of specialized foundation design, including the use of deep foundation systems, to support structures. Various in-situ soil improvement techniques are also available, such as dynamic compaction (i.e., heavy tamping) or compaction grouting. ● **Expansive soils:** Assessment of the potential for expansive soils will be performed as part of the geotechnical study, and mitigation techniques, such as over-excavation and replacement with non-expansive soils, soil treatment, moisture management, and/or specific structural design for expansive soil conditions, will be developed, as appropriate. The implementing agency will apply the recommendations of the site-specific geotechnical study to minimize risks related to potential fault rupture, seismic ground shaking, ground failure, and liquefaction hazards/landslides.		
3.6(b): Would the proposed Project result in substantial	Construction and Operation	None required.	Construction and Operation	Construction and Operation

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
soil erosion or the loss of topsoil?	*Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant		*Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
3.6(c): Would the proposed Project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<u>Construction</u> *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Typical Projects:* Potentially significant *KOP Categories 1–6:*	<u>Construction and Operation:</u> **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.** Detailed in Impact 3.6(a).	<u>Construction</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	<u>Construction</u> *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> Typical Projects: Significant and unavoidable *KOP Categories 1–6:*

Environmental Impact	**Significance before Mitigation**	**Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)**	**Significance after Mitigation (when carried out by County)**	**Significance after Mitigation (when not carried out by County)**
	Less than significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant		Less than significant	Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
3.6(d): Would the proposed Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Less than significant	Construction and Operation: **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.** Detailed in Impact 3.6(a).	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant			*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
3.6(e): Would the proposed Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal where sewers are not available for the disposal of waste water?	No impacts	None required.		
3.6(f): Would the proposed Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:*	Construction **Mitigation Measure GEO-2: Conduct Paleontological Resources Investigations.** During design of individual subsequent projects and prior to construction, the implementing agency will conduct paleontological resource investigations consistent with SVP Guidelines. This process will include: • Conducting a paleontological records search through the Los Angeles County Natural History Museum to identify previously recorded paleontological localities and the presence of sensitive deposits in the proposed project study area	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	• Reviewing project design and maximum depths and extents of project ground disturbance components • Reviewing publicly available geotechnical reports for information concerning subsurface deposits and deposit depths across the project area • Identifying the potential for sensitive paleontological deposits underlying the proposed Project that project implementation could affect • Determining whether impacts on sensitive deposits, if present, would be significant If no sensitive deposits are identified or if they are sufficiently deeper than the proposed project excavations and would not be encountered during construction, no further steps will be required. If sensitive deposits are identified and could be affected by the proposed Project, implement Mitigation Measure GEO-3. **Mitigation Measure GEO-3: Avoid Paleontological Resources or Conduct Monitoring.** The implementing agency will redesign the subsequent project to avoid sensitive paleontological resources and deposits that could potentially contain these resources. If avoidance and/or project redesign is not feasible, then paleontological monitoring will be implemented and will include the following implementation steps: • The implementing agency will retain a qualified paleontologist, who will attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual (1) who has	Operation Typical Projects: Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		an MS or PhD in paleontology or geology; (2) who also has demonstrated familiarity with paleontological procedures and techniques; (3) who is knowledgeable in the geology and paleontology of the County; and (4) who has worked as a paleontological mitigation project supervisor in the County for at least 1 year. ● A paleontological monitor or a qualified paleontologist will be on site on a full-time basis during excavation and ground-disturbing activities that occur in any undisturbed deposits below ground surface, to inspect exposures for contained fossils. The paleontological monitor will work under the direction of the proposed Project's qualified paleontologist. A paleontological monitor is defined as an individual selected by the qualified paleontologist who has experience in the collection and salvage of fossil materials. ● If fossils are discovered on a development site, the qualified paleontologist will recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains. ● The qualified paleontologist will be responsible for the cleaning, repairing, sorting, and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation program. ● Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited (as a donation) at a scientific institution with permanent paleontological collections, such as the Los Angeles County Natural History Museum. Donation of the fossils will be accompanied by financial support for initial specimen storage, paid for by the project proponent.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		• Within 30 days after the completion of excavation and ground-disturbing activities, the qualified paleontologist will prepare and submit to the implementing agency a paleontological resource recovery report that documents the results of the mitigation program. This report will include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. <u>Operation</u> **Mitigation Measure GEO-4: Avoid/Minimize Impacts on Paleontological Resources During Operations.** If significant paleontological resources and sensitive deposits with the potential to contain significant paleontological resources are identified within a project area during design/planning of individual projects (Mitigation Measures GEO-2 and GEO-3), and deposits that are sensitive for significant paleontological resources remain exposed at or near the ground surface or become exposed during project operations, then an avoidance and minimization plan will be prepared to avoid/minimize potential impacts during operations. This plan may include, but not be limited to: • Securing sensitive deposits from accessibility through the development of Environmentally Sensitive Areas • Preparing an operations and maintenance plan to minimize degradation and exposure of sensitive deposits • Designing and developing interpretive exhibits to provide education and understanding of the importance of avoiding and protecting sensitive deposits and paleontological resources		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		If significant impacts on a newly exposed or existing significant paleontological resource cannot be avoided, then Mitigation Measure GEO-3 will need to be implemented.		
Greenhouse Gas Emissions				

3.7(a): Would the proposed Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Construction and Operation
	
	Construction
	
	Typical Projects – Common Elements:
	
	Potentially significant
	
	Typical Projects – Multi Use Trails and Access Gateways
	
	Potentially significant
	
	Typical Projects:
	
	Potentially significant
	
	KOP Categories 1–6:
	
	Potentially significant
	
	Overall 2020 LA River Master Plan Implementation:
		Construction and Operation
		
		Common Elements, KOP Categories 1–6, and Overall 2020 LA River Master Plan:
		
		Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.
		
		Implementing agencies will require implementation of the following GHG emissions reduction strategies:
		
		• Energy
		  ○ **Energy-efficient Appliances in Buildings.** New construction will use only ENERGY STAR rated appliances for appliance types that are offered ENERGY STAR ratings.
		  ○ **Electric Space and Water Heating for Buildings.** New construction will employ electric and water heating. Where natural gas appliances need to be installed, these appliances will be an ENERGY STAR certified gas water heater) or be powered by renewable natural gas.
		  ○ **Building Energy.** New construction will implement one or more of the Design Guidelines related to building energy consumption.
		  • Use renewable energy sources (solar, wind, water, and renewable natural gas).
			Construction and Operation
			
			Common Elements Typical Project:
			
			Significant and unavoidable
			
			Multi-Use Trails and Access Gateways:
			
			Less than Significant
			
			KOP Categories 1–6:
			
			Significant and unavoidable
			
			Overall 2020 LA River Master Plan Implementation:
			
			Significant and unavoidable
				Construction and Operation
				
				Typical Projects – Common Elements:
				
				Significant and unavoidable
				
				Typical Projects – Multi Use Trails and Access Gateways
				
				Significant and unavoidable
				
				KOP Categories 1–6:
				
				Significant and unavoidable
				
				Overall 2020 LA River Master Plan Implementation:
				
				Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant	• Optimize building orientation for solar exposure, diffused daylight, and passive ventilation. • Optimize high thermal performance. • Use high-albedo roof and paving materials to mitigate heat gain. • Use green roof and pervious paving. • Implement building energy best practices from the following standards: United States Green Building Council's LEED, United States Department of Energy Better Buildings Initiative, ENERGY STAR, Dark Sky, Cradle-to-Cradle, and Green Globes. ● Area ○ **Electric Landscaping Equipment.** Maintenance and operations activities that use landscaping equipment (e.g., lawn mowers, trimmers) for new construction will employ electric landscaping equipment. ● Water Use ○ **Water Conservation and Efficiency.** New construction will implement one or more of the Design Guidelines related to indoor and outdoor water conservation and efficiency. • Install systems for on-site water retention, detention, and filtration. • Capture 100 percent of on-site rainfall for the 85 percent rain event. • Reuse rainwater and greywater. • Create bioswales or treatment basins to collect stormwater runoff.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		• Install low-flow water fixtures that exceed the requirements of codes and ordinances. – Public bathroom faucet aerators with a flow rate of 0.4 gallon per minute – Rotating sprinkler nozzles for landscape irrigation 0.5 to 1.0 gallons per minute, or – Drip/subsurface irrigation (i.e., micro-irrigation) • Wastewater Generation o **Waste Reductions.** New construction will implement one or more of the Design Guidelines related to minimization and recycling of waste generation. • Use locally sourced, recycled, and recyclable materials with low-embodied energy. • Use green cleaning products and integrated building management. • Regularly monitor building systems and optimize usage. As discussed in Section 3.16, *Transportation*, the Common Elements Typical Project was determined to have the potential to generate a significant VMT impact. If, as part of Mitigation Measure TRA-1a, the subsequent project cannot be screened out using the County's VMT impact criteria and the VMT is determined to exceed the threshold based on applicable guideline and project type, then Mitigation Measure TRA-1b will be implemented. **Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.** Detailed in Impact 3.16(b).		

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		Construction and Operation *Multi-Use Trails and Access Gateways:* **Mitigation Measure GHG-1b: Implement Operations GHG Emissions Reduction Strategies Specific to Emission Sources of Multi-Use Trails and Access Gateways.** Implementing agencies will require implementation of the following GHG emissions reduction strategies: ● Area ○ **Electric Landscaping Equipment.** Maintenance and operations activities that use landscaping equipment (e.g., lawn mowers, trimmers) for new construction will employ electric landscaping equipment. ● Water Use ○ **Water Conservation and Efficiency.** New construction will implement one or more of the Design Guidelines related to indoor and outdoor water conservation and efficiency. • Install systems for on-site water retention, detention, and filtration. • Capture 100 percent of on-site rainfall for the 85 percent rain event. • Reuse rainwater and greywater. • Install low-flow water fixtures that exceed the requirements of codes and ordinances: – Rotating sprinkler nozzles for landscape irrigation 0.5 to 1.0 gallons per minute, or – Drip/subsurface irrigation (i.e., micro-irrigation) ● Wastewater Generation		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		○ **Waste Reductions.** New construction will implement one or more of the Design Guidelines related to minimization and recycling of waste generation. • Use locally sourced, recycled, and recyclable materials with low-embodied energy. • Recycle construction waste.		
3.7(b): Would the proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Construction and Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction and Operation *Typical Projects:* **Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.** Implementing agencies will require applicants of future development to implement the following GHG emissions-reduction strategies where feasible. • Zero-emission and near-zero-emission construction equipment will be used, to the extent feasible. **Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(a). Construction and Operation *KOP Categories 1–6:* **Mitigation Measure GHG-1a: Implement Operations GHG Emissions Reduction Strategies.** Detailed in Impact 3.7(a). **Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.**	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction and Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		As described above. **Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.** Detailed in Impact 3.16(b).		
Hazards and Hazardous Materials				
3.8(a): Would the proposed project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
3.8(b): Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan*	Construction **Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.** To avoid exposure of construction personnel, the public, or the environment to contaminated media and/or hazardous building materials, prior to construction activities associated with any subsequent project involving ground disturbance, the implementing agency will be required to retain a professional hazardous	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
hazardous materials into the environment?	*Implementation:* Potentially significant <u>Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	materials specialist specializing in hazardous materials impact assessment to conduct a project-level analysis to verify the presence or absence of hazardous materials conditions (including Cortese List sites) in the vicinity of the construction site and if there is potential for existing hazardous materials conditions to affect construction activities. This assessment will consist of a search for environment-related information present in publicly accessible databases. The information will be reviewed to determine if the construction footprint or adjacent properties are listed in the aforementioned databases. If the construction footprint or adjacent properties are listed in the databases, the professional hazardous materials specialist will determine the potential risk to construction workers, the public, or the environment from construction activities (to be documented in a technical memo). The determination of risk would consider, among other factors, regulatory status, the type of project, type of contaminated property, distance and direction to the project, and appropriate measures. If the hazardous materials specialist concludes that the subsequent project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, then no further action would be required. If a site is considered a risk to construction workers, the public, or the environment, implementing agency will implement measures to reduce risk, including one or more of the following: • Implement engineering controls and best management practices (BMPs) during construction	<u>Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		to minimize human exposure to potentially contaminated soils during construction. Engineering controls and construction BMPs could include, but are not limited to, the following: o Contractor employees working on site handling potentially contaminated media will be certified in the Occupational Health and Safety Administration's 40-hour Hazardous Waste Operations and Emergency Response training. o Contractors will water or mist soil as it is being excavated and stockpiled or loaded onto transportation trucks. o Contractors will place any stockpiled soil in areas shielded from prevailing winds or cover stockpiles with staked and/or anchored sheeting. ● Conduct a soil and/or groundwater sampling program to determine the type and extent of contaminants. The sampling program could include: o A scope of work for preparation of a health and safety plan that specifies pre-field activity marking of boring locations and obtaining utility clearance, and field activities, such as identifying appropriate sampling procedures, health and safety measures, chemical testing methods, and quality assurance/quality control procedures o Necessary permits for well installation and/or boring advancement o A soil sampling and analysis plan in accordance with the scope of work o Laboratory analyses conducted by a State-certified laboratory o Disposal processes, including transport by a State-certified hazardous material hauler to a State-		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		certified disposal or recycling facility licensed to accept and treat hazardous waste ● Implement a soil management plan. The purpose of a soil management plan is to provide administrative, procedural, and analytical guidance to expedite and clarify decisions and actions if contaminated soils are encountered. Typically, procedures and protocols are included to ensure that contaminated soil is excavated properly and efficiently, and that unacceptable risks are not posed to human health or the environment from contaminated soils. Additionally, the soil management plan would contain procedures for handling, stockpiling, screening, and disposing of the excavated soil. The soil management plan is a site-specific technical plan that could be required depending on other screening activities conducted (listed above) and is not included as part of this EIR. ● If dewatering would be necessary in areas where contaminated groundwater exists, then dewatering procedures could be subject to permit requirements of the National Pollutant Discharge Elimination System (NPDES). Discharges of treated or untreated groundwater generated from dewatering operations or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits are currently regulated under a regional general permit, General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-095, NPDES No. CAG994004)		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		• Conduct an asbestos and lead-based paint survey for any structures built prior to 1980 (the use of asbestos in buildings and structures was common prior to 1980) and planned for demolition as part of subsequent projects. An asbestos survey would be conducted in accordance with the South Coast Air Quality Management District (Rule 1403), Cal OSHA (CCR, Title 8, Section 1529), and the National Emission Standards for Hazardous Air Pollutants for Asbestos Surveys (40 CFR Part 61, Subpart M). CCR, Title 8, Section 1532.1, "Lead," and Cal OSHA requirements should be followed when handling materials containing lead. Operations None required.		
3.8(c): Would the proposed project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:*	Construction **Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.** Detailed in Impact 3.8(b). Operations None required.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:*	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than Significant		Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
3.8(d): Would the proposed project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant	Construction **Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.** Detailed in Impact 3.8(b). Operation None required.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Less than significant			*Overall 2020 LA River Master Plan Implementation:* Less than significant
3.8(e): Would the proposed project be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?	No impacts	None required.	No impacts	No impacts
3.8(f): Would the proposed project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	None required.	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Less than significant		Less than significant	Less than significant
3.8(g): Would the proposed project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Construction *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Construction **Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.** Detailed in Impact 3.19(b). Operation **Mitigation Measure WF-3: Prepare a Fire Protection Plan.** Detailed in Impact 3.19(b).	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
Hydrology and Water Quality				
3.9(a): Would the proposed project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–3, 5 and 6:* Less than significant *KOP Categories 4* No Impacts *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–3, 5, and 6:* Less than significant *KOP Category 4* No Impact *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–3, 5, and 6:* Less than significant *KOP Category 4:* No Impact *Overall 2020 LA River Master Plan Implementation:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
3.9(b): Would the proposed project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
3.9(c): Would the proposed project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: Result in substantial erosion or siltation on or off site; Substantially increase the rate or amount of surface	Construction *Common Elements Typical Projects:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Potentially significant *Multi-Use Trails and Access Gateways Typical Projects:* *Frames 1 through 4* Less than significant *Frames 5 through 9*	Construction *Typical Projects in Frames 5-9, KOP Categories 1 through 6, and Overall 2020 LA River Master Plan* **Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.** As part of site design for all new developments, the applicants will prepare Drainage Report(s) for the appropriate implementing agency review and approval prior to issuance of a grading, building, site development, or any construction permits. All development, including interim conditions during construction and interim conditions with temporary improvements, within the project site is required to address stormwater management and implement stormwater control measures. Drainage report(s) will include, at a minimum, all of the following:	Construction *Common Elements Typical Projects:* Frames 1 through 4 Less than significant *Frames 5 through 9* Less than significant *Multi-Use Trails and Access Gateways Typical Projects:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Less than significant	Construction *Common Elements Typical Projects:* Frames 1 through 4 Less than significant *Frames 5 through 9* Significant and unavoidable *Multi-Use Trails and Access Gateways Typical Projects:* *Frames 1 through 4* Less than significant *Frames 5 through 9*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
runoff in a manner that would result in flooding on or off site; Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; Impede or redirect flood flows?	Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Common Elements Typical Projects:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Potentially significant *Multi-Use Trails and Access Gateways:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Potentially significant *KOP Categories 1-6:*	• Verification of existing stormwater and flood conveyance facilities, including size, elevation, material, capacity, and condition, including the existing stormwater collection system in the project area. • Hydrologic analysis of construction-period conditions and implementation of all temporary facilities necessary during construction to avoid increases in peak flows. • Hydrologic analysis of existing and proposed operational peak flows that accounts for all areas that will be disturbed by new development. • Hydraulic analysis for evaluating pipe capacity and sizing of new pipes. The capacity of existing pipes that are proposed for reuse and new pipes will be sized in accordance with the County's methodology, as noted in the County Hydrology Manual or local municipal code, or otherwise approved by the County or City Engineer. • Applicants will implement all permanent facilities necessary, such as channel refurbishment and a bypass tunnel, as included in the *2020 LA River Master Plan* to avoid increases in operational peak flows. **Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.** Based on the results of the drainage report(s) in Mitigation Measure HYDRO-1a, measures during construction and operation may be required to ensure flood flows are not impeded and to minimize redirected flood flows. The measures will identify site-specific drainage facilities necessary to avoid flows exceeding the existing system during construction and implement	*KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u> *Common Elements Typical Projects:* Frames 1 through 4 Less than significant *Frames 5 through 9* Less than significant *Multi-Use Trails and Access Gateways:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Less than significant *KOP Categories 1-6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Common Elements Typical Projects:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Significant and unavoidable *Multi-Use Trails and Access Gateways:* *Frames 1 through 4* Less than significant *Frames 5 through 9* Significant and unavoidable *KOP Categories 1-6:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	the necessary flood-reduction strategies and capacity improvements. Specific measures include: ● If an extreme storm event is anticipated, then temporary stormwater control measures will be implemented to avoid increases in peak flows. Stormwater control measures include but are not limited to interim onsite detention facilities, capture and reuse measures, and/or other measures approved by the County, designed to maintain or reduce current, pre-development, surface runoff and stormwater discharge to the public storm drain system. ● Necessary flood-reduction strategies and capacity improvements will be implemented. <u>Operations</u> *Typical Projects in Frames 5-9; and KOP Categories 1 through 6, and Overall 2020 LA River Master Plan* **Mitigation Measure HYDRO-1a** As described above. **Mitigation Measure HYDRO-1b** As described above.		Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
3.9(d): In flood hazard, tsunami, or seiche zones, would the proposed project risk release of pollutants due to project inundation?	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant	None required.	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Less than significant		*Overall 2020 LA River Master Plan Implementation:* Less than significant	*Overall 2020 LA River Master Plan Implementation:* Less than significant
3.9(e): Would the proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Construction and Operation *Typical Projects:* No impacts *KOP Categories 1–6:* No impacts *Overall 2020 LA River Master Plan Implementation:* No impacts	None required.	Construction and Operation *Typical Projects:* No impacts *KOP Categories 1–6:* No impacts *Overall 2020 LA River Master Plan Implementation:* No impacts	Construction and Operation *Typical Projects:* No impacts *KOP Categories 1–6:* No impacts *Overall 2020 LA River Master Plan Implementation:* No impacts
Land Use and Planning				
3.10(a): Would the proposed Project physically divide an established community?	Construction *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Potentially significant	Construction *KOP Category 6:* **Mitigation Measure LU-1: Construction Management Plan.** The implementing agency will require a construction management plan (CMP) be prepared that will include the following elements: ● No construction staging will be allowed within residential neighborhoods. ● Construction workers will park in a specified off-site location and be shuttled to and from the construction site. Local residential neighborhoods will not be used	Construction *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable	Construction *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant <u>Operation</u> *Typical Projects:* No Impact *KOP Categories 1–3:* No impacts *KOP Categories 4 and 5:* Less than significant *KOP Category 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	for construction worker parking under any circumstances. ● The CMP will provide a traffic control plan that identifies the location and timing of temporary closures and detours of public streets with the goal of maintaining traffic flow, especially during peak travel periods. The CMP would be site specific and include, at a minimum, signage to alert drivers to the construction zone, traffic control methods, traffic speed limitations, and alternative access and detour provisions during road closures. Local police and fire departments will be consulted during preparation of the CMP. ● Any temporary closure or removal of parking areas or roadways during construction will be temporary and will be restored upon completion of construction. Efforts will be made to minimize their removal or shorten the length of time that these facilities are inoperable to the extent possible. ● Construction hours and parking for construction vehicles will be implemented; freight and passenger rail services will be protected; and truck routes and construction for special events during project construction, bicycle and pedestrian access, and transit access will be maintained. Screening will be provided for all construction equipment to the maximum extent feasible. ● Alternative access to community facilities and neighborhood-serving commercial uses will be provided if access would be obstructed by construction activities. **Mitigation Measure LU-2: Consultation.** During the site selection process, the project proponent will consult with the applicable municipality to	*Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u> *Typical Projects:* No Impact *KOP Categories 1–3:* No impact *KOP Categories 4 and 5:* Less than significant *KOP Category 6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects:* No Impact *KOP Categories 1–3:* No impact *KOP Categories 4 and 5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		determine whether the site is suitable for the proposed development and whether the project would physically divide an established community. This will be determined through aerial or site reconnaissance and comparison with the jurisdiction's planned and existing land uses in the project area, which will then be confirmed, in writing, by the applicable jurisdiction. If it is determined that a significant impact could result, the implementing agency will take one or more of the following actions: ● Select an alternate site that would be more appropriate for the proposed use and not likely to result in a significant impact. ● Revise the project features to avoid the impact. <u>Operation</u> *KOP Category 6* **Mitigation Measure LU-3: Alternative Connectivity.** During the subsequent project design process, determination will be made whether the project design would result in a physical barrier to the community in the form of road closures, walls, or other project features that could disrupt connectivity within the community. If it is determined that physical barriers would result, the implementing entity or person will do one or more of the following: ● Redesign the project to avoid the impact. ● Provide alternative connections that maintain connections across the community. This may include constructing off-site street connections, including alleys and other roadways, that maintain community connectivity and access.		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Mitigation Measure LU-2: Consultation. Detailed above.		
3.10(b): Would the proposed Project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Construction *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Less than significant *KOP Categories 1 and 2:* Potentially significant *KOP Categories 3–5:* Less than significant *KOP Category 6:*	Construction *KOP Category 6* **Mitigation Measure LU-1: Construction Management Plan.** Detailed in Impact 3.10(a). **Mitigation Measure LU-2: Consultation.** Detailed in Impact 3.10(a). Operation *KOP Categories 1, 2, 6* **Mitigation Measure LU-4: Site Selection Process.** To avoid potential project inconsistency with applicable land use plans, the following will be implemented: ● During the site selection process, as specific projects under the KOP category are developed, the implementing agency will consult with the affected jurisdiction to determine if potential inconsistencies with land use plans and policies could occur. ● Results of the consultation could include: o Selection of an alternative site o Revision or substitution of specific project components (alternative design) o Reduction in size of the project o Abandonment of the project The results of the consultation will be documented in writing, with written concurrence from the affected	Construction *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1 and 2:* Significant and unavoidable *KOP Categories 3–5:* Less than significant *KOP Category 6:*	Construction *Typical Projects:* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1 and 2:* Significant and unavoidable *KOP Categories 3–5:* Less than significant *KOP Category 6:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	jurisdiction, and incorporated into the County's project file. Operation *Overall 2020 LA River Masterplan* **Mitigation Measure LU-2: Consultation** Detailed in Impact 3.10(a). **Mitigation Measure LU-3: Alternative Connectivity** Detailed in Impact 3.10(a). **Mitigation Measure LU-4: Site Selection Process** As described above.	Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Mineral Resources				
3.11(a-b): Would the proposed Project result in the loss of availability of a known mineral resource or mineral resource recovery delineated on a local general plan, specific plan, or other land use plan site that would be of value to the region and the residents of the state?	Construction *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:*	None required.	Construction Typical Projects: Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:*	Construction Typical Projects: Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant		Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Noise				
Impact 3.12(a): Would the proposed Project result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Construction *Typical Projects – Common Elements – Cities of Maywood, Vernon, and Los Angeles)* Potentially significant *Typical Projects – Common Elements – (All Other Jurisdictions)* Less than significant *Typical Projects – Multi Use Trails and Access Gateways – Cities of Maywood, Vernon, Los Angeles, (Frames 4 & 6)* Potentially significant *Typical Projects – Multi Use Trails and*	Construction *Typical Projects – Common Elements (City of Maywood)* **Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.** During final design the implementing agency will prepare a focused noise analysis for any project within the city, which identifies nearby noise sensitive receptors that could be affected, predicts anticipated construction-related noise levels, and identifies measures that will be implemented by the construction contractor in order to comply with the city's standard. Measures that could be implemented include, but are not limited to, the following: ● Using equipment that generates lower noise levels than those outlined in Table 3.12 9 ● Locating construction equipment far enough from noise-sensitive land uses such that noise attenuates to below the city's standard ● Designing and installing temporary sound barriers, which would provide attenuation below the city's dBA standard The implementing agency will also require noise monitoring during all phases of construction to confirm that the mitigation measures identified by the	Construction *Typical Projects-Common Elements (City of Maywood)* Less than significant *Typical Projects – Common Elements (Vernon)* Significant and unavoidable *Typical Projects – Common Elements (City of Los Angeles)* Less than significant *Typical Projects – Common Elements – (All Other Jurisdictions)* Less than significant *Typical Projects-Multi Use Trails and*	Construction *Typical Projects-Common Elements City of Maywood)* Significant and unavoidable *Typical Projects – Common Elements (Vernon)* Significant and unavoidable *Typical Projects – Common Elements (City of Los Angeles)* Significant and unavoidable *Typical Projects – Common Elements – (All Other Jurisdictions)* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Access Gateways– (All Other Jurisdictions) Less than significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects – Common Elements (Traffic):* Less than significant *Typical Projects – Common Elements (On-site) – (County of LA; Cities of Long Beach, Carson, Compton, Paramount, South Gate, Cudahy, Bell, Maywood, Vernon, Los Angeles, Glendale, Burbank)*	construction noise work plan and implemented by the construction contractor reduce construction noise to below the city's threshold. Construction *Typical Projects – Common Elements (City of Vernon)* **Mitigation Measure NOI-1: As described above.** **Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.** Prior to any construction within the City of Vernon, the implementing agency will apply for and obtain a conditional use permit, which will allow the Project to exceed the City of Vernon's noise standard of 65 dBA. Construction *Typical Projects – Common Elements (City of Los Angeles)* **Mitigation Measure NOI-3: Require Noise-Reducing Practices be incorporated into Construction Activities.** Prior to any construction within the City of Los Angeles, the implementing agency will require the contractor to include the following noise-reducing practices: ● Use noise control devices, such as equipment mufflers, enclosures, and barriers. Natural and artificial barriers such as ground elevation changes and existing buildings can shield construction noise. Stage construction operations as far from noise-sensitive uses as possible. ● Avoid residential areas when planning haul truck routes.	*Access Gateways City of Maywood)* Less than significant *Typical Projects – Multi Use Trails and Access Gateways (Vernon)* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways (City of Los Angeles)* Less than significant *Typical Projects – Multi Use Trails and Access Gateways (All Frames)* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:*	*Typical Projects- Multi Use Trails and Access Gateways City of Maywood)* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways (Vernon)* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways (City of Los Angeles)* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways (All Frames)* Less than significant *KOP Categories 1–5:* Significant and unavoidable *KOP Category 6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant *Typical Projects – Multi Use Trails and Access Gateways – Typical Projects – Multi Use Trails and Access Gateways – (Cities of Maywood, Vernon, Los Angeles)* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways – (All other Jurisdictions)* Less than significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation*: Potentially significant	• Maintain all sound-reducing devices and restrictions throughout the construction period. • Replace noisy equipment with quieter equipment (for example, use a vibratory pile driver instead of a conventional pile driver and rubber-tired equipment rather than track equipment). • Change the timing and/or sequence of the noisiest construction operations to avoid sensitive times of the day. Construction *Typical Projects – Multi-Use Trails and Access Gateways (City of Maywood)* **Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.** As described above. Construction *Typical Projects – Multi-Use Trails and Access Gateways (City of Vernon)* **Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.** As described above. Construction *Typical Projects – Multi-Use Trails and Access Gateways (City of Los Angeles)* **Mitigation Measure NOI-3: Require Noise-Reducing Practices be incorporated into Construction Activities.**	Significant and unavoidable Operation *Typical Projects – Common Elements (Traffic):* Less than significant *Typical Projects – Common Elements (On-site) – (County of LA)* Less than significant *Typical Projects – Common Elements (On-site) – (City of Long Beach)* Less than significant *Typical Projects – Common Elements (On-site) – (Carson,)* Less than significant *Typical Projects – Common Elements (On-site) – (Compton)* Less than significant *Typical Projects – Common Elements*	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements (Traffic):* Less than significant *Typical Projects – Common Elements (On-site) – (County of LA)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (City of Long Beach)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Carson,)* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		As described above. Operation *Typical Projects – Common Elements (County of LA; Cities of Long Beach, Carson, Compton, Paramount, Cudahy, Bell, Maywood, Vernon, Los Angeles, Glendale, Burbank)* Operations (Onsite) **Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.** During final design of the Common Elements Typical Project, the implementing agency will design HVAC systems to comply with the applicable city's municipal code standards. This could include but would not be limited to actions such as: ● Prepare a focused noise study to analyze HVAC noise, which will identify a location for HVAC systems at appropriate distances so as to not exceed a 30-minute noise level (within any 1 hour) of 50 dBA at the closest noise sensitive land use. ● Design housings or shielding for HVAC systems that would reduce HVAC noise so as to not exceed a 30-minute noise level (within any 1 hour) of 50 dBA at the closest noise sensitive land use. Operations *Typical Projects – Common Elements (City of South Gate)* **Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.**	*(On-site) – (Paramount)* Less than significant *Typical Projects – Common Elements (On-site) – (South Gate)* Less than significant *Typical Projects – Common Elements (On-site) – (Cudahy)* Less than significant *Typical Projects – Common Elements (On-site) – (Bell)* Less than significant *Typical Projects – Common Elements (On-site) – (Maywood)* Less than significant *Typical Projects – Common Elements (On-site) – (Vernon)* Less than significant *Typical Projects – Common Elements*	*Typical Projects – Common Elements (On-site) – (Compton)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Paramount)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (South Gate)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Cudahy)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Bell)* Significant and unavoidable *Typical Projects – Common Elements*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		As described above. **Mitigation Measure NOI-5: Prepare Focused Noise Study and Implement Findings.** During final design of the Common Elements Typical Project, the implementing agency will prepare a focused noise study to determine the existing ambient baseline noise level by which to compare the operational noise level of the Common Elements Typical Project. The focused noise study will analyze the existing baseline noise level against operational noise, and, if it is determined that operational noise levels from the Common Elements would exceed the sound level limit, the implementing agency will provide measures or engineering best management practices to reduce exterior noise below the limit. These measures or best management practices could include, but are not limited to, the following: ● Locating the Common Elements Typical Project away from noise-sensitive receptors to reduce operational noise to below the existing baseline ● Designing the Common Elements Typical Project to shield noise-sensitive receptors from noise-producing elements ● Including sound-attenuating features such as soundwalls <u>Operation</u> *Typical Projects – Multi-Use Trails and Access Gateways (Maywood)* **Mitigation Measure NOI-1** As described above.	*(On-site) – (Los Angeles)* Less than significant *Typical Projects – Common Elements (On-site) – (Glendale)* Less than significant *Typical Projects – Common Elements (On-site) – (Burbank)* Less than significant *Typical Projects – Multi Use Trails and Access Gateways – (All other Jurisdictions)* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	*(On-site) – (Maywood)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Vernon)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Los Angeles)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Glendale)* Significant and unavoidable *Typical Projects – Common Elements (On-site) – (Burbank)* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways –*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		Operation *Typical Projects – Multi-Use Trails and Access Gateways (Vernon)* **Mitigation Measure NOI-2** As described above. Operation *Typical Projects – Multi-Use Trails and Access Gateways (Los Angeles)* **Mitigation Measure NOI-3** As described above. Construction *KOP Categories 1 through 6* As the location, based on Frame and jurisdiction is not known, the implementing agency will comply with relevant municipal code standards, time frames, and General Plan requirements related to construction of any project associated with any relevant KOP category. Additionally, the implementing agencies will incorporate Mitigation Measures **NOI-1** through **-3** as discussed above as mitigation within the cities of Maywood, Vernon, and Los Angeles. Operations *KOP Categories 1 through 6* **Mitigation Measure NOI-6: Prepare a Noise Study.** The implementing agency will prepare a focused noise study that analyzes the operational noise impacts of subsequent projects under the six KOP categories that include noise-producing components, such as, but not		*(All other Jurisdictions)* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		limited to, equestrian facilities and under- and overpasses or any other KOP-related project component. The focused noise study will include the quantification of noise-producing activities located on and originating from the subsequent project site. The focused noise study will determine the extent of impacts and whether these impacts would exceed any codified thresholds or guidance associated with the relevant jurisdiction. Should impacts be identified, the implementing agency will provide mitigation to reduce impacts to less-than-significant levels. Mitigation could include, but is not limited to, the following: ● Project design that would isolate noise producing features away from noise-sensitive receptors ● Inclusion of noise-attenuating features such as sound walls, berms, acoustical shielding, etc., which would block the line of sight and provide noise reduction to surrounding noise-sensitive land uses <u>Construction and Operation</u> *Overall 2020 LA River Master Plan Implementation* **Mitigation Measure NOI-1 through NOI-6** As described above.		
Impact 3.12(b): Would the proposed Project generate excessive groundborne vibration or groundborne noise levels?	<u>Construction</u> *Typical Projects: Common Elements* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways*	<u>Construction</u> **Mitigation Measure NOI-7: Locate Project 200 feet or More from Occupied Structures or Prepare Vibration Study and Implement Findings.** The implementing agency will locate any development of the Common Elements Typical Project outside of a distance of 200 feet from any occupied structure. If for some reason this is not possible, then during final design the implementing agency will prepare a focused	<u>Construction</u> *Typical Projects:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant	<u>Construction</u> *Typical Projects: Common Elements* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Typical Projects:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	vibration study that analyzes construction vibration sources and predicts vibration levels at nearby vibration sensitive land uses. If vibration levels are predicted to exceed the County's 0.01 PPV threshold or any applicable city's standards, the implementing agency will prescribe measures to reduce vibration to the greatest extent practical. Measures could include but are not limited to: ● Using less vibration-intensive construction equipment ● Timing construction so that structures would not be occupied when high levels of vibration are expected ● Informing residents of the timing of construction and that vibration may be noticeable during these times **Mitigation Measure NOI-8: Locate Project 400 feet or More from Occupied Structures or Prepare Vibration Study and Implement Findings.** The implementing agency will locate any development of a Multi-Use Trails and Access Gateways Project outside of a distance of 400 feet from any occupied structure (dependent on phase and construction equipment used). If for some reason this is not possible, during final design the implementing agency will prepare a focused vibration study that analyzes construction vibration sources and predicts vibration levels at nearby vibration sensitive land uses. If vibration levels would exceed the County's 0.01 PPV threshold or any applicable city's standards, the implementing agency will prescribe measures to reduce vibration to the greatest extent practical. Measures could include but are not limited to: ● Using less vibration-intensive construction equipment	*KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Significant and unavoidable *KOP Categories 1–5:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		• Timing construction so that structures would not be occupied when high levels of vibration are expected • Informing residents of the timing of construction and that vibration may be noticeable during these times **Mitigation Measure NOI-9: Prepare Vibration Study and Implement Findings.** The implementing agency will, during final design, prepare a focused vibration study that analyzes construction vibration sources and predicts vibration levels at nearby vibration sensitive land uses. If vibration levels would exceed the County's 0.01 PPV threshold or any other codified threshold, the implementing agency will prescribe measures to reduce vibration to the greatest extent practical. Measures could include, but are not limited to, the following: • Using less vibration-intensive construction equipment • Timing construction so that structures would not be occupied when high levels of vibration are expected • Informing residents of the timing of construction and that vibration may be noticeable during these times		
Impact 3.12(c) : Would the proposed Project be located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	None required.	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	<u>Construction and Operation</u> *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
and expose people residing or working in the project area to excessive noise levels?	Less than significant		Less than significant	Less than significant
Population and Housing				
Impact 3.13(a): Would the proposed Project induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Impact 3.13(b): Would the proposed Project displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	None required.	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	Construction and Operation *Typical Projects:* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Less than significant		Less than significant	Less than significant
Public Services				
Impact 3.14(a): Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Fire Protection; Police Protection; Schools; Parks; Other Public Facilities?	Construction *Typical Projects:* Less than significant *KOP Categories 1–6: Police and Fire Protection:* Potentially significant *KOP Categories 1–6: Schools, Parks, and Other Public Facilities:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects:* Less than significant *KOP Categories 1–6: Police and Fire Protection:*	Construction **Mitigation Measure LU-1: Construction Management Plan** Detailed in Impact 3.10(a). Operation **Mitigation Measure PS-1: Ensure Police and Fire Service Providers Have Adequate Resources.** During subsequent project design and development, the implementing agency will regularly notify and coordinate with police and fire service providers that have jurisdiction over subsequent project sites on project construction design, activities, and scheduling—including any street or lane closures related to subsequent projects—to ensure police and fire service providers have adequate resources to continue to serve the project area within their respective required levels of service and response times once the subsequent project is constructed.	Construction *Typical Projects:* Less than significant *KOP Categories 1–6: Police and Fire Protection:* Less than significant *KOP Categories 1–6: Schools, Parks, and Other Public Facilities:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1–6: Police and Fire Protection:*	Construction *Typical Projects:* Less than significant *KOP Categories 1–6: Police and Fire Protection:* Significant and unavoidable *KOP Categories 1–6: Schools, Parks, and Other Public Facilities:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects:* Less than significant *KOP Categories 1–6: Police and Fire Protection:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant *KOP Categories 1–6: Schools, Parks, and Other Public Facilities:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant		Significant and unavoidable *KOP Categories 1–6: Schools, Parks, and Other Public Facilities:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Significant and unavoidable *KOP Categories 1–6: Schools, Parks, and Other Public Facilities:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Recreation				
Impact 3.15(a): Would the proposed Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant	Construction **Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.** As specific subsequent project and location information is identified during detailed design, the implementing agency will confirm the timing, duration, and areal extent of construction activities that would occur. If temporary closures of existing recreational facilities would be necessary for construction, the specific increase in use of other nearby recreational facilities will be evaluated. Factors to be considered in the evaluation include the duration of the closure, acreage and type of facility that would be unavailable due to the closure, and existing usage levels at the relevant nearby recreational facilities. If there is an increase in the use of existing neighborhood and regional parks or other recreational	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	facilities such that substantial physical deterioration of the facility would occur or is accelerated, the implementing agency will apply measures including, but not limited to, one or more of the following: ● Minimize duration of construction period. ● Modify construction phasing to limit disturbance of existing recreational facilities. ● Avoid construction during peak use periods. ● Post signage informing users of the duration of construction, with additional wayfinding to adjacent facilities with similar amenities.	Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Impact 3.15(b): Would the proposed Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways*	Construction and Operation Refer to mitigation measures identified in Sections 3.1, *Aesthetics*; 3.2, *Air Quality*; 3.3, *Biological Resources*; 3.4, *Cultural Resources*; 3.5, *Energy*; 3.6, *Geology, Soils, and Paleontological Resources*; 3.7, *Greenhouse Gas Emissions*; 3.8, *Hazards and Hazardous Materials*; 3.9, *Hydrology and Water Quality*; 3.10, *Land Use and Planning*; 3.11, *Mineral Resources*; 3.12, *Noise*; 3.13, *Population and Housing*; 3.14, *Public Services*; 3.16,	Construction Refer to the significance after required mitigation identified in Sections 3.1 through 3.14 and 3.16 through 3.19 Wildfire.	Construction Refer to the significance after required mitigation identified in Sections 3.1 through 3.14 and 3.16 through 3.19 Wildfire.

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
physical effect on the environment?	Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:*	*Transportation*; 3.17, *Tribal Cultural Resources*; 3.18, *Utilities and Service Systems*; and 3.19, *Wildfire*.	<u>Operation</u> Refer to the significance after required mitigation identified in Sections 3.1 through 3.14 and 3.16 through 3.19 Wildfire.	<u>Operation</u> Refer to the significance after required mitigation identified in Sections 3.1 through 3.14 and 3.16 through 3.19 Wildfire.

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant			
Transportation				
Impact 3.16(a): Would the proposed Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects – Common Elements:* Less than significant	Construction **Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.** Detailed in Impact 3.10(a). Operation None required.	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:*	Construction *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements:* Less than significant

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Typical Projects – Multi Use Trails and Access Gateways Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant		Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Impact 3.16(b): Would the proposed Project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:*	Construction **Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.** Detailed in Impact 3.10(a). Operation **Mitigation Measure TRA-1a. Determine VMT Based on Type of Subsequent Project.** For any subsequent projects that include project elements that are identified in the VMT Impact Evaluation Matrix as having the potential to generate a significant VMT impact, the implementing agency will conduct the following two-step screening process: • **Step 1.** Conduct a trip generation analysis to determine whether a project would generate a net increase of 110 or more daily trips, or determine whether the location is located within one-half mile of a major transit stop or high-quality transit corridor based on its County Transportation Impact	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation	Construction *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant <u>Operation</u> *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Less than Significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	Analysis Guidelines Sections 3.1.2.1 and 3.1.2.3. If the subsequent project is screened out once project design and location details are known, then no further actions are required. If the subsequent project is not screened out after Step 1, the implementing agency will move on to Step 2. • **Step 2.** Perform a VMT analysis for the subsequent project using the County's VMT impact criteria that have been developed based on guidance from OPR and CARB. Per the criteria, project VMT impact thresholds vary depending on the project type, as follows: o For residential development land use projects, the project would generate residential VMT per capita exceeding 16.8 percent below the existing residential VMT per capita for the Baseline Area in which the project is located. o For office land use projects, the project would generate employment VMT per employee exceeding 16.8 percent below the existing employment VMT per employee for the Baseline Area in which the project is located. o For regional serving retail land use projects, entertainment projects, and/or event center land uses, the project would result in a net increase in existing Total VMT. Trips associated with these land uses are typically discretionary trips, which may be either substitute trips to other, closer destinations, or new trips entirely. A project-specific customized approach will be required to estimate VMT for such projects. The methodology should be developed in consultation with and approved by Public Works staff at the outset of the study.	*Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* *Less than Significant KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Significant and unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Less than Significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		○ For unique land uses in which a land use project does not fit into any of the above categories, a project-specific customized approach may be required to estimate daily trips and VMT, but may be based on the existing employment trip element using an approach similar to that for office projects, above. The methodology and thresholds to be used in such cases should be developed in consultation with and approved by Public Works staff at the outset of the study. If the subsequent project cannot be screened out but the VMT is determined to not exceed the threshold based on the applicable guideline and project type, then no further action is needed. If the subsequent project cannot be screened out and the VMT is determined to exceed the threshold based on the applicable guideline and project type, then Mitigation Measure TRA-1b will be implemented: **Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.** The implementing agency (County or other jurisdictional agency) will implement a subsequent project-specific program utilizing transportation demand management (TDM) strategies and neighborhood or site enhancements to reduce VMT, and any other appropriate strategies to address identified impacts and reduce VMT to the River Corridor. The program to reduce VMT will be based on the suite of eligible TDM strategies **included in the County Guidelines or other measures with substantial evidence, or, if the subsequent project is located in an incorporated city, the program will be based on**		

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		that city's list of qualifying VMT mitigation strategies. Specific measures can include but are not limited to: ● Increasing transit accessibility ● Relocating a project in order to be adjacent to transit ● Pricing any provided parking at river access sites to discourage vehicle trips to the River Corridor ● Implementation of neighborhood or site enhancements such as pedestrian network improvements (for example, high-visibility crosswalks, continuous sidewalks, and Americans with Disabilities Act [ADA]-compliant directional curb cuts at intersections), and traffic calming measures such as speed humps or chicanes		
Impact 3.16(c): Would the proposed Project substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or result in inadequate emergency access?	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant	Construction **Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.** Detailed in Impact 3.10(a). Operation None required.	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Construction *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant		Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Tribal Cultural Resources				
Impact 3.17(a), Would the proposed Project cause a substantial adverse change in the significance of a TCR defined in PRC Section 21074 as a	Construction *Typical Projects – Common Elements:* Potentially significant	Construction **Mitigation Measure CR-1a: Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources to Determine Presence of Resources.** Detailed in Impact 3.4(a).	Construction *Typical Projects – Common Elements:* Significant and unavoidable	Construction *Typical Projects – Common Elements:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is either of the following: *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?* *A resource determined by the lead agency to be significant pursuant to criteria in PRC Section 5024.1(c). In applying this criteria, the lead agency will*	*Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant	**Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources and Implement Findings.** Detailed in Impact 3.4(a). **Mitigation Measure CR-4a: Retain a Qualified Archaeologist.** Detailed in Impact 3.4(b). **Mitigation Measure CR-4b: Avoid Significant Archaeological Sites or TCRs through Establishment of Environmentally Sensitive Areas.** Detailed in Impact 3.4(b). **Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.** Detailed in Impact 3.4(b). **Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.** Detailed in Impact 3.4(b). **Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.** Detailed in Impact 3.4(b). **Mitigation Measure TCR-1: Conduct Native American Monitoring.**	*Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable	*Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
consider the significance of the resource to a California Native American tribe?	*Overall 2020 LA River Master Plan Implementation:* Potentially significant	If determined necessary via consultation, in addition to Mitigation Measure CR-4c Native American monitoring requirements, Native American monitoring will be conducted by the tribe that identified the TCR through AB 52 consultation. Native American monitors will be present during construction activities in native sediments and will observe all ground-disturbing activities conducted within 100 feet of the TCR. Should unanticipated discoveries be made during Native American monitoring, then the unanticipated discoveries protocol described in Mitigation Measure CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consulting with the lead agency and Native American representatives (if the find is Native American in origin), developing a mitigation plan, and potentially developing and implementing a data recovery plan. In the event of an unanticipated discovery of human remains, the monitor will follow Section 7050.5 of the Health and Safety Code (Mitigation Measure CR-7), described in Section 3.4.2.2 of the PEIR. <u>Operation</u> **Mitigation Measure TCR-2: Avoid TCRs during Project Operations through Establishment of Environmentally Sensitive Areas.** If physical portions of previously identified TCRs are left in place after project construction, then Environmentally Sensitive Areas will be established to protect any remaining physical portions of the TCR from further direct or indirect affects that may result as part of project operations. The establishment of Environmentally Sensitive Areas will be conducted in	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		coordination and consultation with Native American tribes. **Mitigation Measure TCR-3: Temporarily Halt Ground Disturbance for Unanticipated TCR Discoveries during Operations.** If TCRs are discovered inadvertently during project operations, work will be temporarily halted in the area and within 100 feet of the find. The implementing agency will notify the consulting Native American tribe to assess the find and develop the appropriate treatment measures in consultation with the implementing agency and Native American tribes.		
Utilities/Service Systems				
Impact 3.18-1(a): Would the proposed Project require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation*: Potentially significant	Construction: None required. Operations *KOP Categories 1 through 6 and Overall 2020 LA River Master Plan* **Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.** During design, the implementing agency will prepare a utilities plan that: ● Identifies the location of existing utilities and connections and new/expanded infrastructure that will be required to connect to existing services ● Quantifies demand and generation factors for construction of the new/expanded infrastructure on	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
environmental effects?	Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	a project-specific basis and determine whether supply/capacity can meet demand ● Identifies project modifications that will minimize any significant environmental impact on utilities As part of the utilities plan, the implementing agency will prepare a utilities report that compares the expected operational demand and generation for the various utility resources against existing supply and infrastructure to determine whether sufficient capacity exists to accommodate the Project; if any insufficiency is identified, the implementing agency will modify the Project to avoid the impact in consultation with the affected utility provider(s). Modifications to the Project could include the following site-specific conservation features above those required by the applicable codes and ordinances: ● On-site wastewater treatment ● On-site recycled water infrastructure ● On-site solid waste recycling ● Solar panels ● Use of alternative energy such as biofuels	Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Operation *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Impact 3.18(b): Would the proposed Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Construction *Typical Projects –* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	Construction None required. Operation *KOP Category 6 and Overall 2020 LA River Master Plan* **Mitigation Measure UTIL-2: Prepare Water Supply Assessment.** The implementing agency will prepare a water supply assessment in accordance with the requirements of SB 610.	Construction *Typical Projects –* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	Construction *Typical Projects –* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant Operation *Typical Projects –* Less than significant *KOP Categories 1–3* Less than significant *KOP Category 4:* No Impact *KOP Category 5:* Less than significant *KOP Category 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant		Significant and unavoidable Operation *Typical Projects –* Less than significant *KOP Categories 1–3:* Less than significant *KOP Category 4:* No Impact *KOP Category 5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Significant and unavoidable Operation *Typical Projects –* Less than significant *KOP Categories 1–3:* Less than significant *KOP Category 4:* No Impact *KOP Category 5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Impact 3.18(c): Would the proposed Project result in a determination by the wastewater treatment provider that serves or may serve the Project	Construction *Typical Projects – Common Elements:* No Impact	Construction None required. Operation *KOP Category 6 and Overall 2020 LA River Master Plan* **Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.**	Construction *Typical Projects – Common Elements:* No Impact	Construction *Typical Projects – Common Elements:* No Impact

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	*Typical Projects – Multi Use Trails and Access Gateways* No Impact *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Potentially significant	As described above.	*Typical Projects – Multi Use Trails and Access Gateways* No Impact *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable	*Typical Projects – Multi Use Trails and Access Gateways* No Impact *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Overall 2020 LA River Master Plan Implementation: Potentially significant		*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	*Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Impact 3.18(d): Would the proposed Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects – Common Elements:*	Construction *KOP Category 6 and Overall 2020 LA River Master Plan* **Mitigation Measure UTIL-3: Recycle Construction Materials and Reduce Waste.** Implementing agencies will require construction contractors to recycle construction materials and divert inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill, according to local, regional, and State regulations and ordinances. Implementing agencies will incentivize construction contractors with waste minimization goals in bid specifications. Operation *KOP Category 6 and Overall 2020 LA River Master Plan* **Mitigation Measure UTIL-4: Divert Solid Waste.** For every project under KOP Category 6, the implementing agency will include one or more of the following actions to reduce the amount of solid waste generated from operation of the Project: ● Provide on-site recycling containers both outside and indoors on each floor of the development. ● Ensure that all contracts for landscape maintenance include provisions for recycling/composting of green waste.	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects – Common Elements:* Less than significant	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements:*

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	Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	• Provide for regular collection of recyclable material and green waste for diversion from landfill. • Include signage throughout the project site encouraging the reuse and recycling of waste. • Provide incentives for project operators to reduce and divert solid waste from operation of the project; these incentives could include rebates to property owners for identified volume levels of recycled waste per development and innovative changes to standard operating procedures.	*Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–5:* Less than significant *KOP Category 6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Impact 3.18(e): Would the proposed Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<u>Construction</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant	None required.	<u>Construction</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant	<u>Construction</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant

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	Overall 2020 LA River Master Plan Implementation: Less than significant <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant		*Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	*Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant
Wildfire				
Impact 3.19(a): Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan.	<u>Construction</u> *Typical Projects – Common Elements:* Potentially significant	<u>Construction</u> **Mitigation Measure WF-1: Construction Coordination with Emergency and Fire Services** The implementing agency and construction contractor will regularly notify and coordinate with Los Angeles County and/or local jurisdictions' emergency departments on project construction design, activities, and scheduling. For future projects with substantial	<u>Construction</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways*	<u>Construction</u> *Typical Projects – Common Elements:* Significant and Unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Typical Projects – Multi Use Trails and Access Gateways Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*	construction periods (e.g., more than 10 months), the following measures will be implemented as applicable to minimize construction impacts on emergency response requirements of relevant police and fire departments. ● Prior to the start of construction, consult the fire station(s) serving the project area and review phasing, road/lane closure, and detour plans. The fire station(s) may then identify alternative fire and emergency medical response routes. ● Prior to the start of construction, consult the police station(s) serving the project area, as appropriate, of project-related lane and/or road closures and detour plans. The police station(s) may then identify alternative police emergency response routes. ● If determined to be necessary by the relevant police and/or fire service providers, implement one or more of the following applicable traffic control measures capable of reducing the temporary adverse effects on police and emergency vehicle travel during project construction: o Use flag persons to direct traffic. o Post "No Parking" signs along the affected area. o Install temporary signals or signs to direct traffic or other equivalent traffic control measures. <u>Operation</u> None required.	Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Les s than significant	*Typical Projects – Multi Use Trails and Access Gateways* Significant and Unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially Significant			Significant and Unavoidable
Impact 3.19(b): Would the Project due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects – Common Elements:* Potentially significant	Construction **Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.** For construction projects that are proposed in or adjacent to areas designated as Very High FHSZs, prior to construction, the implementing agency will prepare a construction fire protection plan. The construction fire protection plan will include, but will not be limited to, the following measures to address potential ignition sources during construction: ● Parking for workers' vehicles and equipment will be designated away from dry brush and other ignition sources. ● Vehicle idling will be prohibited. ● Specify that personnel must be trained in the practices of the fire safety plan relevant to their duties. Construction and maintenance personnel will be trained and equipped to extinguish small fires to prevent them from growing into more serious threats. ● Prohibit smoking in wildland areas, with smoking limited to paved areas or areas cleared of all vegetation. ● During high fire risk conditions, designated vehicles will carry fire-prevention equipment, such as water, a shovel, and/or a fire extinguisher, on the construction site at all times. ● Fireproof mats or shields will be used during welding or other construction activities that could produce sparks during high fire risk conditions.	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable	Construction *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Typical Projects – Multi Use Trails and Access Gateways Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	• Demonstrate compliance with applicable plans and policies established by State agencies. <u>Operations</u> **Mitigation Measure WF-3: Prepare a Fire Protection Plan.** For projects that are proposed in areas designated as Very High FHSZs, the implementing agency will prepare a fire protection plan (FPP) for the project prior to commencing operation of the facility. The FPP will be prepared to ensure that projects developed within Very High FHSZs are in compliance with current regulatory codes and that impacts resulting from wildland fire hazards are adequately mitigated. The FPP will include, but will not be limited to, the following: • Measures to address specific location, topography, geology, level of flammable vegetation, and climate of the project site • Measures consistent with applicable fire codes • A vegetation management plan that includes measures such as reducing flammable vegetation around the property's structure and installing sprinklers that activate in the case of fire In addition, the following elements will be included in the FPP: • Emergency services – availability and travel time • Access for emergency services and evacuation of students and faculty (primary and, if required, additional access) • Firefighting water supply • Fire sprinkler system • Ignition resistant construction	*KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	*Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		• Defensible space, ornamental landscaping, and vegetation management		
Impact 3.19(c): Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment.	Construction *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant Operation *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways*	Construction **Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.** Detailed in Impact 3.19(b) Operation **Mitigation Measure WF-3: Prepare a Fire Protection Plan.** Detailed in Impact 3.19(b)	Construction *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant Operation *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:*	Construction *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable Operation *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways*

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant		Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable	Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable
Impact 3.19(d)Would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	<u>Construction</u> *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially	<u>Construction</u> **Mitigation Measure WF-4: Prepare Post-Fire Risk Reduction Plan.** This measure is required to ensure that if a project is in Very High FHSZs or an area that was recently burned by wildfire, then the implementing agency will prepare a post-fire risk reduction plan. The plan will focus on the specific construction site and be finalized prior to the beginning of construction. The post-fire risk reduction plan will implement one or more of the following applicable measures: ● Treat all wildfire burned areas within the construction area to control stormwater runoff prior to winter rains. ● Restore wildfire areas within the construction area by planting native vegetation cover or encouraging the re-growth of native species using best practices as soon as possible to aid in control of stormwater runoff.	<u>Construction</u> *Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant <u>Operation</u>	<u>Construction</u> *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
	significant <u>Operation</u> *Typical Projects – Common Elements:* Potentially significant *Typical Projects – Multi Use Trails and Access Gateways* Potentially significant *KOP Categories 1–6:* Potentially significant *Overall 2020 LA River Master Plan Implementation:* Potentially significant	• Remove dead, woody vegetation along watercourses following a catastrophic fire, as directed by local fire officials. • Post-fire, implement slope stabilization measure by planting native vegetation cover as soon as possible to aid in landslide control, as directed by local fire officials. • Ensure excess storm flow is properly diverted away from important property improvements or unstable slopes. • Check drainage systems and clear out culverts, roof gutters, street gutters, infiltration and detention basins, concrete waterways, etc., to allow water to drain, as directed by local fire officials. • Remove potentially toxic materials, ideally before rain washes toxic runoff into storm drains and waterways, as directed by local fire officials. • Minimize foot traffic, equipment, and disturbance on burned landscapes. **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.** Detailed in Impact. 3.6(a). **Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.** Detailed in Impact 3.*9(c).* <u>Operation</u> **Mitigation Measure WF-4: Prepare Post-Fire Risk Reduction Plan.**	*Typical Projects – Common Elements:* Less than significant *Typical Projects – Multi Use Trails and Access Gateways* Less than significant *KOP Categories 1–6:* Less than significant *Overall 2020 LA River Master Plan Implementation:* Less than significant	unavoidable <u>Operation</u> *Typical Projects – Common Elements:* Significant and unavoidable *Typical Projects – Multi Use Trails and Access Gateways* Significant and unavoidable *KOP Categories 1–6:* Significant and unavoidable *Overall 2020 LA River Master Plan Implementation:* Significant and unavoidable

Environmental Impact	Significance before Mitigation	Mitigation Measures (these apply to all project elements, i.e., both Typical Projects, six KOP categories, and overall *2020 LA River Master Plan*, unless specified otherwise)	Significance after Mitigation (when carried out by County)	Significance after Mitigation (when not carried out by County)
		As described above **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.** Detailed in Impact. 3.6(a). **Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.** Detailed in Impact 3.9(c).		

Chapter 1
Introduction

1.1 Background and Overview

This draft program environmental impact report (PEIR) has been prepared by Los Angeles County (County) through Los Angeles County Public Works (Public Works) to assess the potential environmental impacts that could result from the implementation of the proposed *2020 LA River Master Plan* (Project) in Los Angeles County, California. The County is the lead agency for the proposed Project, pursuant to the California Environmental Quality Act (CEQA). Design information for the proposed *2020 LA River Master Plan* is at a conceptual level; therefore, the environmental impact analysis is presented at a programmatic level and does not include project-specific or site-specific analysis.

The Draft *2020 LA River Master Plan* was released to the public on January 13, 2021 for review and comment. The proposed Project is along a 51-mile-long, approximately 2-mile-wide (i.e., 1 mile on each side) corridor of the Los Angeles River (LA River) in Los Angeles County and spans through 18 jurisdictions (17 cities and unincorporated County areas). The river encompasses an 834-square-mile watershed and flows from its headwaters at river mile 51.0 in Canoga Park within the City of Los Angeles to river mile 0.0 in Long Beach, where the river meets the Pacific Ocean. The LA River was channelized between the late 19th and mid-20th centuries to protect lives and property from flooding as the Los Angeles region rapidly grew and transformed to a largely urbanized area. Today, 1 million people live within 1 mile of the river.

1.1.1 LA River Master Plan History

The proposed *2020 LA River Master Plan* is the culmination of planning efforts spanning 90 years. In the past 30 years, planning efforts including technological advances, geographic information systems (GIS), new data sources, new regulatory requirements, climate data, advanced mapping, needs assessments, and health surveys have helped contribute to the goals, actions, and methods of the *2020 LA River Master Plan*. These early and more recent plans are briefly described below.

1.1.1.1 Early Planning Efforts

Planning for recreation and open space in the Los Angeles region formally started with the 1930 Olmsted-Bartholomew Plan, commissioned by the Los Angeles Chamber of Commerce entitled*, Parks, Playgrounds and Beaches for the Los Angeles Region.* The plan identified the ways in which the region was then lacking in open space and laid out a detailed plan for creating new parks, parkways, and permanent "reservations." The plan—which recognized that parks, open spaces, and connection to nature would be essential to the health, environment, and economy of the region—foresaw the rapid urbanization that was to come in the Los Angeles Basin and was published just before the catastrophic floods of the 1930s.

Although this plan was considered visionary and sweeping for its time, priorities were shifted following the flooding of the 1930s, when the U.S. Army Corps of Engineers (USACE) and the Los Angeles County Flood Control District (LACFCD) channelized the river in an effort to protect the

growing population and property from flooding. The channelization tended to be focused on the single-purpose benefit infrastructure (i.e., flood management facilities) and did not follow the broad-based approach to open space, health, and the economy outlined in the 1930 Olmstead-Bartholomew Plan. It was not until the 1980s that efforts to integrate the flood-management functions of the river with broader water resources management, open space, recreation, and communities began to emerge. Public interest in improving river conditions expanded, and Friends of the LA River was founded in 1986, with the intent of improving river stewardship and restoring community connections to the river in an ecologically, equitable, and sustainable manner.

1.1.1.2 1996 LA River Master Plan

In 1996, the County approved the *Los Angeles River Master Plan* (1996 Master Plan), which expanded the originally single-purpose flood-management efforts on the river to a multi-benefit community amenity that reflected aesthetic, environmental, economic, and recreational values of local residents. The 1996 Master Plan focuses on the approximately 51-mile-long LA River, 9 miles of the Tujunga Wash from Hansen Dam to the LA River, as well as the adjacent lands of these two water resources in the County. Specifically, locations within approximately 0.5 mile on each side of the centerline of the river comprise the study area in the 1996 Master Plan. This master plan identified ways to revitalize public rights-of-way along the LA River while ensuring the continued primary purpose of the LA River as a flood risk reduction facility. The 1996 Master Plan was a first step in developing an inclusive vision of shared open spaces and parks, stewardship of water resources, and safety from hazardous floods.

1.1.1.3 Recent Planning Studies and Adopted Plans

Since the approval of the 1996 Master Plan, numerous planning studies have been conducted and plans adopted that call for a more integrated approach to improving water quality, stormwater, flood management, habitat, open space, and recreation conditions along the LA River. In 2001, California Resources Agency and the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy Rivers and Mountains Conservancy (RMC), in conjunction with the Santa Monica Mountains Conservancy (SMMC), jointly developed *Common Ground from Mountains to the Sea: Watershed and Open Space Plan San Gabriel and Los Angeles Rivers*, which identified continuous tracts of open space, trails, and recreation areas along the San Gabriel and LA River corridors. The City of Los Angeles adopted the *Los Angeles River Revitalization Master Plan* in 2007, which identified four core values for the stretch of the LA River that flows through the City: revitalize the river, green the neighborhoods, capture community opportunities, and create value. That same year, the City of Long Beach adopted the *Long Beach River Link,* which called for restoring native habitat along the LA River, creating pedestrian and bike pathways, and improving aesthetics of the river.

Nearly a decade later, in 2015, the City of Los Angeles prepared the *Stormwater Capture Master Plan*, which identified new projects, programs, and policies in the City, including along reaches of the upper and lower LA River, that could substantially increase stormwater capture for water supply before it flowed into storm drains and to the ocean through 2035. That same year, the City of Los Angeles and USACE prepared the *Los Angeles River Ecosystem Restoration Integrated Feasibility Report* to develop several ecosystem restoration projects along approximately 11 miles of the LA River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the river to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountain

ranges while maintaining existing levels of flood risk management. A secondary objective was to provide recreational opportunities consistent with the restoration projects.

The *Countywide Parks and Recreation Needs Assessment* was prepared by the County in 2016 and inventoried and assessed the need for parks and recreation facilities in cities and unincorporated County communities. The report established a new way to understand parks, recreation, and open space by identifying parks as key infrastructure needed to maintain and improve the quality of life for all County residents, using a new series of metrics to determine park need, supporting a need-based allocation of funding for parks and recreation, and emphasizing both community priorities and deferred maintenance projects.

In 2017, the City of Los Angeles prepared the *LA River Low Flow Study*, as part of the *One Water LA 2040 Plan*. The study identified considerations, assumptions, and areas of future study necessary to determine optimal flow conditions in the LA River. These conditions would balance the City's water supply needs with the LA River's water-dependent uses and regulatory requirements. The study summarized LA River inflow sources, low flow conditions, an adaptive water management alternatives, as well as the benefits, challenges, limitations, and costs of different alternatives. Also in 2017, the University of California, Los Angeles (UCLA), in conjunction with the City of Los Angeles and the Colorado School of Mines, released the *Los Angeles Sustainable Water Project: Los Angeles River Watershed* report, which identified the potential to improve water quality standards while integrating the City of Los Angeles' One Water Management practices that can increase potential local water supplies for the City of Los Angeles in the highly urbanized LA River watershed. The report was undertaken as part of a larger goal of the Sustainable LA UCLA Grand Challenge, which is a necessary step toward realizing 100% locally sourced water for the County by 2050.

The *Lower LA River Revitalization Plan* was completed in 2017 and encompasses areas within 1 mile on each side of the 19-mile section of river starting from the City of Vernon to its outlet in the City of Long Beach, including unincorporated County communities and 14 southeast County cities. This plan describes opportunities for improving the environment and residents' quality of life along the river and ensures locals' input as the lower river is reimagined and revitalized into an integral part of a healthy, equitable, and sustainable community.

The *Los Angeles County Annual Affordable Housing Outcomes Report,* published in 2018, provides an understanding of housing needs and investments in the County, and highlights the County's shortfall of more than a half million affordable housing units. The report includes recommendations of public expenditures to support production and preservation of affordable housing.

In 2020, the Upper Los Angeles River and Tributaries Working Group assessed the needs of communities along the upper LA River channel and its six key tributaries within its upper watershed. The group developed project concepts to enhance the quality of life of the communities with a focus on people, recreation, water, and the environment. The *Upper Los Angeles River and Tributaries Revitalization Plan* was released April 16, 2020.

1.1.2 2020 LA River Master Plan

The County began a comprehensive update to the 1996 Master Plan in 2018 with a motion adopted by the Los Angeles County Board of Supervisors in 2016. The update process, led by Public Works, was supported by several additional County departments and a 41-member steering committee of representatives of municipalities, non-profit organizations, and other governmental and non-governmental entities that provided input and expertise related to water, people, and the

environment, the three themes of the master plan. The foundation for the proposed *2020 LA River Master Plan* includes more than 140 planning efforts from across the watershed, including those summarized above. The *2020 LA River Master Plan*'s approach is unique from previous efforts because the analyses—including ecosystem, demographic, and hydrologic studies—were conducted for the entire 834-square-mile watershed of the LA River to better inform the various needs underlying the nine goals, referred to as objectives under CEQA, as identified for the *2020 LA River Master Plan*.

The *2020 LA River Master Plan* builds on the adopted 1996 Master Plan and other regional planning studies since then. It is intended to improve 51 miles of connected open space along the LA River to improve health, equity, access, mobility, and economic opportunity for the diverse communities of the County while still providing flood risk management. The project themes of water, people, and the environment capture the 1996 Master Plan key issues as well as other regional planning studies and recognize that infrastructure planning cannot be isolated from equally important social and environmental needs. The project website provides more detailed information on the Project and the community outreach conducted to date for development of the master plan: http://www.larivermasterplan.org/.

1.1.3 Master Plan Objectives

The *2020 LA River Master Plan* identifies nine goals, referred to as objectives under CEQA:

1. Reduce flood risk and improve resiliency.
2. Provide equitable, inclusive, and safe parks, open space, and trails.
3. Support healthy, connected ecosystems.
4. Enhance opportunities for equitable access to the river corridor.
5. Embrace and enhance opportunities for arts and culture.
6. Address potential adverse impacts on housing affordability and people experiencing homelessness[1].
7. Foster opportunities for continued community engagement, development, and education.
8. Improve local water supply reliability.
9. Promote healthy, safe, clean water.

The *2020 LA River Master Plan* is founded on a community and data-based goal-driven framework that closely ties the plan's recommendations to their potential to achieve the broader master plan's nine objectives. This was achieved through a comprehensive evaluation of criteria identified in the plan's existing conditions inventory and analysis for assessing each goal along the 51 miles of the LA River, subsequently identifying areas of general to very high need relative to that objective.

[1] The aim of the *2020 LA River Master Plan* objective "Address potential adverse impacts on housing affordability and people experiencing homelessness" is to maintain strategies for ensuring continuing housing affordability in LA River adjacent communities. Therefore, the use of "impacts" in objective 6 is distinct from the use of "impacts" under CEQA where, per CEQA Guidelines Section 15358 (b), impacts analyzed under CEQA must be related to a physical change in the environment.

Each of the nine objectives is an active priority for the future of the river and was developed based on an extensive community engagement and GIS-based needs analysis, with input from the community, the steering committee, and technical experts, as detailed in the *2020 LA River Master Plan*. Each objective identified in the *2020 LA River Master Plan* is supported by a recommended set of actions that work toward achieving each objective. Each action is, in turn, supported by a set of methods that provide specific, tangible implementation steps. Together, the objectives, actions, and methods form the strategic directions of the *2020 LA River Master Plan*.

A brief summary of the objectives is provided below.

1.1.3.1 Reduce Flood Risk and Improve Resiliency

The *2020 LA River Master Plan* is intended to reduce flood risk and improve resiliency along the river. However, not all areas of the river have equal conveyance capacity. In some areas, low-channel capacity makes the probability of flooding of the river adjacent communities in any given year as high as 25 percent. Development along the LA River has nearly completely encroached up to the channel. It is critical to maintain the overall existing capacity, as well as increase the conveyance capacity of the river in high-risk areas, to manage flood risk for people and property during storm events. In addition, a changing climate is likely to increase the frequency and intensity of extreme precipitation events that result in flows that may exceed the channel's current capacity. New projects along the LA River will need to consider the long-term impacts of climate change and the need to incorporate resilient infrastructure to manage these extreme events.

1.1.3.2 Provide Equitable, Inclusive, and Safe Parks, Open Space, and Trails

Members of the community identified walking and bicycling as the top two activities they participate in along the LA River, with participation in these two activities together greater than the participation in all other activities combined. However, 61 percent said they do not use the river due to safety concerns. Along the LA River, 12 of the 17 cities do not meet the World Health Organization's minimum standards of 2.2 acres of parks per thousand people, and only 32 of the river's 51 miles have trails alongside them. By aiming to provide 51 miles of safe, connected open space, the LA River can be a valued recreational resource for the surrounding communities in the County.

1.1.3.3 Support Healthy, Connected Ecosystems

The LA River watershed sits within one of the world's most diverse Mediterranean biodiversity hotspots and along the Pacific Flyway. Due to urbanization, the region has the largest number of endangered and threatened species and species of special concern in the contiguous 48 states. The river ecosystem has been altered from its historic state, first through agriculture and irrigation, and later through channelization. In community meetings and surveys, 52 percent of participants said the issue most important was protecting vulnerable plants and animals. Planning and development efforts along the river must create habitat areas large enough to support native functioning ecosystems.

1.1.3.4 Enhance Opportunities for Equitable Access to the River Corridor

Today, ease and availability of access to trails along the LA River is highly variable. About 90 access points connect people to trails that serve 32 of the river's 51 miles. Yet, only one-third of these access points have signs and only 70 percent connect to sidewalks. Many access points are well served by bus, but only two metro rail stops fall within a half mile of an access point to the river. It is therefore not surprising that one of the top five reasons community residents cited for not visiting the LA River is simply not knowing where to go. The LA River is intended to be a resource for use by all of the County. To be a resource, the river must be accessible and usable.

1.1.3.5 Embrace and Enhance Opportunities for Arts and Culture

The LA River has long been at the cultural and historical heart of Los Angeles. From its first Indigenous Peoples to the many neighborhoods it runs through, engages, and enhances today, the river has long been a valued community resource. The County has the opportunity to advance culture, arts, creativity, and community pride throughout the County and to inspire by recognizing, fostering, and preserving the rich tangible and lived cultural heritage along the LA River corridor. The river presents an opportunity to incubate new ideas and talent among the next generation of cultural practitioners, offering new cultural opportunities, experiences, and spaces where the arts can flourish and be shared. Interventions that are permanent or temporary, or reflect socially based practices of art, design, and gathering are all waiting to be realized. As a local cultural resource with global influence and stature, the LA River corridor can be a major destination that draws residents and tourists alike, that promotes the equitable inclusion of the County's diverse people, and that is responsive to the needs and aspirations of the local communities through which it flows.

1.1.3.6 Address Potential Adverse Impacts on Housing Affordability And People Experiencing Homelessness

Housing costs for County residents have been steadily increasing for decades. The median owner-occupied home value has increased by over 50 percent, from $298,800 to $465,900 between 2000 and 2016 (in 2016 dollars). Among renters, the percentage of household income spent on housing increased from 28 to 35 percent in the same period. About a third (32 percent) of renters in the County are severely rent-burdened, meaning they spend more than half of their income on rent. As the affordable housing shortfall has risen, so has the number of people experiencing homelessness, which exceeded 50,000 people across the County. Approximately 8,800 persons experiencing homelessness are living in neighborhoods adjacent to the river. As the LA River moves toward the vision of becoming 51 miles of connected open space, it is critical to consider how this vision will affect housing and homelessness. With the goal of increasing parks and open space, there is potential to negatively affect housing affordability. It is therefore important to proactively implement a meaningful strategy for preventing displacement and ensuring continuing affordability of housing in river adjacent communities. The *2020 LA River Master Plan* seeks to improve neighborhoods without causing negative effects of displacement.

1.1.3.7 Foster Opportunities for Continued Community Engagement, Development, and Education

Among the hundreds of community groups that are present along the river, there are more than three dozen organizations and initiatives that focus on the river itself, some of which have been active for over three decades. Healthier, more socially connected communities were the third most

important river-related issue for community members. The LA River's connection to the region's history, ecology, and culture makes it a prime venue and tool for both community engagement and education. Community members felt it was most important for people to learn about how the river benefits and supports the environment (38 percent); its ecology, habitat, and vegetation (33 percent); and the current hydrology and uses of the river (21 percent). Though some adjacent communities currently take advantage of the river, the *2020 LA River Master Plan* would help reimagine the river and increase opportunities for engagement and education activity, serving as a platform and front door for all surrounding communities.

1.1.3.8 Improve Local Water Supply Reliability

More than 50 percent of the region's water supply is imported from the Colorado River, the Sacramento–San Joaquin River Delta, and the Eastern Sierras. In the Los Angeles Basin, 57 percent of water is imported, 34 percent comes from groundwater, and 9 percent is sourced from recycled water, water conservation measures, and local surface water diversions. In community meetings and surveys, supplementing water supply was the second most important issue related to the LA River for participants, identified by 48 percent of participants. Increasing population, regulatory requirements, natural disasters, and demands on the water system accentuate the decreasing reliability of the sources of imported water supplies that is caused by cyclical droughts and climate change. Dry weather and wet weather flows in the LA River present opportunities to develop and diversify local water resources to reduce dependence on imported water and increase the reliability and resiliency of the region's water supply.

1.1.3.9 Promote Healthy, Safe, Clean Water

The LA River is a water body with multiple beneficial uses, impairments, and regulated pollutants. While over 800 water quality improvement projects are planned, are in development, or have been completed within the river's watershed, additional efforts are needed to meet established water quality targets. In many locations, there are projects proposed or constructed to meet the river's water quality requirements. However, there is much uncertainty in the funding and implementation of the proposed projects to keep pace with approved regulatory milestones. In 2018, the County passed Measure W, the Safe Clean Water Program, to provide a new source of funding to help implement local and regional water quality projects. The *2020 LA River Master Plan* would facilitate the development of corridor-based water quality projects and programs to help promote healthy, safe, clean water.

1.1.4 Draft 2020 LA River Master Plan - Public Involvement and Review

The *2020 LA River Master Plan* development process included a comprehensive community engagement program, in addition to input from the 41-member steering committee and expertise from the technical design team. The three-pronged approach was designed to represent the broad range of interests along the LA River. Community outreach included digital surveys and extensive partnerships with local grassroots organizations, as well as outreach methods like the first LA River Youth Summit attended by 800 high school students from river-adjacent high schools around the County, and telephone town halls where over 5,000 residents participated. Thirteen community meetings specifically focused on master plan content were held in diverse geographies along the 51 miles of the LA River. The large-scale community engagement process—along with the robust

data-driven analysis of existing conditions along the river—helped establish the community needs and inform the *2020 LA River Master Plan* objectives and design considerations. In addition to the thousands of people who engaged in person, nearly one million people engaged with the website, social media, or other digital aspect of the Project.

Eight public meetings of the Steering Committee were held between April 2018 and December 2019 and included public comment opportunities. The Steering Committee also formed three subcommittees that met 27 times for follow-up discussions. The slide content of the Steering Committee meetings as well as meeting summaries and additional technical data were made publicly available at LARiverMasterPlan.org. Upon completion of the Steering Committee meeting process, the draft master plan was reviewed by the subcommittees. The Draft Master Plan was made available to the public on January 13, 2021 for review.

1.2 Overview of the CEQA Process

CEQA requires a lead agency to disclose the significant environmental effects of proposed actions to decision-makers and the public. CEQA applies to all discretionary activities proposed to be carried out or approved by public agencies. Approval of the proposed Project (*2020 LA River Master Plan)* would be a discretionary action by a public agency, in this case the Los Angeles County Board of Supervisors, acting on behalf of the County as the lead agency for the Project. Therefore, compliance with CEQA is required.

An EIR is an informational document prepared in compliance with CEQA that describes a proposed project's significant environmental effects, measures to mitigate those effects, and alternatives for avoiding or minimizing the effects. A PEIR is a type of EIR that can be prepared on a series of actions that can be categorized as one large project and are related geographically; as logical parts in the chain of contemplated actions; in connection with issuance of rules, regulations, plan, or other general criteria to govern the conduct of a continuing program; or as individual activities carried out under the same authorizing statutory or regulatory authority (State CEQA Guidelines Section 15168). Therefore, this PEIR is being prepared for the *2020 LA River Master Plan* because it is the appropriate environmental document for a series of actions that can be characterized as one large project and are related geographically (State CEQA Guidelines Section 15168). The *2020 LA River Master Plan* includes consideration of a multitude of actions that could be implemented in the future, and all of them are geographically related to the LA River. While this PEIR provides an initial program-level CEQA clearance for the *2020 LA River Master Plan*, all subsequent projects proposed under the *2020 LA River Master Plan* will be examined in light of this PEIR to determine whether subsequent or new CEQA documentation must be prepared (State CEQA Guidelines Section 15168 (c)(2)).

The major steps that have been and will be taken by the County in preparing the PEIR in compliance with CEQA are described below.

1.2.1 Notice of Preparation and Scoping Period

The County, in accordance with CEQA, prepared a Notice of Preparation (NOP), which was released to the public and filed with the State Clearinghouse (SCH No. 2020070128) in the Office of Planning and Research on July 7, 2020. The NOP provided notice to the public and public agencies that a PEIR would be prepared, described the proposed Project that would be evaluated in detail in the PEIR,

listed the probable environmental effects of the Project, and identified the date, time, and location for an online scoping meeting, which was held on July 29, 2020.

The NOP was distributed to involved public agencies and interested parties for a 30-day public review period, which began on July 7, 2020 and ended on August 6, 2020.

A copy of the NOP is included in Appendix A of this PEIR, along with written comments provided by the public and public agencies in response to the NOP. Comments received in response to the NOP during the scoping period were considered in preparing this PEIR.

1.2.2 PEIR Public Review and Comment Period

Notification of the availability of the PEIR was sent to the public and interested or affected agencies for review. Release of the PEIR to the public begins a 45-day comment period, extending from February 1, 2021 to March 18, 2021. During that timeframe, members of the public and public agencies are asked to review the PEIR and provide comments on the document, including adequacy of the impact analyses.

The PEIR can be reviewed on Public Works' website (pw.lacounty.gov/go/larmpceqa). Following Governor Newsom's Executive Order N-28-20 relating to the threat of COVID-19, the Los Angeles County Board of Supervisors announced that all Los Angeles County facilities were be closed to members of the public beginning March 16, 2020. Since then, Public Works has closed all public buildings and in-person services. Additionally, the County, City of Los Angeles, and City of Long Beach library locations have been closed to the public until further notice and only select locations have been offering curbside pickup.

Public Works is soliciting the views of interested persons and agencies on the content of this PEIR. In accordance with CEQA, agencies are requested to provide their comments on environmental issues related to the statutory responsibilities of the agency. The PEIR will be used by the County's governing Board—the Los Angeles County Board of Supervisors—when considering approval of the proposed *2020 LA River Master Plan* as well as any related discretionary actions. Any interested individuals or entities can provide written comments on the PEIR. Written comments on the PEIR must be postmarked by March 18, 2021 and should be addressed to:

Grace Komjakraphan-Tek
Los Angeles County Public Works, Stormwater Quality Division
900 South Fremont Avenue, 11th Floor
Alhambra, CA 91803
LARiverCEQA@pw.lacounty.gov

Public notice of the availability of the PEIR was provided in the following publications:

- *Glendale Independent*
- *Grunion Gazette*
- *L.A. Watts Times*
- *Long Beach Press Telegram*
- *Paramount Journal*
- *Los Angeles Times*

- *Excelsior LA*
- *The Canyon News*
- *Monterey Park Press*
- *The Downey Patriot*
- *The Signal Tribune*
- *South Bay Daily Breeze*
- *La Opinion*
- *Los Angeles Times en Español (Hoy Los Angeles)*
- *Los Angeles Daily News*

1.2.3 Preparation of the Final EIR and Project Approval

Upon completion of the 45-day PEIR public review period, a Final PEIR will be prepared, which, among other documents will include comments on the Draft PEIR received during the formal public review period, as well as the County's written responses to those comments. The Final PEIR will also contain corrections to the text of the PEIR, if needed. This Draft PEIR and the Final PEIR will make up the PEIR for the *2020 LA River Master Plan*.

If the decision-making body of the lead agency (here, the Los Angeles County Board of Supervisors) approves the proposed Project, CEQA requires the board to adopt findings with respect to each significant effect identified in the PEIR (Public Resources Code Section 21081, State CEQA Guidelines Section 15091). For each significant effect, CEQA requires the approving agency to make one or more of the following findings:

- Changes or alterations have been required for, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect, as identified in the Final PEIR.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final PEIR.

In the event that the County, as the lead agency, concludes that the proposed Project would result in significant effects that would not be reduced to less-than-significant levels or avoided by feasible mitigation measures and alternatives, the County must adopt a statement of overriding considerations (Public Resources Code Section 21081, subd. (b); State CEQA Guidelines Section 15093). Under CEQA, such statements are intended to provide a written means by which the lead agency balances the benefits of a proposed project and any significant and unavoidable environmental impacts arising from its implementation. Where the lead agency concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable significant environmental impacts, the lead agency may find such impacts acceptable and approve the project. In addition, pursuant to Section 21081.6 of the Public Resources Code, public agencies, when approving a project, must also adopt a program for monitoring or reporting the changes that were

incorporated into the project or made a condition of project approval, for mitigating or avoiding significant effects on the environment. The purpose of the monitoring and reporting program is to ensure mitigation measures and project revisions identified in the PEIR are implemented. The program, which will be referred to as the Mitigation Monitoring and Reporting Plan (MMRP) for the proposed Project, will be recommended for adoption by the Los Angeles County Board of Supervisors at the time it considers its project approval.

1.3 About This PEIR

1.3.1 PEIR

As introduced in Section 1.2 above, this EIR for the *2020 LA River Master Plan* is a PEIR, which is described in Section 15168 of the State CEQA Guidelines as an EIR that:

> May be prepared on a series of actions that can be characterized as one large project and are related either geographically, as logical parts in the chain of contemplated actions, [or] in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program…

Because the proposed Project consists of the *2020 LA River Master Plan* with components that would be implemented over a period of years, the County determined that a PEIR would be the appropriate document for the proposed Project.

According to the State CEQA Guidelines (Section 15168[b]), a PEIR can provide the following advantages:

- Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action.
- Ensure consideration of cumulative impacts that may be slighted on a case-by-case basis.
- Avoid duplicative reconsideration of basic policy considerations.
- Allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an earlier time, when the agency has greater flexibility to deal with basic problems or cumulative impacts.
- Allow a reduction in paperwork.

1.3.1.1 Enforceability of Mitigation Measures

The analyses in this this PEIR includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and

unavoidable when these activities are not carried out by the County. However, the identification of a significant and unavoidable program-level impact in this PEIR does not preclude the finding of a future less-than-significant impact for individual projects that will tier from the PEIR.

1.3.1.2 PEIR and Later Activities

A PEIR can act as the first level of analysis at the program-level that streamlines later, more detailed project-specific and site-specific environmental reviews. When later activities are proposed after the PEIR is certified and the *2020 LA River Master Plan* is approved, a determination will be made at that time by the implementing agency[2] a) whether the activity is covered "within the scope" of the PEIR, and b) if new or worsened significant effects not examined in the PEIR could occur. Factors that an agency may consider in making the determination of being within the scope of the PEIR could include geographic area analyzed for environmental impacts, consistency of the later activity with the type of allowable land use, overall planned density and building intensity, and covered infrastructure described in the PEIR (CEQA Guidelines Section 15168[c][2]).

If an agency determines that a later activity is covered in the scope of the PEIR and new or substantially more severe significant impacts would not occur, no further environmental documentation would be required. If new or more severe impacts beyond those disclosed in the PEIR could occur, the agency would prepare the appropriate level of subsequent CEQA documentation needed (e.g., mitigated negative declaration, or a site-specific supplemental or subsequent EIR) and the subsequent CEQA clearance can focus solely on new or substantially more severe significant effects that were not considered in the original PEIR (CEQA Guidelines Section 15168[d][2]).

This concept, referred to as "tiering," addresses the coverage of general matters in broader PEIRs with subsequent CEQA compliance. These subsequent, project-specific environmental reviews would incorporate by reference the general discussions from the previously prepared PEIR and would focus solely on the issues specific to the environmental analysis subsequently prepared for the later activities.

In the case of the proposed Project, multiple subsequent project-specific activities from the *2020 LA River Master Plan* would be designed and implemented over time. This PEIR would provide the County, as the lead agency, and the 17 cities through which the proposed Project extends, with a base reference of facts and analyses that would avoid unnecessary repetition for future project-specific assessments by agencies on individual projects, and would allow for a comprehensive approach to the consideration of regional and cumulative impacts.

1.3.1.3 Organization and Content of This PEIR

This PEIR conforms to the content requirements of the State CEQA Guidelines. A list of the chapters and a brief description of their content is provided here to assist the reader in locating information. Cumulative impacts are analyzed in each respective section.

- **Executive Summary**: Provides a brief description of the *2020 LA River Master Plan*, including an overview of the impact analysis, recommended mitigation measures, and net residual impact. Summary information regarding the proposed Project and key conclusions is also provided.

[2] An implementing agency is defined in this PEIR as any public agency intending to tier from the PEIR to comply with CEQA for their discretionary action associated with a later activity under the 2020 LA River Master Plan PEIR.

- **Chapter 1, *Introduction***: Provides a general orientation regarding the purpose of CEQA, as well as this PEIR, and includes information on the CEQA PEIR process.
- **Chapter 2, *Project Description***: Presents a statement of the proposed project objectives; a description of the location and setting for the Project; a detailed description of the proposed Project's components, including Typical Projects, kit of parts, and *2020 LA River Master Plan* Design Guidelines; and related information regarding implementation.
- **Chapter 3, *CEQA Environmental Impact Assessment***: Analyzes potential impacts under CEQA that could occur as the result of approval and implementation of the proposed Project. The impact discussion is organized into 18 topical issues that have the potential to result in impacts on the environment. This chapter also addresses cumulative impacts from the Project and related projects.
- **Chapter 4, *Other CEQA Considerations***: Discusses other topics required by CEQA, including a listing of impacts found not to be significant, growth-inducing impacts, and irreversible changes that might occur as a result of the Project.
- **Chapter 5, *Alternatives***: Discusses proposed alternatives to the proposed Project and the comparative merits of each, in accordance with State CEQA Guidelines Section 15126.6. The chapter also discusses alternatives that were considered, but rejected as infeasible, and identifies the environmentally superior alternative.
- **Chapter 6, *List of Preparers***: Lists persons who contributed directly to the preparation of this PEIR.
- **Chapter 7, *References***: Lists the sources of information that were referenced for the analyses contained within this PEIR.

This PEIR also includes a number of appendices, including copies of the NOP, public responses to the NOP, and the technical analyses that were the basis for the evaluation of project impacts presented in Chapter 3, *CEQA Environmental Impact Assessment*, of this PEIR.

1.4 Agency Actions Anticipated for the PEIR

Because this is a PEIR, and project-level approvals are not anticipated at this point, no other permits or approvals (and hence, no responsible agency actions) are anticipated for the PEIR. After the final PEIR is certified, more detailed project-level review can proceed along the *2020 LA River Master Plan* study area by the County or the 17 other jurisdictions. The PEIR will serve as a first-tier analyses for later project-level and site decisions by these agencies. Individual entities with jurisdiction along the river corridor—including the LACFCD, USACE, and the cities—will continue having decision-making authority associated with any master plan implementation activities affecting their respective jurisdictions.

1.4.1 Lead Agency Actions

The County will serve as the lead agency under CEQA for the PEIR and will be responsible—through its governing board, the Los Angeles County Board of Supervisors—for approving the *2020 LA River Master Plan*. Similar to the 1996 Master Plan, the *2020 LA River Master Plan* will guide County in decision-making for LA River projects and facilities owned, operated, funded, permitted, or

maintained by the County. As part of the decision-making process, the County will take the following specific actions:

- Certify the final PEIR.
- Adopt Findings of Fact and Statement of Overriding Considerations.
- Adopt an MMRP.
- Adopt the *2020 LA River Master Plan*.

The County will establish an implementation team responsible for ongoing coordination after the adoption of the *2020 LA River Master Plan*.

1.4.2 Later Activities

The 17 cities and unincorporated County communities through which the proposed Project extends are encouraged to adopt the *2020 LA River Master Plan* and partner with the County in making the reimagined river a reality. It is anticipated that the *2020 LA River Master Plan* will eventually result in later projects that will require other local and regulatory agency approvals. In addition to future County proposed projects in the unincorporated areas, the 17 other jurisdictions in the study area may carry out future development of specific projects that would be a part of the master plan. These later activities will be carried out at the discretion of the other jurisdictions in which the later activities are located and may or may not require subsequent CEQA analysis. If these other jurisdictions choose to rely on this PEIR wholly or in part, or tier from it for subsequent CEQA compliance of later activities over which they have discretionary authority, they will need to adopt the relevant mitigation measures from the MMRP developed for the *2020 LA River Master Plan*. They will also need to adopt their own findings to ensure compliance with the requirements of this PEIR pursuant to CEQA.

Chapter 2
Project Description

2.1 Introduction

This chapter describes the proposed *2020 LA River Master Plan*. It includes a description of the project location and an overview of the existing environmental setting where the *2020 LA River Master Plan* would be implemented. It presents the objectives[1] and elements of the proposed *2020 LA River Master Plan*, along with a summary of the *2020 LA River Master Plan* Design Guidelines (Design Guidelines; included in Appendix B).

2.2 Project Location and Overview

2.2.1 Regional Location and Right-of-Way

The LA River Watershed covers a land area of 834 square miles. The eastern portion of the watershed spans from the Santa Monica Mountains to the Simi Hills and the western portion spans from the Santa Susana Mountains to the San Gabriel Mountains. As seen on Figure 2-1 (at the end of this chapter), the watershed encompasses and is shaped by the path of the LA River, flowing from river mile 51.0 in Canoga Park within the City of Los Angeles to mile 0 at Long Beach where the river meets the Pacific Ocean. The LA River has evolved from an uncontrolled, meandering river providing a valuable source of water for early inhabitants, to a major flood management system. Channelized to protect lives and property from flooding during the late 19th through the mid-20th centuries, the LA River has largely been separated from the region's social, cultural, and ecological communities. Out of the approximately 4.5 million people who live within the watershed, 1 million live within 1 mile of the river itself. The LA River study corridor (1 mile on each side of the river) passes through 18 local jurisdictions (17 cities and unincorporated County areas) along its 51-mile journey from the Santa Susana Mountains to the Pacific Ocean in Long Beach.

The LA River is a channelized river. Although most of the river length within the channel (bank to bank) is concrete-lined along its sides and bottom, areas of the river near the Estuary, Sepulveda Basin, and the Glendale Narrows have a "soft bottom" (earthen channel) where soil and plants form the bottom of the channel. The other areas of the river have concrete walls forming a rectangular channel, often called a box channel, or a trapezoidal channel formed by levees. The areas immediately adjacent to the top of the channel bank (e.g., the top of the levee in leveed sections) are often used as an access road or recreational trail.[2] As seen on Figure 2-2 (at the end of this chapter), the area outside of the channel is called the "landside" and sometimes includes areas for habitat, recreation, maintenance, or other park amenities. Together the channel, top of levee, and the landside area make up the river right-of-way (ROW). The outside edge of the river ROW is typically referred to as the fenceline in the *2020 LA River Master Plan*.

[1] The *2020 LA River Master Plan* was designated as a Goal Driven Framework. To be consistent with CEQA Section 15124, the *2020 LA River Master Plan* goals are referred to as objectives of the Project in this PEIR.

[2] Rectangular channels of the LA River do not have leveed areas.

The typical LA River ROW includes flood-management structures such as the channel, levees, and access roads, which are primarily maintained by the Los Angeles County Flood Control District (LACFCD) and the United States Army Corps of Engineers (USACE). Currently, LACFCD and USACE each maintain approximately half of the LA River, as seen on Figure 2-3 (at the end of this chapter). Permits for projects along the LA River are issued by these two entities depending on project typology and location. Ownership of the approximately 2,300 acres of land within the LA River ROW varies. LACFCD owns large portions of the ROW, but municipal and private owners also own portions of the ROW. Where municipal or private interests own parcels within the ROW, easements for operations and maintenance exist that authorize LACFCD and USACE to operate and maintain the flood management structures within the ROW.

LACFCD and USACE utilize the LA River ROW to access, operate, and maintain the river's flood-management structures. As part of the process to update the *LA River Master Plan*, the ROW was mapped in greater detail using aerial photography and parcel ownership records. Of the 2,300 acres of land in the ROW, 1,740 acres are within the channel and 560 acres are landside area. Along the river, the width of the ROW varies. Nearly three quarters of the river has a landside area (top of bank to property line) greater than 12 feet wide. However, about 16.5 percent of the river has no landside area (16.5 percent of 102 miles—left and right bank of the 51-mile river), which makes access to the channel for potential recreational or other uses difficult in those areas. The *2020 LA River Master Plan* discusses how potentially underutilized spaces such as utility and railroad ROW could be repurposed to increase access, connectivity, and park space.

2.2.2 Study Area

Although the LA River ROW is confined to its channel, top of levee, and immediately adjacent landside areas (within the fenceline), a larger study area was identified to consider current conditions and potential opportunities up to 1 mile on each side of the river centerline to allow for overall improved access to the river from nearby communities. Therefore, for the purposes of CEQA and consistency with the *2020 LA River Master Plan*, the study area is defined as a 2-mile-wide corridor—1 mile on each side of the river—that follows the centerline of the LA River for its entire 51 miles (Figure 2-4 at the end of this chapter).

2.2.2.1 Potential Location of Subsequent Projects

As described in Chapter 1, *Introduction*, after the *2020 LA River Master Plan* is approved, subsequent project-specific activities (also known as later activities as defined in the 2020 State CEQA Guidelines) identified in the *2020 LA River Master Plan* could be designed, approved, and implemented over time by any one of the 18 jurisdictions tiering from the PEIR. These subsequent projects could be located anywhere in the 2-mile-wide study area, including the river channel (bank to bank), between the top of the levee to the fenceline, or beyond the fenceline (i.e., outside of the river ROW).

2.3 LA River Planning Frames

A series of nine distinct geographical sections, or planning frames, related to jurisdictional, hydraulic, and ecological zones have been identified along the LA River and are included in the *2020 LA River Master Plan*. The use of the frame illustrates how the areas adjacent to a river reach are

critical to understand in planning and implementing a connected and accessible river corridor. As the *2020 LA River Master Plan* is implemented and subsequent projects are designed and proposed for location along the river in the future, the characteristics of each frame would provide useful information on local needs, projects, and programs that reflect the river ROW and adjacent land uses. Each frame is described below, including its channel characteristics, landside ROW characteristics, notable features, and significant design considerations.

The nine planning frames are numbered sequentially, beginning at river mile 0.0 in Frame 1 in the City of Long Beach, where the LA River outfalls to the Pacific Ocean, and ending at river mile 51.0 in Frame 9 in Canoga Park, where the river begins in the City of Los Angeles. These planning frames span 18 local jurisdictions, and a single frame can include one to several jurisdictions.

2.3.1 Frame 1: Estuary

Frame 1 is primarily within the City of Long Beach and extends 4.0 miles from river mile 0.0 to 4.0 (Figure 2-5 at the end of this chapter). This frame is the closest frame to the Pacific Ocean and Port of Long Beach. Small portions of the City of Los Angeles also fall within this frame near its western boundary. This portion of the LA River is characterized by brackish water year-round and is identified as an important bird habitat. The channel in this frame is a leveed, trapezoidal, concrete cross-section with a width of approximately 400 feet and an average channel slope of 0.05 percent. Landside ROW characteristics in this frame are defined as containing east- and west-facing parcels along the levee, with areas that vary from 15 feet to 150 feet wide. The soft channel bottom with year-round water transitions at river mile 3.0 to a concrete-bottom section with hard rip-rap sides and a typical width of 585 feet. The Shoreline Aquatic Park and the Queen Mary are in the Long Beach Port near river mile 0.0; Santa Cruz Park, Golden Park, and Cesar Chavez Park are on the left bank at river mile 0.3 to 0.8, bisected from the river by West Shoreline Drive; and Wrigley Greenbelt is on the left bank of the LA River from river mile 2.9 to 4.0. Frame 1 encompasses approximately 10.79 percent of the total *2020 LA River Master Plan* study area.

2.3.2 Frame 2: South Plain

Frame 2 is in the Cities of Long Beach, Carson, and Compton and unincorporated County areas, and it extends 4.4 miles from river mile 4.0 to 8.4 (Figure 2-6 at the end of this chapter). The channel in this frame is a trapezoidal, concrete-leveed cross-section with an approximate width of 350 feet and an average channel slope of 0.14 percent. This frame has some of the widest ROWs. Industrial and residential development, transmission easements, Interstate 710, and State Route 91 cut into the landside ROW in the northern portion of the frame. The parcels are east- and west-facing parcels along the levee. The landside ROW is widest in the southern portion of the frame, at widths of over 200 feet on each bank. The landside ROW is on average 50 feet wide.

This frame has an important equestrian community that would benefit from an expanded network of equestrian trails. Furthermore, this frame is identified as having freshwater year-round and is an important bird habitat area. Dominguez Gap Wetlands is between river mile 4.8 and 5.8 along the left bank, Compton Creek confluence is at river mile 5.4 along the right bank, and De Forest Park is between river mile 6.8 and 7.5 along the left bank. Frame 2 encompasses approximately 8.66 percent of the total study area of the *2020 LA River Master Plan*.

2.3.3 Frame 3: Central Plain

Frame 3 is in the Cities of Compton, Paramount, Downey, Lynwood, South Gate, and Cudahy, and it extends 5.74 miles from river mile 8.4 to 14.1 (Figure 2-7 at the end of this chapter). Frame 3 is characterized as mostly residential.

The river downstream of Rio Hondo confluence has better than 0.75 percent (133-year) flood capacity. Flows greater than the 0.75 percent event are designed to overtop two weirs downstream of Imperial Highway on the east bank (near river mile 11.4) and near Interstate 105 on the west bank (near river mile 10.7). The channel in this frame is a trapezoidal, concrete-leveed cross-section with an approximate width of 400 feet and an average channel slope of 0.24 percent. The landside ROW in this frame contains both east- and west-facing parcels, and is further limited by industrial and residential development, transmission easements, and Interstate 710 and Interstate 105. It exists for extensive lengths at about 15 feet wide. However, there are large 200-foot-wide tracts of the ROW incorporated into recreational park space (Ralph C. Dills and Hollydale Parks along with portions of the LA River Trail).

Along the left bank, Ralph C. Dills Park is at river mile 9.5 to 10.0, Hollydale Park is at river mile 11 to 11.5, and the Rio Hondo confluence is at river mile 12.0. Frame 3 encompasses approximately 10.66 percent of the total study area of the *2020 LA River Master Plan*.

2.3.4 Frame 4: North Plain

Frame 4 is in the Cities of Bell Gardens, Bell, Maywood, Vernon, Commerce, and Huntington Park, and it extends 5.36 miles from river mile 14.1 to 19.5 (Figure 2-8 at the end of this chapter). This frame is characterized as primarily industrial with pollution and soil contamination present from heavy industrial use.

Downstream from Arroyo Seco and in Vernon (river mile 18), the flood capacity level is worse than 2 percent and at the Rio Hondo confluences (river mile 12), the flood capacity level is mostly better than 1 percent. The channel in this frame is a concrete-leveed, trapezoidal section that is approximately 415 feet wide from bank to bank at the southernmost end. It transitions to a concrete-entrenched, trapezoidal section and then to a concrete-entrenched, rectangular section at river mile 19 at the northern end, with a width of about 285 feet. The average channel slope in Frame 4 is 0.22 percent. In this frame, industrial development and several adjacent rail lines limit the landside ROW to consistently less than 15 feet. In the northern portion of the frame, there is no landside ROW along the right bank. ROW parcels in this frame are south, east, and west facing. Maywood Riverfront Park is along the right bank from river mile 15.7 to 15.8. Frame 4 encompasses approximately 9.96 percent of the total study area of the *2020 LA River Master Plan*.

2.3.5 Frame 5: Heights

Frame 5 is in the City of Los Angeles and extends 5.0 miles from river mile 19.5 to 24.5 (Figure 2-9 at the end of this chapter). This frame is characterized as densely urban with a high concentration of arts and cultural facilities. Most residential use is concentrated on the east side of the LA River, with industrial, commercial, financial, and civic activities on the west side of the LA River.

Between the Arroyo Seco (river mile 24) and Rio Hondo confluences (river mile 12), the flood capacity level is mostly better than 1 percent. The channel in this frame is an entrenched, concrete,

trapezoidal section with a typical width of 225 feet and an average channel slope of 0.39 percent. In this frame, the landside ROW is typically less than 12 feet wide, widening at the northern edge. It consists of south-, east-, and west-facing parcels. Railroad lines and larger industrial yards run along both sides of the river. This frame contains several former industrial areas where soil contaminants may be present. Los Angeles State Historic Park is along the right bank at river mile 23.5, and Arroyo Secco confluence is at river mile 24.0 where Interstate 110 crosses the LA River. Frame 5 encompasses approximately 8.68 percent of the total study area for the *2020 LA River Master Plan*.

2.3.6 Frame 6: Narrows

Frame 6 is in the Cities of Los Angeles, Burbank, and Glendale and extends 7.5 miles from river mile 24.5 to 32.0 (Figure 2-10 at the end of this chapter). In this frame, the channel contains entrenched, trapezoidal, concrete walls and is primarily soft bottom with the channel bottom, transitioning to concrete for about a half-mile stretch as the river turns a corner just north of the Verdugo Wash confluence.

The Narrows reach (river mile 22 to river mile 33) has known deficiencies exacerbated by the heavy vegetation that has established itself in the soft bottom of the trapezoidal channel. Despite the presence of levees along portions of this reach, the flood capacity level is worse than 2 percent, with many regions having worse than 10 percent flood capacity and as low as 25 percent flood capacity. The typical channel width is approximately 300 feet with 0.40 percent average channel slope. In this frame, the landside ROW ranges between 12 and 30 feet. There are also some gaps in the landside ROW along each bank. It consists of northeast- and southwest-facing parcels. Surface water is present in the channel bottom of this frame year-round due to a high water table and the underlying geology. Soil contaminants may be present at postindustrial sites within this frame.

From river mile 28.5 to 32.0, there is a significant ecological area identified near Griffith Park. This frame has an important equestrian community that would benefit from an expanded network of equestrian trails. Elysian Park is adjacent to the river along the right bank, at approximately river mile 25.0 through 24.5 and the Rio de Los Angeles State Park is along the left bank of the LA River at river mile 25.2 to 26.5. Frame 6 encompasses approximately 15.47 percent of the total study area of the *2020 LA River Master Plan*.

2.3.7 Frame 7: East Valley

Frame 7 is in the Cities of Los Angeles and Burbank and extends 5.8 miles from river mile 32.0 to 37.8 (Figure 2-11 at the end of this chapter). This frame is characterized as highly residential and has an important equestrian community that would benefit from an expanded network of equestrian trails.

From Tujunga confluence to the Narrows (river mile 33), the level of flood capacity is generally better than 2 percent. The channel is concrete-lined and rectangular, with widths ranging from 125 to 130 feet and an average channel slope of 0.62 percent. As the channel narrows in Frame 7, landside ROW increases to 30 to 50 feet with a couple of large parcels that extend 200 to 450 feet into adjacent development. However, there is also approximately a mile on each bank (about 20 percent of the frame) where there is no landside ROW due to Warner Bros. and Universal Studios and the Lakeside Golf Course. The landside ROW parcels in this frame are both north- and south-facing, sometimes on slopes. Tujunga Wash is at river mile 37.5, and the Burbank Channel confluence is at river mile 32. Along the left bank, Warner Bros. Studios is approximately between

river mile 34 and 34.5, and Lakeside Gold Club is between river mile 34.6 and 35.6. Along the right bank, Griffith Park is between river mile 32 and 34.5 and Sennett Canyon and Creek is at river mile 33.5. Frame 7 encompasses approximately 10.03 percent of the total study area of the *2020 LA River Master Plan*.

2.3.8 Frame 8: Mid Valley

Frame 8 is in the City of Los Angeles and extends 5.3 miles from river mile 37.8 to 43.1 (Figure 2-12 at the end of this chapter). Frame 8 contains the Los Angeles communities of Sherman Oaks, Studio City, Toluca Lake–Cahuenga Pass, Van Nuys–North Sherman Oaks, and Encino–Tarzana. From Sepulveda Basin to Tujunga confluence (river mile 38), the channel generally has better than 1 percent flood capacity with a short segment upstream of the Tujunga confluence, where worse than 10 percent (red) flood capacity level is estimated. In this frame, the channel is an entrenched, rectangular-box, concrete channel with a typical width of 60 feet and an average channel slope of 0.31 percent. In this frame, the landside ROW ranges from 30 to 60 feet before terminating at the northwestern edge of the frame where Sepulveda Basin begins. Frame 8 is characterized as highly residential with several greenways from river mile 37.8 to 38.6 along the right bank, from river mile 38.7 to 39.1 along the left bank, and from river mile 39.2 to 39.7 along both the left and right banks. Frame 8 encompasses approximately 10.04 percent of the total study area of the *2020 LA River Master Plan*.

2.3.9 Frame 9: West Valley

Frame 9 is in the City of Los Angeles and extends 7.9 miles from river mile 43.1 to 51.0 (Figure 2-13 at the end of this chapter). Frame 9 contains the Los Angeles communities of Encino–Tarzana, Reseda–West Van Nuys, and Canoga Park–Winnetka–Woodland Hills–West Hills. The channel upstream of Sepulveda Basin (river mile 51.0 to river mile 46.0) mostly has a mixture of 2 percent (yellow) and 1 percent (green) flood capacity levels, with a few locations with worse than 2 percent (orange) channel capacity level, likely due to local constrictions from bridges. The channel in this frame begins as a soft-bottom channel with riparian edges at Sepulveda Basin, and it transitions to an entrenched, trapezoidal, concrete channel at mile 45.5, with a typical width of 180 feet. At river mile 51.0, the channel transitions to an entrenched, concrete, box channel with a typical width of approximately 60 feet and an average channel slope of 0.25 percent. In this frame, the landside ROW ranges from 20–30 feet with a few larger tracts in the western portion of Canoga Park that are closer to 40–50 feet in width. The eastern soft-bottom portion of the river channel has no landside ROW in Sepulveda Basin for approximately 2 miles (about 25 percent of the frame). Generally, surface water in the channel portions of this frame is insignificant, except during rain events. This frame is characterized as highly residential.

Aliso Canyon Wash confluence occurs at river mile 47.3, Browns Canyon Wash confluence occurs at river mile 49.8, and Bell Creek confluence occurs at river mile 51.0. On the right bank, Reseda Park is between river mile 46.6 and 47.0. Frame 9 encompasses approximately 15.71 percent of the total study area of the *2020 LA River Master Plan*.

2.4 2020 LA River Master Plan Objectives

The 2020 LA River Master Plan has the following nine objectives (referred to as "goals" in the *2020 LA River Master Plan*), which are summarized in Chapter 1 of this PEIR:

1. Reduce flood risk and improve resiliency.
2. Provide equitable, inclusive, and safe parks, open space, and trails.
3. Support healthy connected ecosystems.
4. Enhance opportunities for equitable access to the river corridor.
5. Embrace and enhance opportunities for arts and culture.
6. Address potential adverse impacts on housing affordability and people experiencing homelessness.[3]
7. Foster opportunities for continued community engagement, development, and education.
8. Improve local water supply reliability.
9. Promote healthy, safe, clean water.

The *2020 LA River Master Plan* is based on a goal-driven framework that ensures that the plan's recommendations are closely tied to their potential to achieve the broader *2020 LA River Master Plan*'s nine objectives. This was achieved through a comprehensive evaluation of criteria identified in the plan's existing conditions inventory and analysis for assessing each goal along the 51 miles of the LA River, subsequently identifying areas of general to very high need relative to that goal. The plan's strategic directions are a framework built around the plan's nine goals, each of which is an active priority for the future of the river and is explained by rationale that weaves together analysis and community input gathered throughout the *2020 LA River Master Plan* process.

2.5 Proposed Project—2020 LA River Master Plan

The *2020 LA River Master Plan* is intended to be a visionary and practical document for all 18 local jurisdictions within the study area. The *2020 LA River Master Plan*'s framework begins with community needs and aims to provide guidance and resources for jurisdictions to implement subsequent projects in the study area. Rather than requiring one set of fixed solutions for all 51 miles, the *2020 LA River Master Plan* allows for a consistent approach throughout the study area but with frame-specific identity within the greater whole. Ecology, habitat, and art reflect the physiography and culture of an individual frame of the river. Other elements, such as signage, access points, and lighting, were developed to ensure a consistent approach to connectivity, wayfinding, and equitable access. In all cases, the adjacent communities are considered for improvements along the river corridor to have the appropriate scale and feel for the neighborhood.

[3] The aim of the *2020 LA River Master Plan*'s objective 6, "Address potential adverse impacts on housing affordability and people experiencing homelessness," is to maintain strategies for supporting continuing housing affordability in LA River–adjacent communities. Therefore, the use of "impacts" in objective 6 is distinct from the use of "impacts" under CEQA where, per State CEQA Guidelines Section 15358 (b), impacts analyzed under CEQA must be related to a physical change in the environment.

In addition to common elements that projects need to include, to achieve the nine objectives, the *2020 LA River Master Plan* proposes six categories of project improvements, or "kit of parts" (KOP), consisting of infrastructure and urban river design typologies that illustrate the range of possible strategies that the proponents of subsequent projects, including the County, can use along the river. The six KOP categories are:

- Trails and Access Gateways
- Channel Modifications
- Crossings and Platforms
- Diversions
- Floodplain Reclamation
- Off-Channel Land Assets

Each of these six KOP categories includes a recommended collection of design components and can be implemented individually or in any combination as subsequent projects, as driven by the local jurisdiction's needs, funding, and policy decisions.

In addition to the KOP categories with related design components, the *2020 LA River Master Plan* includes a series of smaller common elements that include site furnishings, amenities, and facilities. These include consistent lighting, drinking fountains, places to sit along the river, river pavilions, and cafés that are intended to contribute to habitability of the river environs; promote safety, accessibility, and legibility; and build a cohesive identity of the river corridor.

The *2020 LA River Master Plan* also includes Design Guidelines (summarized below in Section 2.5.2 and included in their entirety as Appendix B.2) that have been developed as a framework to support the development of specific design and technical solutions for subsequent projects to be implemented under the *2020 LA River Master Plan* while presenting a unified, cohesive identity along the 51-mile connected open space corridor and promoting best practices and resiliency. The County intends to adopt these Design Guidelines, along with the *2020 LA River Master Plan*.

Table 2-1 shows the six KOP categories and their respective multi-benefit design components included in the *2020 LA River Master Plan*. It also notes the applicability of the smaller common elements and Design Guidelines across the multi-benefit design components, as needed under future subsequent projects.

Table 2-1. Proposed Project: 2020 LA River Master Plan—Six Categories of the Kit of Parts with Design Components

Kit of Parts	KOP Category 1: Trails and Access Gateways	KOP Category 2: Channel Modifications	KOP Category 3: Crossings and Platforms	KOP Category 4: Diversions	KOP Category 5: Floodplain Reclamation	KOP Category 6: Off-Channel Land Assets
Multi-Benefit Design Components	River gateway	Terraced bank	Pedestrian bridge	Diversion pipe	Side channel	Urban agriculture
	Pedestrian trail	Check dam	Bike bridge	Side channel	Wetland	Solar power
	Bike trail	Levee	Equestrian bridge	Pump	Naturalized bank	Composting
	Equestrian trail	Armored channel	Multi-use bridge	Diversion channel	Braided channel	Natural treatment system
	Equestrian facility	Storm drain daylighting	Cantilever	Diversion tunnel	Field	Wetland
	Multi-use trail	Vertical wall	Platform	Overflow weir	Recreation field	Recreation field
	Light tower/water tower	Channel smoothing	Habitat/Wildlife bridge	Underground gallery	Storage (surface)	Surface storage
	Lookout	Texturizing or grooving		Storm drain interceptors		Subsurface storage
	Boardwalk	Concrete bottom		Wetland		Injection well
	Channel access	Soft bottom/ concrete removal				Water treatment facility
	Vehicular access	Sediment removal				Purple pipe connection
	Underpass and overpass	Bridge pier modification				Dry well
	Vegetated buffer	Access ramp				Spreading ground
	Habitat corridor	Reshape low flow				Storm drain daylighting
		Deployable barrier				Affordable housing
						Art and culture facility
	Common Elements and Design Guidelines, Including Best Management Practices					

Note: The multi-benefit design components can be implemented individually or in combination with others as subsequent projects under the *2020 LA River Master Plan*. Subsequent projects could be sited in the LA River channel (bank to bank), between the top of the levee to the fenceline, or beyond the fenceline (i.e., outside of the river ROW) but within the *2020 LA River Master Plan* 2-mile-wide study area along the 51-mile LA River.

2.5.1 Elements of the 2020 LA River Master Plan and Their Organization for CEQA

To inform decision-making in a comprehensive manner, this PEIR includes the analysis of the potential environmental impacts from implementation of the *2020 LA River Master* Plan based on the following groupings:

- Two "typical projects" that have been identified based on the availability of construction and operations scenario assumptions from Public Works along with relatively detailed design concepts for these projects being described in the *2020 LA River Master Plan*
    - Common Elements Typical Project
    - Multi-Use trails and Access Gateways Typical Project
- Six KOP categories
- Overall implementation, which examines the entirety of the *2020 LA River Master Plan* that would be implemented over a 25-year horizon period

The two Typical Projects are analyzed in greater detail in this PEIR than the other elements. The six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level.

2.5.1.1 Typical Projects

This PEIR analyzes two Typical Projects that are most likely to be proposed throughout the 51-mile-long corridor: Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project. The Typical Projects could be sited between the top of levee and the fenceline at any location in the study area. The analysis of these Typical Projects assumes that no in-channel disturbance would occur under these Typical Projects.

Common Elements Typical Project

The Common Elements Typical Project includes the following elements: pavilions, cafés, hygiene facilities, restrooms, benches, emergency call boxes, water fountains, trash and recycling, bike racks, environmental graphics, lighting, planting, stairs/ramps, guardrails, fences and gates, stormwater best management practices (BMPs), and art/performance spaces (Figure 2-14 at the end of this chapter). In the Common Elements Typical Project, it is assumed these elements could be implemented individually or in any combination at a given site with a size of up to an area of 3 acres or along 1 mile (extra small/small project size). For purposes of the CEQA analysis, it is assumed that the Common Elements Typical Project includes implementation of all 17 elements at a given location and could attract up to 500 visitors.

As described in the *2020 LA River Master Plan*, pavilions are an important common element and are organized in three tiers based on the number and type of amenities. Tier I pavilions are the smallest of the pavilions. They provide shade and seating options along the length of the river, in addition to drinking fountains, waste disposal, and an emergency call box. Tier II pavilions offer enhanced facilities and amenities beyond the baseline Tier I pavilions, and additionally include restrooms, bike racks, picnic tables, charging stations, and vending machines, with optional barbecues and outdoor

showers. Tier III pavilions are the largest of the pavilions and can serve as significant hubs for programming and activity. Tier III pavilions included all Tier I and Tier II amenities in addition to a café, indoor showers, lockers, public safety station, bike rental and repair, equipment rental, multi-purpose rooms, community kitchens, and management offices. For additional context on the Tier III pavilion and its components, see Figure 2-15, Figure 2-16, and Figure 2-17 (at the end of this chapter), which show an artist's rendering, example layout plan, and example configuration of a Tier III pavilion. The analysis of the Common Element Typical Project in this PEIR assumes the most extensive footprint of a Tier III pavilion, which includes the amenities of Tier I and Tier II pavilions.

The common elements under the *2020 LA River Master Plan* would provide safety, comfort, and wayfinding. The need for common elements would be determined by spacing at set intervals along the LA River. They would be implemented as needed under subsequent projects under the *2020 LA River Master Plan* to address the overall cadence of amenities along the river. It is anticipated that the Tier III pavilions would occur every 2 to 3 miles along the river. The Tier I and Tier II pavilions would potentially be placed every 0.5 mile while being spaced to optimize distance. Appendix B.2, Design Guidelines, includes a detailed description of common elements.

Multi-Use Trails and Access Gateways Typical Project

The Multi-Use Trails and Access Gateways Typical Project (Figure 2-18 at the end of this chapter) would include a continuous path for multiple uses—such as bike trails, equestrian trails, and pedestrian trails—and easy-to-find and welcoming access gateways for access to the river. This typical project is informed by KOP Category 1, Trails and Access Gateways, and includes some of its design components (i.e., pedestrian trail, equestrian trail, bike trail, multi-use trail, vegetated buffer, and river gateway; see Table 2-1) for which the County could make reasonable and informed construction and operations assumptions.

The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across Los Angeles County for cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely as possible. When feasible with the availability of ample ROW space, dedicated passageways for each user group would be given with buffers in between the trails. The trails would be linear and designed for active transport, with the bicycle trails along the entirety of the river being designed to meet California Department of Transportation (Caltrans) Class I minimum standards with a design speed of 20 miles per hour. For safety, clear environmental graphics and striping would be included.

Access gateways, like the river gateway shown on Figure 2-18 (at the end of this chapter), would include signage directing usage of the multi-use trails and would call attention to the river through clear visual markers. It is anticipated that access gateways would be placed along the river where major access points, adjacent programming, and LA River communities intersect. All gateways would include ample lighting for security, Americans with Disabilities Act (ADA) accessibility, and environmental graphics and signage.

As analyzed in this PEIR, the Multi-Use Trails and Access Gateways Typical Project consists of an approximately 5-mile-long and 40-foot-wide multi-use trail composed of a 6-foot pedestrian trail with 2-foot-wide buffers on either side, an 8-foot two-way bicycle path with a 2-foot buffer, an 8-foot vegetated buffer, and a 12-foot equestrian trail (Figure 2-19 at the end of this chapter). For subsequent projects, actual trail widths would be dictated by their expected usage and informed by the site conditions. A river gateway that announces access to the trails is also included in this Typical

Project (Figure 2-18 at the end of this chapter). It is expected that a Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 visitors.

2.5.1.2 Kit of Parts (KOP)

The 2020 LA River Master Plan's KOP categories are a recommended collection of multi-benefit design components organized within six major infrastructure and urban river typologies. Each KOP category includes a set of design components (Table 2-1) that would help achieve one or more project goals. The wide-ranging functions, characteristics, and complexity of the KOP categories and their respective design components—along with the lack of specific sites or detailed design information—make it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for these elements of the *2020 LA River Master Plan*. Accordingly, the six KOP categories are qualitatively analyzed at a high level in this PEIR (State CEQA Guidelines Section 15168).

Under the *2020 LA River Master Plan*, the multi-benefit design components can be implemented individually or in combination with other design components as subsequent projects under the *2020 LA River Master Plan*. The specific location (in-channel/off-channel, frame, etc.) and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing party, community needs, policy decisions, and availability of funding. Once site-specific and project-specific details are available for the subsequent projects informed by the multi-benefit design components of the six KOP categories, additional CEQA analysis would be required before subsequent projects can be implemented.

KOP Category 1: Trails and Access Gateways

Improving trails and access points along the LA River corridor is critical for successfully transforming the river into 51 miles of continuous open space that is universally accessible, safe, and comfortable for all. Trails and increased access can improve connectivity between communities along the river; connect people to parks, open space, and other amenities; and improve health outcomes through exercise, exposure to nature, and social gatherings.

In addition to the design components specified in the Multi-Use Trails and Access Gateways Typical Project (Section 2.5.1.1), the following design components could be constructed under KOP Category 1: equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor.

Typical cross-sections of trails and access gateways are shown on Figure 2-20 at the end of this chapter (the figure shows select design components under this KOP category). Design components under this KOP category could serve a range of functions, including recreational and ecological uses. Examples of recreational uses include a continuous path serving multiple purposes and include pedestrian trails, bike trails, equestrian trails, easy-to-find and welcoming access gateways, and a series of amenities for public use, such as shade structures and play fields. Examples of ecological uses include habitat corridors, planted vegetated buffers used to separate high-traffic zones from low-traffic zones, and connections between large areas of habitat to provide sufficient habitat for wide-ranging animal species.

KOP Category 2: Channel Modifications

The existing LA River channel comprises 13 different channel configurations that vary in shape, width, and depth. Some sections have a rectangular section with vertical sides, while other segments are trapezoidal with tapered sides. Historically, modifications to the channel have primarily been made to increase the capacity of the channel. In some areas of the LA River, modifying the existing channel could be advantageous for flood risk, access, and/or ecological function. Channel modifications may include terracing the banks, constructing dams or deployable barriers, modifying the channel for erosion protection, and redirecting water flow. Other channel modifications include changing the materiality of the channel (e.g., adding or removing concrete depending on capacity requirements). Depending on the channel modification implemented, benefits may include improving access and safety, making places for people and habitat, and improving channel capacity to reduce flood risk. Any channel modification requires hydraulic analysis to ensure flood risk is not increased.

The following design components could be constructed under KOP Category 2: terraced bank, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps.

Typical cross-sections of channel modifications are shown on Figure 2-21 at the end of this chapter (the figure shows select design components under this KOP category). Design components under this KOP category could serve a range of functions, including flood management, recreational uses, and ecological uses. Examples of recreational and ecological uses include amphitheaters, small planting trays, parks, wildlife ramps, and wetland terraces. Examples of flood management uses include channel smoothing/texturing/grooving, concrete bottom, and replacement of underground drainage pipes with storm drain daylighting.

KOP Category 3: Crossings and Platforms

Given its width and length, the LA River channel can separate communities and be an obstacle for connectivity. Crossings can connect existing or proposed communities or assets on one side of the river with existing or proposed communities or assets on the other side of the river. Crossings and platforms would typically include multi-use bridges for pedestrian, bike, and equestrian access, , and they would connect communities to nearby parks and community facilities. Platforms are wider than crossings and can create space for parks, recreation, and habitats above the channel in addition to providing cross-river connectivity. Platforms can also host a range of habitat typologies, including riparian and upland conditions, and can allow for wildlife migration. Crossings and platforms can connect people to the river, creating new spaces for gathering and panoramic views of the river and surroundings. Any channel modifications required for crossing and platforms would require hydraulic analysis to ensure flood risk is not increased.

The following design components could be constructed under KOP Category 3: bridges (pedestrian, bike, equestrian, habitat/wildlife, and multi-use), cantilevers, and platforms.

A typical cross-section of crossings and platforms is shown on Figure 2-22 at the end of this chapter (the figure shows select design components under this KOP category). Examples of recreational uses for this KOP category include recreational fields, parks, and channel overlooks. Examples of ecological uses include water features and connections for habitat communities.

KOP Category 4: Diversions

Historically, water flow in the LA River has varied greatly based on seasonal rainfall and groundwater conditions, and diversions for flooding and irrigation were common. Today, water flows in the LA River are highly engineered with dams, reservoirs, and spreading grounds regulating wet-weather events, while dry-weather flows consist mostly of treated wastewater discharged from water reclamation plants. Any modification to the LA River channel or its water flow requires hydraulic analysis to ensure flood risk is not increased and to consider the downstream impacts of altering the flow rate on other uses of the water, such as ecosystem function.

The following design components could be constructed under KOP Category 4: pumps, diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors, and wetlands. Typical cross-sections of diversions are shown on Figure 2-23 at the end of this chapter (the figure shows select design components under this KOP category).

In addition to reducing flood risk and benefiting local water supply reliability, diversions can also provide opportunities for treatment and reuse of water for groundwater recharge, habitat features, or recreational opportunities during smaller storm events, or in the dry season when flows are reduced. Examples of recreational uses include side channels that can provide for flood management during storm events and educational purposes during dry events.

KOP Category 5: Floodplain Reclamation

Historically, the LA River had a vast floodplain and the river would commonly shift its course after major floods. In the 1930s, USACE channelized the river and replaced the shifting floodplain to prevent further flooding. This ultimately allowed for future development and urbanization. Currently, the historic floodplain of the LA River is almost entirely developed. Any floodplain modification requires hydraulic analysis to ensure flood risk is not increased. Floodplain reclamation in the LA River include wetlands, naturalized banks, braided channels, fields, storage, and side channels. Typical cross-sections of floodplain reclamation are shown on Figure 2-24 at the end of this chapter (the figure shows select design components under this KOP category).

Currently, there are a limited number of opportunities along the LA River for floodplain reclamation at any scale, and all the opportunities identified in the *2020 LA River Master Plan*'s opportunity analysis only allow for small-scale reclamation that would not have a role in flood-risk reduction but could have significant benefits for ecosystem function. Due to development and urbanization in the watershed, large-scale floodplain reclamation is not currently feasible without resulting in significant impacts on existing residents, businesses, transportation corridors, and other vital infrastructure.

Reclaiming the floodplain would reconnect the hydrologic relationship between the river and its floodplain, which has the potential to enhance ecological function, create park space, and improve water quality, among other benefits. Examples of recreational uses include boardwalk platforms and a farmer's market. Examples of ecological uses include a naturalized bank and a wider channel for decreased flood risk to support habitat communities.

KOP Category 6: Off-Channel Land Assets

Given some of the limitations of what can be located within the LA River ROW, off-channel land assets can be used for projects that are essential to the *2020 LA River Master Plan* but cannot be

located in the channel or adjacent ROW. In the KOP category, off-channel land assets refer to projects that would exist beyond the fenceline (Figure 2-2 at the end of this chapter). Off-channel land assets combined with ROW improvements can further ensure projects are multi-benefit, addressing multiple needs. Off-channel land assets include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks.

Typical cross-sections off-channel land assets are shown on Figure 2-25 at the end of this chapter (the figure shows select design components under this KOP category). Off-channel land assets combined with ROW improvements can further ensure projects are multi-benefit, addressing multiple needs. Examples of recreational uses include a playground, recreational field, and arts and culture facilities. Examples of ecological uses include orchards, composting centers, community gardens, and ponds.

2.5.1.3 Overall 2020 LA River Master Plan Implementation

The *2020 LA River Master Plan* includes up to 107 potential projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) that would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the two Typical Projects (Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project) that would be constructed at a specified cadence, or spacing, along the river to ensure equitable distribution of facilities throughout the 51-mile-long corridor and help improve access and safety; and additional subsequent projects from the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

These 107 potential projects are identified in the *2020 LA River Master Plan* in addition to several other planned proposed projects included in other LA River published plans (such as the *2007 LA River Revitalization Master Plan*, the *LA River Ecosystem Restoration Integrated Feasibility Report* and its *Recommended Plan – ARBOR Study*, and the *2017 Lower LA River Revitalization Plan*). The *2020 LA River Master Plan* analyzed parcels that could provide opportunities to site the 107 potential projects, and completed an opportunities and constraints analysis at sites along the corridor taking into account the LA River ROW, adjacent land assets, and underlying geophysical conditions. The proposed final implementation of these potential 107 subsequent projects, including specific location (planning frame, in-channel [bank to bank]/off-channel [outside of bank]), design, and timing would depend on many factors that are currently unknown at this time. These factors include, but are not limited to, the proponent of subsequent projects, the implementing party, local community needs, policy decisions, timing of proposed implementation, and availability of funding. Accordingly, this PEIR presents a program-level analysis of the *2020 LA River Master Plan* and its components that does not include any site-specific or project-specific analysis.

As shown in Table 2-2, for the 107 projects, it is expected that most of them (85) would be extra-small and small projects (up to 3 acres/1 mile in size), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and 1 extra-large projects (150+ acres/10+ miles in size).

Table 2-2. 2020 LA River Master Plan: Subsequent Project Size Distribution

Size	Number of Projects Proposed under the 2020 LA River Master Plan PEIR	Project Element
Extra-Small/Small (up to 3 acres/1 mile)	43 (extra small) and 42 (small)	Primarily Multi-Use Trails and Access Gateways; Crossings and Platforms (such as a pedestrian bridge); Channel Modifications; and/or Off-Channel Land Assets
Medium (3 to 40 acres/5 miles)	10	All 6 KOP categories are applicable
Large (40 to 150 acres/10 miles)	11	All 6 KOP categories are applicable
Extra-Large (150+ acres/10+ miles)	1	All 6 KOP categories are applicable
Total	**107**	

2.5.2 2020 LA River Master Plan Design Guidelines

The proposed Design Guidelines (included as Appendix B.2 to this draft PEIR and described above) were developed as a framework to support the specific design and technical solutions for projects to be implemented under the *2020 LA River Master Plan* while presenting a unified, cohesive identity along the 51-mile connected open space corridor and promoting best practices and resiliency. The Design Guidelines would ensure a standard for design for projects at all scales and help define the LA River corridor. Rather than requiring one set of fixed solutions for all 51 miles, these guidelines promote a consistent approach with frame-specific identity within the greater whole. The Design Guidelines are intended to provide flexibility for site-specific needs while reflecting neighboring communities' cultural identities and the diverse and shared identities of Los Angeles County.

The Design Guidelines are organized into four chapters that focus on access and mobility; environmental graphics; ecology, habitat, and planting; and facilities and amenities. The components and key features of these four Design Guidelines chapters, as relevant to the analysis in this PEIR, are summarized below. Design Guidelines for the *2020 LA River Master Plan* are attached to this PEIR as Appendix B.2 and include a detailed description of the Design Guidelines along with a checklist at the end of each chapter that details the technical requirements.

While a majority of the proposed Design Guidelines are not described as mandatory requirements, select Design Guidelines (such as those related to access points, gateways, maintenance buffers and clearances, emergency access, lighting, and monitoring and maintenance plans) are described as requirements (through the use of "must" and "shall") rather than recommendations under the *2020 LA River Master Plan*. Accordingly, this PEIR assumes that the *2020 LA River Master Plan* will be implemented consistent with these required Design Guidelines. Similarly, it is assumed that all subsequent projects under the *2020 LA River Master Plan* would be implemented in accordance with the required Design Guidelines by implementing agencies (Los Angeles County or the 17 cities). For the purposes of the impact analysis presented in Chapter 3 of this PEIR, compliance with these required Design Guidelines is assumed and factored into the impact analysis and CEQA determination for the *2020 LA River Master Plan*.

With respect to the remaining recommended (and not required) Design Guidelines, the PEIR does not assume that the *2020 LA River Master Plan* will be implemented in compliance with these recommended Design Guidelines, as they are not presented as requirements. Therefore, the recommended Design Guidelines are not factored into the impact analysis and CEQA determination for the *2020 LA River Master Plan* in Chapter 3 of this PEIR. However, recommended Design Guidelines that are relevant to environmental resources analyzed in Chapter 3 are disclosed in the impact analysis discussion. Design Guidelines that are not relevant to the environmental analysis or are recommended (i.e. not required) are not anticipated to result in significant impacts. All subsequent projects as proposed by implementing agencies would be required to consider the later activity in the context of the PEIR and its findings, including application of all Design Guidelines to the extent that they are proposed for incorporation into the project.

Implementation of all Design Guidelines must be consistent with prevailing building codes and relevant regulations and permits.

2.5.2.1 Access and Mobility

A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. The Access and Mobility chapter of the Design Guidelines provides dimensional and material guidelines for multi-modal trails connecting to and along the LA River and includes ROW scenarios, gateways, and bridges, among other aspects, related to access and mobility. The ROW width along the LA River ranges from very narrow (less than 12 feet) to extra-large (more than 12 feet). These widths are key considerations for design and location of trails along the LA River. Currently, there is not a connected 51-mile trail along either bank of the LA River. Along one bank, there are gaps in the LA River Trail in the San Fernando Valley and downtown Los Angeles, which are being respectively planned and studied by the City of Los Angeles and the Los Angeles County Metropolitan Transportation Authority. Once these gaps are filled, there would be a continuous 51-mile-long LA River Trail along the LA River. Different segments of the trail occur on the two sides of the river, but there is no continuous access or a trail along both banks. Trails along both sides would need to be planned for in the future.

The LA River Trail implemented under the *2020 LA River Master Plan* is envisioned to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians. The LA River Trail should aim to accommodate as many user types as safely possible. Additionally, operations and maintenance vehicles to must have adequate access the ROW to enable these essential functions to be performed. The various trail conditions along the LA River should be designed with their intended use in mind. Table 2-3 highlights the key features in the Access and Mobility chapter of the Design Guidelines, including the key technical requirements listed in the Access and Mobility checklist, that are relevant to the analysis in this PEIR. For a detailed description of all Access and Mobility Design Guidelines and the full checklist, see Appendix B.2.

Table 2-3. Access and Mobility Design Guidelines: Key Features

Component	Key Features
Multi-Use Trails	
The LA River Trail should connect to other trails along the length of the river to create a network of trails across the County that accommodates as many user types, such as cyclists, pedestrians, and equestrians, as safely as possible. A variety of trail types could be designed with separated uses (equestrian, pedestrian, and bicycle), adjacent uses (pedestrian and bicycle), or combined uses (pedestrian and bicycle).	As on Figure 2-19 (at the end of this chapter), the typical cross-section of a multi-use trail would include an 8- to 12-foot equestrian path, two 4-foot-wide bicycle trails with 2-foot shoulders, and a 4- to 6-foot pedestrian path. The multi-use trail would be designed to give each user group a dedicated passageway with vegetated buffers, dividers, and shoulders in between the trails. • All trails should be sloped at a maximum of 2% away from the river to encourage drainage. • Where feasible, all trails should be sloped into a vegetated area that is designed to collect, retain, and infiltrate stormwater runoff. • Bicycle trails are encouraged, but not required to be designed to meet Caltrans Class I minimum standards with a design speed of 20 miles per hour. • Where possible, equestrian trails should be kept separate from other trails. Other multi-use trails may include combinations of the equestrian, bicycle, and pedestrian path with variations in vegetated buffers and/or dividers, or they can include shared trails between the equestrian, pedestrian, and bicycle uses. Multi-use trails can be designed in different ways depending on available width. Ideally, equestrians would be separated from pedestrians and bicyclists with a buffer. Channel configurations and ROW conditions along the LA River vary through each frame, and range in size from extra-large (greater than 12 feet) to very narrow (less than 12 feet), which would affect the design and locations of trails.
Paving Materials	
When possible, these "ideal" surfaces should be used; however, all design conditions, material thicknesses/ assemblies, and colors should be reviewed by design professionals for site-specific considerations.	The typical multi-use trails would be paved with concrete, asphalt, stone fines and decomposed granite, compacted earth, or permeable paving. • Low volatile organic compound, warm-mix asphalt should be used. • Dark surfacing, such as black asphalt, should be avoided along the trail because of urban heat island effect.
Fences, Guardrails, Railings, and Gates	
Use of the river corridor for public activities requires a re-evaluation of fencing in terms of function, aesthetics,	• The appropriate type of fencing is based on the proposed recreational uses and adjacent elements.

Component	Key Features
and the perception of safety vs. real hazard	• Reduction of fencing would rely on the reduction of public hazards, the implementation of other types of buffers and barriers, and a safety/warning notification system. • Gates may be used for public safety and to prohibit access during flood conditions. • Vehicular and pedestrian gates must have the ability to close and lock.
Gateways	
Gateways are placed along the river at key locations where major access points, adjacent programming, and LA River communities intersect and, depending on the conditions and amenities, can exist at three different scales.	• All gateway points must include: ○ ADA accessibility ○ Lighting ○ Signage
Bridges	
Bridges should be implemented, where feasible, to connect all users to the river and adjacent neighborhoods; therefore, trail intersections should be carefully considered in the design of bridges to ensure seamless circulation between different kinds of users.	• Pedestrian, equestrian, and bicycle bridges should be designed to be a minimum of 12 feet wide. • When possible, all bridges should be designed to not exceed a maximum slope of 5% on main paths of egress. • Clear safety striping and environmental graphics to be present warning trail users of a bridge crossing and trail intersections. • Bridge paths of travel should be connected to appropriate multi-use trails (i.e., when building an equestrian bridge, users should be connected to an equestrian trail). • All bridge proposals should be studied for hydraulic impacts on the flood capacity of the channel and shall not obstruct flows during a 1% annual chance storm event.
Underpasses	
Trails that run parallel to the river may pass under existing or proposed bridge crossings.	• Minimum of 10 feet clearance at underpass. • Lighting must be added to provide visibility. • Underpasses should be designed to incorporate stormwater collection/ treatment before release into the channel where feasible (tight ROWs may prohibit this). • The slope of the trail at any underpass or overpass should be between 2% and 5%, while not exceeding 8%. • A guardrail or railing may be needed to separate users from the river.

2.5.2.2 Environmental Graphics

The proposed Environmental Graphics Guidelines for the *2020 LA River Master Plan* have been developed with a common set of values for their design and proposed use. These guidelines create a framework for consistent wayfinding and promote a unique identity for the LA River. They aim to be accessible to all. Legibility and graphic clarity are important across all environmental graphics. Sign designs have a simple, timeless aesthetic while allowing for community expression and art at gateways and other special locations. Furthermore, environmental graphics can be integrated with architecture, art, and design rather than just consisting of standalone signs. Wayfinding to the LA River from bike routes and pedestrian streets is also crucial for directing people to the river itself. The sequence and placement of these signs and graphics should avoid sign clutter. Information conveyed through environmental graphics should be deliberately curated as pedestrians or cyclists approach and enter the LA River ROW.

The Environmental Graphics Design Guidelines chapter includes a matrix that describes parameters (ADA font and size, contrast, language, universal design, Native American place names, and references) for different types of graphics, such as informational, regulatory, confirmation, directional, mile markers, pavement markings, interpretive signs and displays, and large-scale icon graphics. All environmental graphics share common design features such as the terminology for the "LA River," the heron logo and icon, the use of open-source Barlow font, and the recommended background color with white for effective contrast. Accessibility, legibility, and compliance with the ADA (where applicable) are baseline criteria to be followed by environmental graphics. Furthermore, symbols for amenities or trails should be consistent across all environmental graphics and should follow the symbols used for the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), if one exists for the amenity depicted.

Table 2-4 below highlights the key features in the Environmental Graphics chapter of the Design Guidelines, including the key technical requirements listed in the Environmental Graphics checklist, that are relevant to the analysis in this PEIR. For a detailed description of all Environmental Graphics Design Guidelines and the full checklist, see Appendix B.2.

Table 2-4. Environmental Graphics Design Guidelines: Key Features

Component	Key Features*
Informational	
Informational signs are used to inform visitors about a place and include park entry signs and other non-regulatory signs.	• Signs should be placed near primary access points and be visible from the street or trail and would have an anti-graffiti film overlay.
Regulatory	
Regulatory signs are used to alert users to rules and regulations within LA River parks or multi-use trails. They are also used to warn park and trail users of dangerous conditions or to inform bicyclists and drivers of regulations and upcoming conditions.	• Signs are typically placed at or near park entrances or access points and would have an anti-graffiti film overlay. Certain regulatory sign placement would need to follow uniform traffic standards and MUTCD guidelines. • Signs indicating flood danger should be placed along the channel itself or at other appropriate locations.

Component	Key Features*
	• All rules and regulations should always be bilingual (language dependent on the neighborhood and could be Spanish, Chinese, Korean, Russian, etc.).
Confirmation	
Confirmation signs inform users that they are on the correct route or alerts users to an upcoming turn. This information can include distances or time to destination or the LA River.	• Signs should be at access points, which could be key locations close or on the LA River, and would have an anti-graffiti film overlay. • Amenity symbols should be MUTCD standard symbols whenever available.
Interpretive	
Interpretive signs and displays are used to educate users. These may include topics such as geomorphology and engineering of the river, ecological restoration, water supply, water quality, natural history of Los Angeles, Native American place markers and traditions, or cultural history of local neighborhoods. Typically, they would be found in LA River parks or at access points to the river and trails.	• Signs should be placed along trail lookouts, gateways, access points, pocket parks, and within major projects themselves. Placement would depend on the education context. • Signs are encouraged to be bilingual (language dependent on the neighborhood and could be Spanish, Chinese, Korean, Russian, etc.).
Directional	
Directional signs are used to alert travelers to the location of the river, multi-use trails, and river parks. They serve an important wayfinding function and would set traffic patterns to and from the river.	• Signs should be placed along streets and at intersections that cater to pedestrians and cyclists and would have an anti-graffiti film overlay.
Mile Markers	
Mile markers are a new and important signage type to the LA River. A cohesive system of mile numbering along the LA River unifies all 51 miles and helps users identify their location along river trails. The mile numbering system would strengthen public safety by allowing people to easily locate themselves along the river for emergency responders.	• Mile markers, with anti-graffiti overlay, should be placed every half mile, facing both directions of travel along the trail on the landside of the trail. • Signs should be sandwiched on a pole so that the mile marker is legible from both directions of travel.
Pavement Markings	
Pavement markings occur on the pavement of multi-use trails along the LA River and demarcate the distance from the outfall into the ocean (river mile 0.0) to the headwaters (river mile 51.0).	• Pavement marking must be incorporated at every mile on all paved paths along the LA River trail, including bikeways and multi-use trails. • Pavement markings would be on the ground of the trail, would face both directions of travel, and would occur every mile. Tick on edges of trail would occur every 1/10 mile.

Note: * The sign site specifications and installation within each component may have additional variation based on the type of sign.

The LA River travels through many diverse neighborhoods. Primary languages spoken by adjacent neighborhoods must be considered when creating bilingual environmental graphics.

Languages such as, but not limited to, Spanish, Chinese, Khmer, Tagalog, Russian, or Korean are all examples of languages that can be used for translations of environmental graphics. Symbols and clear graphic design can also be used for communication without the need for translations.

2.5.2.3 Ecology, Habitat, and Planting

Despite being highly urbanized, the LA River watershed is within one of the world's most diverse Mediterranean ecosystems. The river's capacity to support biological activity is determined by hydrological conditions, channel shape, and connectivity to adjacent biodiversity hotspots upland from the river. The Design Guidelines for ecology and planting are thus guided by the unique biodiversity of the region and characteristics of the river's distinct frames. Additionally, elements of the river's former ecology can be reintroduced where appropriate to reestablish many of the rare and riparian and upland ecosystems that have been lost to urbanization; however, the resilience of these native ecosystems to hydrological or climate changes should be considered and planting palettes may be augmented and adaptively managed. The following summarizes the guidelines for the design and installation of planting along the LA River and provides guidance for planting setbacks and buffers, planting along levee and floodwalls, and channel modifications, among other aspects related to the creation of habitats and functioning ecosystems.

Table 2-5 below highlights the key features in the Ecology, Habitat, and Planting chapter of the Design Guidelines, including the key drawing and specification technical requirements listed in the Ecology, Habitat, and Planting checklists that are relevant to the analysis in this PEIR. In addition to the design and technical specifications requirements, all projects along the LA River are required to develop a 3-year monitoring and maintenance program prior to start of construction. The maintenance program begins on completion of the last day of the planting operation and emphasizes proper application of supplemental water, replacement planting, and weed management to achieve an increased rate of vegetation establishment and growth. The monitoring and maintenance program to be established is to provide for regular inspections and decisions regarding weed management, supplemental irrigation, and additional planting actions. For a detailed description of all Ecology, Habitat, and Planting Design Guidelines and the full drawing and specification technical requirements and maintenance program checklists, see Appendix B.2.

Table 2-5. Ecology, Habitat, and Planting Design Guidelines: Key Features

Component	Key Features
LA River Planting	
LA River Planting allows for creation of habitats and functioning ecosystems.	To ensure success in habitat and planting projects along the LA River, design considerations must include everything from site preparation to sourcing plant material to maintenance post installation. These guidelines put forward the following values for projects along the river: • Plant species appropriate to the planning frame of the proposed Project.

Component	Key Features
	• Provide successional development of plantings into communities of plants that are ultimately best suited to the conditions of their environment. • Provide a continuous native tree and plant corridor along the river with linkages to riparian habitat and upland areas near the river. • Support nurseries and organizations that specifically collect and propagate indigenous native plant species for planting along the river corridor. • Achieve healthy soil biology, not just chemistry, by providing the critical foundation for each stage of succession that would ultimately host a sound ecological system. • Eradicate invasive exotics and deter the use of exotics that provide little or no habitat value. • Encourage the use of permeable paving solutions, filtration, and percolation of rainwater, and on-site water retention/detention to mitigate/eliminate water pollution and to reduce runoff. • Consider the resilience of the LA River system and the future effects of climate change in project planning and design. • Ensure there is a maintenance plan for the installed landscape that is appropriate to the needs of the planted species. • Provide opportunities for artwork through habitat creation and planting. • Ensure planting densities consider the safety of pedestrians, joggers, and cyclists by providing sufficient line-of-sight clearance, especially at access points and trail intersections, and do not shield light sources along trails. • Productive landscapes (i.e., urban agriculture) should have strong ties to the community and community organizations and would provide access to fresh food sources. If urban agriculture is included in the planting plans of the site, those specific areas do not need to meet native planting requirements. • Additional information on planting strategies and plant communities is available in Appendix B.2.
Tree and Shrub Planting	
The landscape architect should keep in mind the species and communities that probably existed along project river reaches and determine whether those species can still thrive within the constraints now existing along the river ROW.	• Plant species appropriate to the planning frame of the proposed Project; refer to Appendix B.2 for further specifications and planting list. • Do not plant aggressive exotic plant species or any other species listed as invasive by the California Native Plant Council.

Component	Key Features
	• Eradicate all existing invasive plant species on site. Existing, non-invasive, exotic species may be retained until senescence then replaced with appropriate native plants. • Plant material quantities and handling standards must comply with the latest version of the American Standard for Nursery Stock (ANSI Z60.1) published by the American Horticulture Industry Association. • Planting in the LA River channel should only occur where excess hydraulic capacity is confirmed. • Irrigation supply and system components would comply with the County's Low Impact Development Manual, County water sources, conservation standards, and current California Green Building Standards Code. • Use recycled or reclaimed water for irrigation where possible. Analyze total dissolved salts from the sources to confirm plant types.
Setbacks and Buffers	
Setback requirements for plantings are necessary for the maintenance of the function of the LA River as a flood channel. Additionally, plantings can serve as a buffer along the river corridor.	• All new proposed projects must comply with the setback and buffer guidelines. • Follow the Limited Landscape Management Zone requirements (17-foot setback from the channel wall) for maintenance and emergency vehicle clearance. • Follow the most recent USACE guidelines for Vegetation Free Zone (15-foot setback). • New proposed projects should aim to create bioswales or treatment basins to collect stormwater runoff. BMPs are described in further detail below.
Planting along Levees and Floodwalls	
Planting along flood channels must consider strategies that do not compromise the level of flood risk reduction provided by the structures.	• Follow the most recent USACE Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures (ETL 1110-2-583, or the most current publication) to ensure structure's integrity. • Deploy BMPs to capture stormwater where possible.
Maintenance Buffers and Clearance	
Maintenance vehicles require adequate access and space to maneuver in order to service the flood channel.	• All maintenance vehicles must have ingress/egress clearance at all times. • Alterations or design of service roads must meet County approval. • Allow 40-foot centerline turning radius for truck ingress and egress from arterial streets. • Comply with all setback requirements. • Consult with appropriate utility company if working in a utility easement or ROW.

Component	Key Features
Best Management Practices (BMPs)	
BMPs help capture, convey, and infiltrate stormwater during a rain event and may include rain gardens, swales, infiltration strips, and infiltration trenches.	• Project sites should be studied to identify optimal locations and possible grading actions to increase capture and retention of rainfall to help sustain the growth of native plantings. • Soils should be suitable for infiltration. • BMPs should be sized appropriately with respect to the tributary drainage areas. • Pre-treatment BMPs to remove solids, sediments, trash, and debris are critical and recommended. • All BMPs require regular maintenance to avoid debris and obstructions for long-term success. • More information on BMPs is available in the Public Works Low Impact Development Standards Manual.
Channel Modifications	
Designers are encouraged to create innovative designs to integrate ecological function and programming into the channel edge condition; however, modifications should not increase flood risk and would be subject to permit requirements and hydraulic feasibility modeling.	• Channel modifications should not result in an increased level of flood risk to the properties surrounding community. • Qualified engineers would need to thoroughly evaluate the hydraulic and flood risk impacts of any proposed channel modification. • Trapezoidal channel: wide-stepped terraces for planting or terracing with hardscape steps and amphitheater seating can be evaluated. • Rectangular channel: A larger terrace can be created for planting, or the wall of the rectangular channel can open to allow for a ramp to enter the channel. • Platform: an open space option that can be considered with a high need for connectivity to a park space and limited or nonexistent landside ROW but cannot be considered over soft-bottom portions of the channel or in the estuary.
Site Preparation and Soils	
The landscape architect or planting designer should use the soil analysis results to determine the plant palette.	• All existing soils should be tested to verify they are free of contaminants and debris and have the capacity to support adequate nutrients, drainage, and structure for a given planting design. If soils are contaminated, create a remediation plan. • Test samples of salvaged on-site topsoil, all plant mix materials, and organic material components that are intended to be used for planting soil mixes and final mixes by an independent Soil and Plant Testing Laboratory acceptable to the landscape architect and in accordance with the current standards of the Soil Science Society of America. All reports would be sent to the landscape architect for approval.

Component	Key Features
Maintenance Best Practices	
Project proponents would be required to prepare a 3-year monitoring and maintenance program for all plantings.	• The monitoring and maintenance program would designate who would oversee all short- and long-term maintenance actions and would define a performance schedule that identifies actions needed to improve planting success. • Long-term water usage is discouraged but supplemental irrigation to sustain new plantings is discretionary. • All irrigation supply and system components would comply with the County's Low Impact Development Manual, County water sources, conservation standards, and current California Green Building Standards Code. • Trimming, pruning, and removal of plants is to be done under the guidance of a qualified native plant specialist. • Refer to the County's Weed Management Area Best Management Practices for Vegetation Management (revised December 2015) for weeding and supplemental mulching maintenance practices.
Slope Stabilization and Erosion Management	
During and after construction, exposed slopes should be treated to avoid dust and sediment erosion.	• Slope stabilization techniques include geo-grid matting, erosion control matting, and hydroseeding. • These techniques are meant to be deployed along the landside ROW only because they would not be able to withstand the flood water velocities in channel. • Armoring the landside of levees would reduce the risk of levee failure under extreme overtopping events and provides increased resiliency to flooding.
Wildfire Management	

Planting projects should not increase fire risk.	• For larger projects or those that interface with a wildlife area, indicate wildfire breaks on the site plan.
	• Wildfire mitigation strategies for native habitats along the LA River should focus on eliminating invasive species, creating fuel breaks, and reducing fuel load where possible. The following can be considered as best practices:
	  ○ Remove invasive, nonnative species during chaparral seeding or transplanting to aid in the establishment, survival, and recovery of native chaparral communities.
	  ○ Prune dead plant material and remove plant debris to reduce fuel load. Pruning methods should maintain the natural form of trees and shrubs.
	  ○ Consider spacing of canopy trees and large shrubs far enough to reduce the spread of fire.
	  ○ Maintain vertical separation between lower and upper fuel layers.

Component	Key Features
	○ Minimize grasses and forbs, cut to four inches tall when they brown. ○ Reduce fuel load through mowing or machinery, grazing by animals such as goats,(NRCS Code 528), pruning (NRCS Code 660), removal, chipping, masticating, and/or sparingly through prescribed burning (NRCS Code 338).

NRCS = Natural Resources Conservation Service

2.5.2.4 Facilities and Amenities

Facilities and amenities along the LA River promote a sense of place and belonging along the river corridor. They not only draw people to the river, but also encourage them to stay for longer periods of time to enjoy the river with comfort and safety. These amenities—ranging from large pavilions (Tier III pavilions) that can be a notable community resource to a single bench or drinking fountain (Tier I pavilion)—are meant to be used by all people, including commuters, recreational users, nearby residents, and persons experiencing homelessness. Pavilions situated along the LA River would house numerous facilities and amenities, forming a network of programs and activities to support a continuous and unified experience along the LA River Trail and serve as an asset for river users and river-adjacent communities. Excellent design of these amenities and facilities, regular maintenance, and installation at regular intervals along the river corridor would ensure consistency and encourage regular use by communities along the LA River.

The development of river pavilions should incorporate water, environmental, construction, and social best practices. Examples include, but are not limited to, California's Title 24 Part 6 Building Energy Efficiency Standards, United States Green Building Council's Leadership in Energy and Environmental Design, United States Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes, among many others. Table 2-6 below highlights additional best practices and presents key features in the Facilities and Amenities chapter of the Design Guidelines, including the technical requirements listed in the Facilities and Amenities checklist, that are relevant to the analysis in this PEIR. For a detailed description of all Facilities and Amenities Design Guidelines and the full checklist, see Appendix B.2.

Table 2-6. Facilities and Amenities Design Guidelines: Key Features

Component	Key Features
Pavilions	
A network of pavilions along the LA River should adhere to a cadence that optimizes an equitable distribution of facilities and amenities for river users and river-adjacent communities.	• Shade pavilions/Tier I (baseline): ○ Occupancy ranges from 5 to 20 occupants depending on compact, linear, square, moderate, and expanded design. ○ Shade pavilions must include shade structure and seating, river education display, drinking fountain, emergency call box, litter and recycling receptacles, and pet waste station. ○ Tier I pavilions may occur more frequently along the LA River (ideally alternating every 0.5 mile along both sides of the river, where feasible, with Tier II pavilions). • Rest pavilions/Tier II: ○ Occupancy ranges from 20 to 50 occupants, depending on compact, linear, square, moderate, and expanded design. ○ Rest pavilions must include everything in the shade pavilions (Tier I) plus the following: single-occupancy restrooms/basic sanitation facilities, charging station, bike racks (number based on occupancy and local codes), snack station, and picnic tables. ○ Tier II pavilions may occur more intermittently at an appropriate cadence (ideally alternating every 0.5 mile along both sides of the river, where feasible, with Tier I pavilions) • Gathering pavilions/Tier III pavilions: ○ Occupancy ranges from 50 to 500 occupants, depending on compact, linear, square, moderate, and expanded design. ○ Gathering pavilions must include everything in the shade pavilions (Tier I) and rest pavilions (Tier II) plus the following: locker rooms/enhanced sanitation facilities, public safety station, and cafés. ○ On-site staff, river rangers, and or/police rangers should be incorporated to serve and support river users. ○ Tier III pavilions should be located every 2 to 3 miles on either side of the river in conjunction with river gateway access points. • All river pavilions (Tier I, II, and III): ○ The finished floor elevation should be above the 1% storm event; however, if this is not feasible, other locations or making the facility floodable (i.e., the area can flood without causing permanent damage to any of the structures or amenities) should be considered. ○ Comply with the current ADA Standards for Accessible Design; state and county requirements, such as California's Title 24 Part 6 Building Energy Efficiency Standards; and local building codes, zoning regulations, and parking requirements. ○ For safety, optimize lighting at night, provide emergency call boxes at the entry of pavilions, and ensure first aid kits and defibrillators are available.

Component	Key Features
Pavilion Best Practices	
The development of river pavilions should incorporate water, environmental, construction, and social best practices.	• Water ○ Follow County and/or local jurisdictional Low-Impact Development Standards. ○ On-site water retention, detention, and filtration. ○ Capture 100% of on-site rainfall for the 85% rain event. ○ Greywater and rainwater reuse. ○ Low-flow water fixtures. • Energy and Environment ○ Use renewable energy sources (solar, wind, and water). ○ Optimize building orientation for solar exposure, diffused daylight, and passive ventilation. ○ High thermal performance. ○ Energy efficient appliances. ○ Pollution reduction. • Materiality ○ Locally sourced, recycled, and recyclable materials with low embodied energy. ○ High-albedo roof and paving materials to mitigate heat gain. ○ Green roof and pervious paving. • Construction/Operations and Maintenance ○ Recycle construction waste. ○ Reduce dust and mitigate other nuisances during construction. ○ Green cleaning and integrated building management. ○ Regularly monitor building systems and optimize usage. • Social ○ Provide universal access to all communities and users. ○ Avoid physical deterrents. ○ Provide spaces for socialization. ○ Promote public engagement with areas for large gatherings.
Common Elements	
Common elements are driven by cadence, either required at all project sites or at set intervals along the LA River Trail.	Where feasible, all projects must provide: • Benches and seating • Bike racks • Litter and recycling receptacles • Drinking fountains • Lighting • Emergency call boxes Use graffiti-deterrent finishes where possible.

2.5.3 Project Phasing, Construction, Operations/Maintenance Scenarios

Construction of subsequent projects, as approved subsequently by proposing agencies, under the *2020 LA River Master Plan* would occur over a 25-year horizon period for the *2020 LA River Master Plan* through 2045 and could extend beyond it. The precise timing for later activities (i.e., subsequent proposed projects) over this timeframe is not known, as they are dependent on several factors, such as securing necessary funding, implementing party, community needs, and detailed design considerations.

The construction and operations/maintenance scenarios for the two Typical Projects (Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project) are described below and have been developed based on assumptions made by Public Works related to construction equipment, phasing, duration, typical operations/maintenance activities, etc.

2.5.3.1 Construction Scenarios

Common Elements Typical Project

Project construction for a Common Elements Typical Project would begin as soon as 2021 and would continue for 10 months. The work would be accomplished over six phases to minimize disruption to existing operations and the community. Construction would involve up to 20 construction workers per day and may include excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, and small cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted hours. Project construction would involve a total area of approximately 3 acres. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would occur on LACFCD ROW.

Construction would generally proceed in the following phases over the 10-month construction schedule:

- Phase I: Demolition
- Phase II: Site Preparation
- Phase III: Grading
- Phase IV: Building Construction
- Phase V: Paving
- Phase VI: Architectural Coating

Multi-Use Trails and Access Gateways Typical Project

Project construction would begin as soon as 2021 and would continue for 20 months. The work would be accomplished over six phases to minimize existing trail operation and the community. Construction would involve 5 to 10 construction workers per day and may include excavators, dump trucks, backhoes, motor graders, hydraulic impact hammers, forklifts, paving machines, and truck-mounted cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted

hours. Project construction would involve a total area of approximately 24 acres. Based on the anticipated construction phasing, the average daily construction disturbance area would not exceed 0.5 acre per day. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would occur on LACFCD ROW.

Construction would generally proceed in the following phases over the 20-month construction schedule:

- Phase I: Demolition
- Phase II: Site Preparation
- Phase III: Grading
- Phase IV: Building Construction
- Phase V: Paving
- Phase VI: Planting

Overall 2020 LA River Master Plan Implementation—Construction of Subsequent Projects

Subsequent projects from the six KOP categories and their multi-benefit design components would be developed in the future. The specific location (in-channel/off-channel, frame, etc.) in the study area and design details of these subsequent projects would depend on numerous factors, including proponent of subsequent projects, the implementing party, community needs, policy decisions, and availability of funding. Site-specific and project-specific design details of subsequent projects would determine their construction schedules and would ultimately be driven by the County's needs or the needs of any other jurisdictions implementing these projects under the *2020 LA River Master Plan*. Accordingly, construction schedules for subsequent projects are not yet known and would be described in future CEQA documentation.

2.5.3.2 Operations Scenarios

Common Elements Typical Project

The Common Elements Typical Project operations and maintenance could start as early as 2022. Regular maintenance is essential to preserve the upkeep of these facilities. In their implementation across the river, it is essential to consider materials that are durable, easily cleaned, and vandal-resistant, lessening long-term maintenance costs. Furthermore, it is important to regularly operate and surveil them to deter people from misappropriating their use, such as discouraging persons experiencing homelessness from lingering in them for long periods of time. The *2020 LA River Master Plan* requires the development of pavilion-specific maintenance plans and schedules that require frequent and special attention to prevent vandalism and ensure proper use of facilities. Maintenance activities for the Common Design Typical Project include trash/litter control, facilities cleaning, inspection, landscape trimming, water and irrigation system maintenance, and rodent control.

The Common Elements Typical Project would offer refuge to river users and river-adjacent communities and reflect the same aspiration of enhancing visitors' experience of the river as the

2020 LA River Master Plan at large. The *2020 LA River Master Plan* describes water, environmental, and social BMPs that should be considered when developing and operating a Common Elements Typical Project. As described in the *2020 LA River Master Plan*, pavilions include BMPs that should not result in demanding energy and water usage, result in environmental nuisances, or create inaccessible facilities and amenities. Pavilions can serve as an example of varying best practices and help propel the LA River into a future of access, equity, and resiliency. Regular operation of a Common Elements Typical Project would include up to 500 visitors per day. Operation of a Common Elements Typical Project would also include 10 full-time employees per day.

Multi-Use Trails and Access Gateways Typical Project

Multi-Use Trails and Access Gateways Typical Project operations and maintenance could start as early as 2022. Due to the use of multi-use trails and access gateways, inspection of trails, shade structures, river access gateways and recreational facilities would be conducted weekly. Maintenance duties would also include operating trail facilities, clearing and maintaining trails, and responding to community inquiries. Weed control and litter control would occur weekly, and rodent control would occur as needed. Landscaping and planting activities would occur at different yearly frequencies. Tree trimming would occur every 2 to 3 years, shrubbery/vine trimming would occur every year, ground cover trimming would occur twice a year, and ornamental grass trimming would occur once a year. Maintenance machinery that would be used include 4x4 trucks, excavators, hand-held machinery, and potentially dump trucks.

Operation of a Multi-Use Trails and Access Gateways Typical Project would attract a variety of users, including pedestrians, bicyclists, and equestrians. A Multi-Use Trails and Access Gateways Typical Project could expect up to 1,000 users per day and would have 3 full-time employees per day.

Overall 2020 LA River Master Plan Implementation—Operation and Maintenance of Subsequent Projects

Similar to the discussion for the construction scenarios of subsequent proposed projects under the *2020 LA River Master Plan*, operations and maintenance scenarios for these projects would be described in future CEQA documentation once details related to design, location, and operations of these projects are determined.

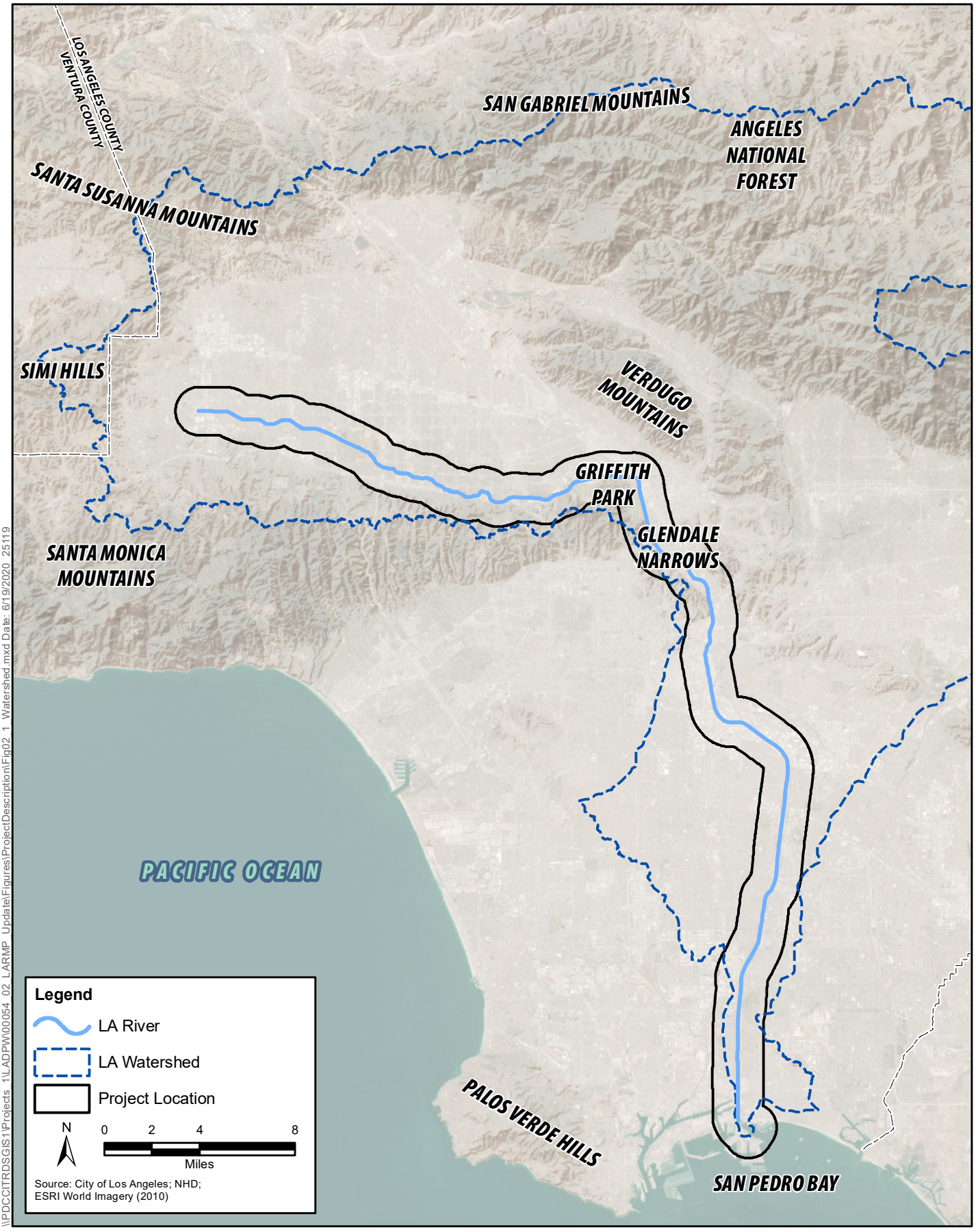

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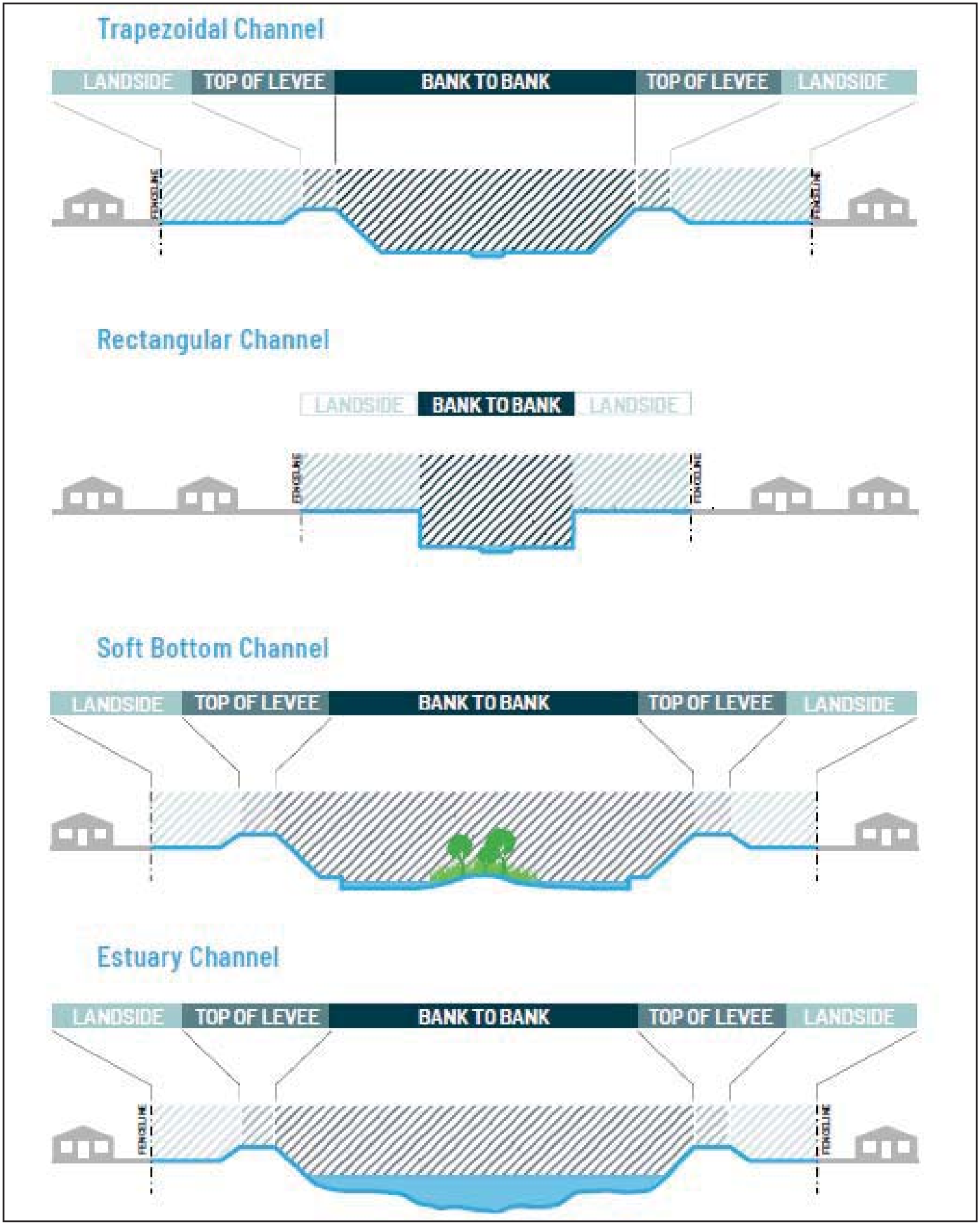
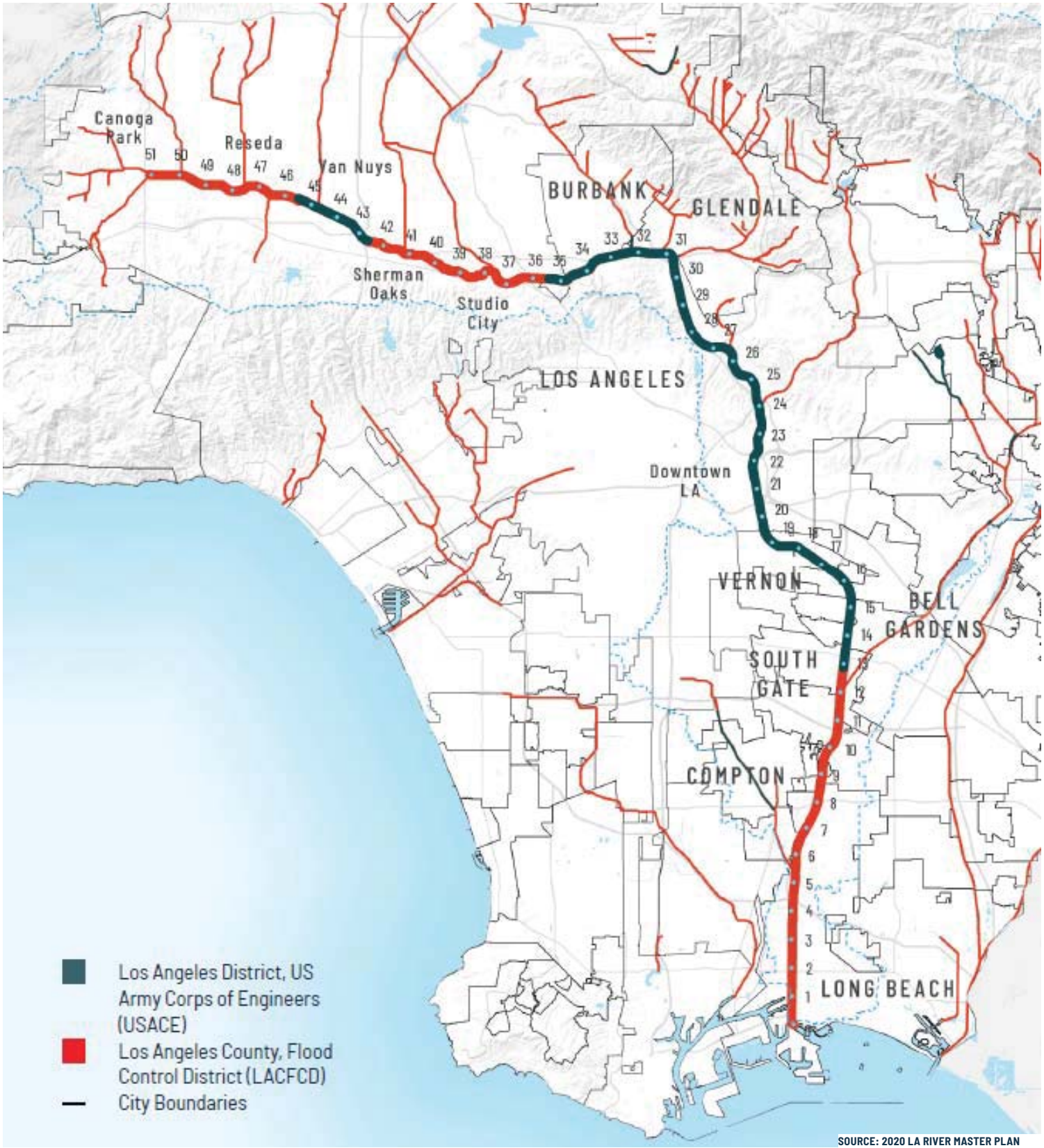
Figure 2-1
LA River Watershed



SOURCE: 2020 LA RIVER MASTER PLAN

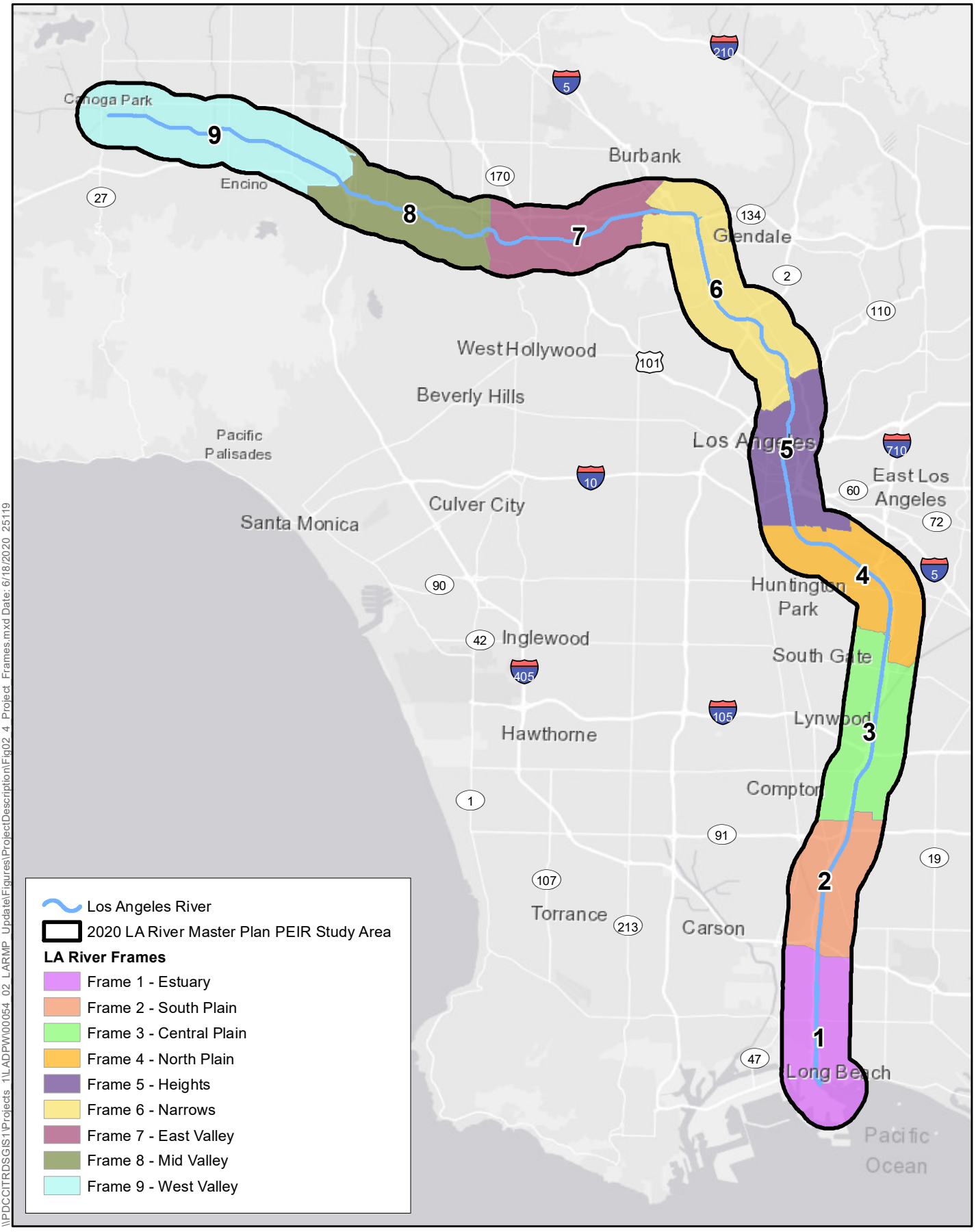
FIGURE 2-2
LA RIVER AND ADJACENT LAND CROSS-SECTION



SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-3

LA RIVER AND TRIBUTARIES: OPERATION AND MAINTENANCE RESPONSIBILITIES FOR FLOOD-MANAGEMENT STRUCTURES



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Source: Los Angeles County; ESRI StreetMap
Map Prepared: 6/18/2020

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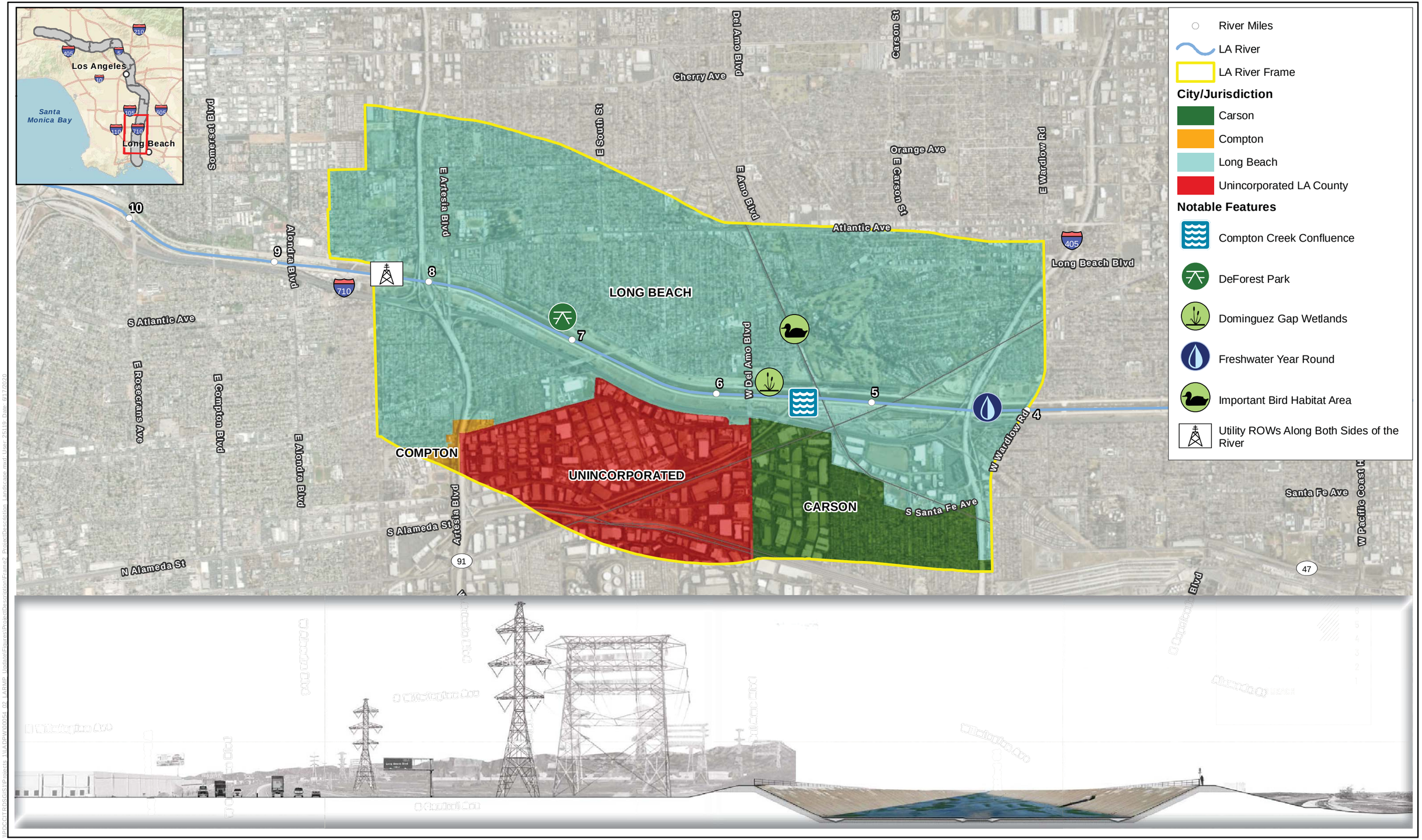
Miles

Figure 2-4
LA River Study Area and Planning Frames



Source: County of Los Angeles; OLIN; ESRI

Figure 2-5
Frame 1 - Estuary
Jurisdictions and Notable Features with Representative Cross-Section



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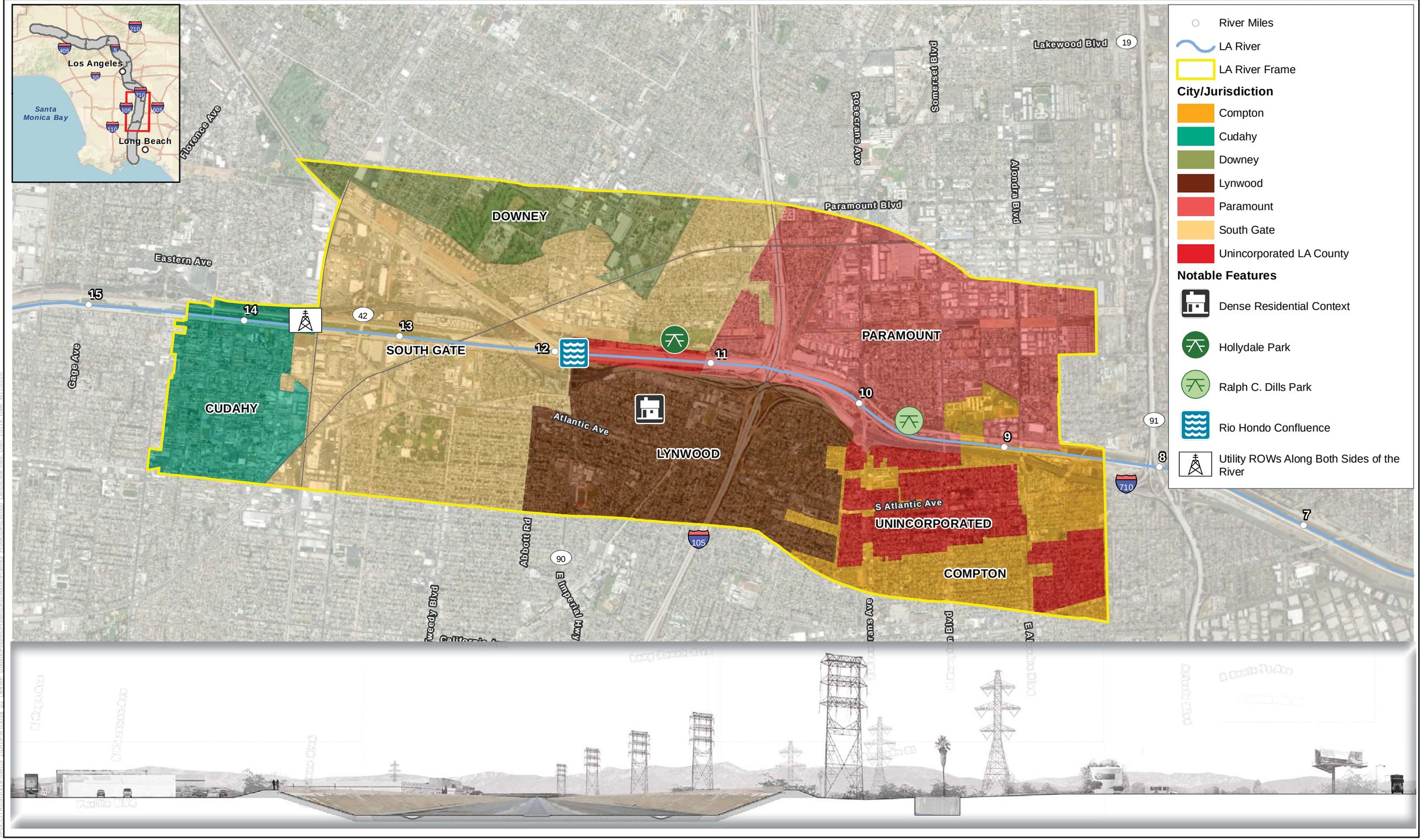
Source: County of Los Angeles; OLIN; ESRI

Figure 2-6
Frame 2 - South Plain
Jurisdictions and Notable Features with Representative Cross-Section



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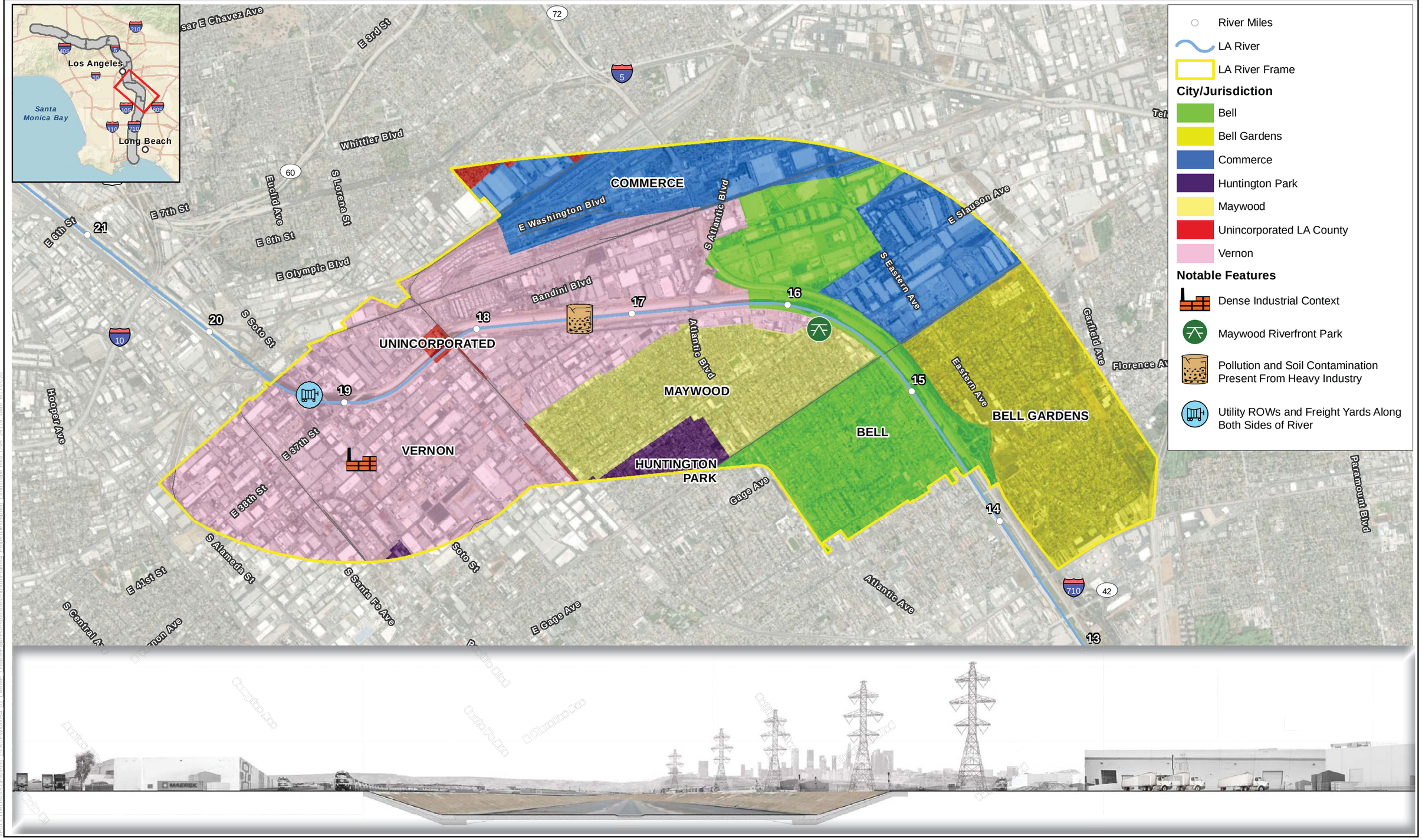
Source: County of Los Angeles; OLIN; ESRI

Figure 2-7
Frame 3 - Central Plain
Jurisdictions and Notable Features with Representative Cross-Section



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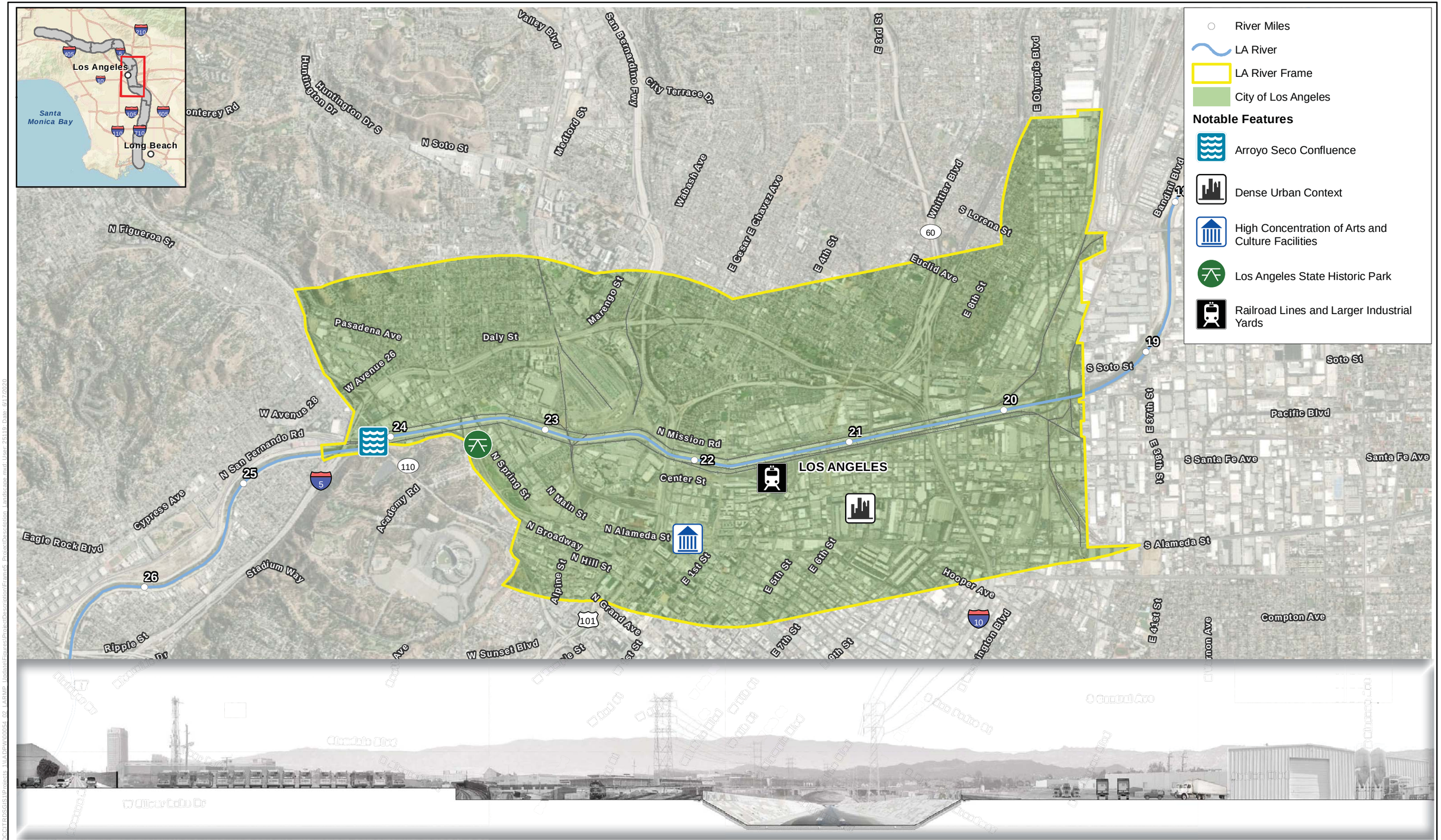
Source: County of Los Angeles; OLIN; ESRI

Figure 2-8
Frame 4 - North Plain
Jurisdictions and Notable Features with Representative Cross-Section



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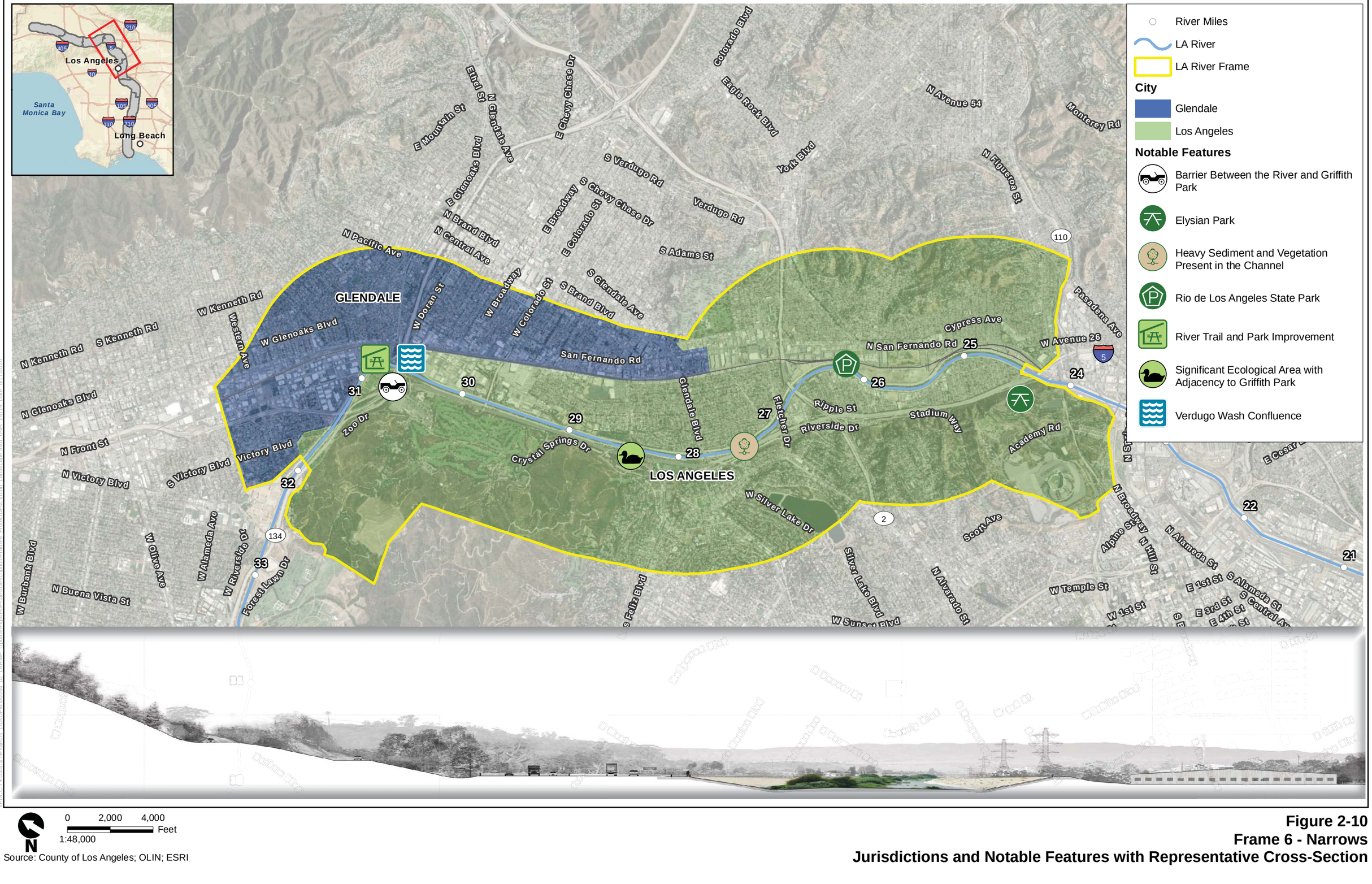
Source: County of Los Angeles; OLIN; ESRI

Figure 2-9
Frame 5 - Heights
Jurisdictions and Notable Features with Representative Cross-Section



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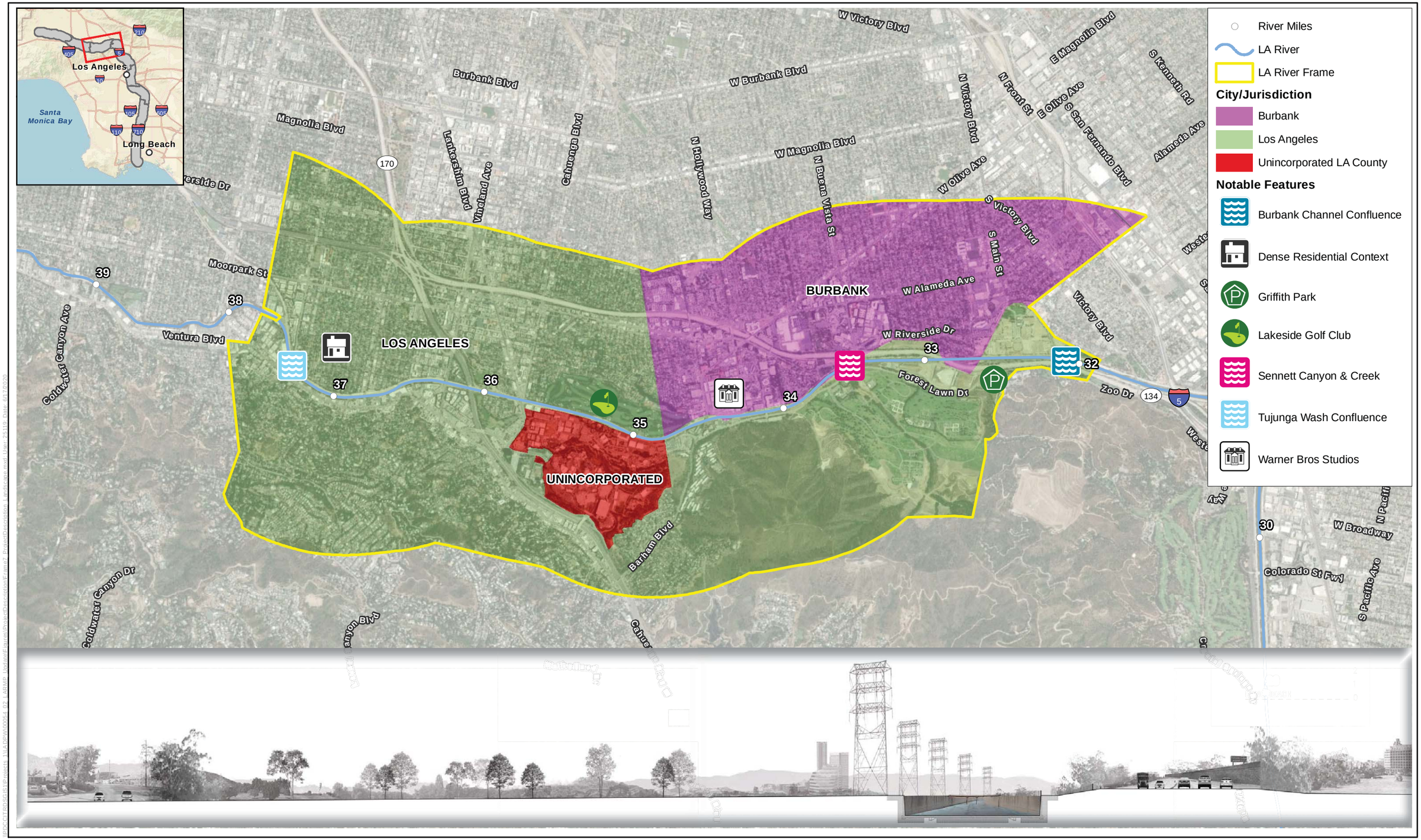
Source: County of Los Angeles; OLIN; ESRI

Figure 2-10
Frame 6 - Narrows
Jurisdictions and Notable Features with Representative Cross-Section



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1:36,000

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Source: County of Los Angeles; OLIN; ESRI

Figure 2-11
Frame 7 - East Valley
Jurisdictions and Notable Features with Representative Cross-Section

\\PDCCITRDSGIS\1Projects_1\LADPW000054_02_LARMP_UpdateFigures\ProjectDescription\Fram e7_ProjectDescription_Landscape.mxd User: 25119 Date: 6/17/2020



0 2,000 4,000 Feet
1:36,000

N

Source: County of Los Angeles; OLIN; ESRI

Figure 2-12
Frame 8 - Mid Valley
Jurisdictions and Notable Features with Representative Cross-Section



Source: County of Los Angeles; OLIN; ESRI

Figure 2-13
Frame 9 - West Valley
Jurisdictions and Notable Features with Representative Cross-Section

1. PAVILION
0.5-3 MILES
2. CAFE
2-3 MILES
3. HYGIENE FACILITIES
2-3 MILES
4. RESTROOM
1 MILE
5. BENCHES
0.5 MILES
6. EMERGENCY CALL BOX
0.5 MILES
7. WATER FOUNTAIN
0.5 MILES
8. TRASH & RECYCLING
0.5 MILES
9. BIKE RACK
0.5 MILES
10. ENVIRONMENTAL GRAPHICS
CONTINUOUS
11. LIGHTING
CONTINUOUS
12. PLANTING
CONTINUOUS
13. STAIRS / RAMPS
AS NEEDED
14. GUARDRAILS
AS NEEDED
15. FENCES AND GATES
AS NEEDED
16. STORMWATER BMPS
AS NEEDED
17. ART / PERFORMANCE SPACE
WHEREVER POSSIBLE



SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-14
COMMON ELEMENTS



FIGURE 2-15
COMMON ELEMENTS TYPICAL PROJECT RENDERING

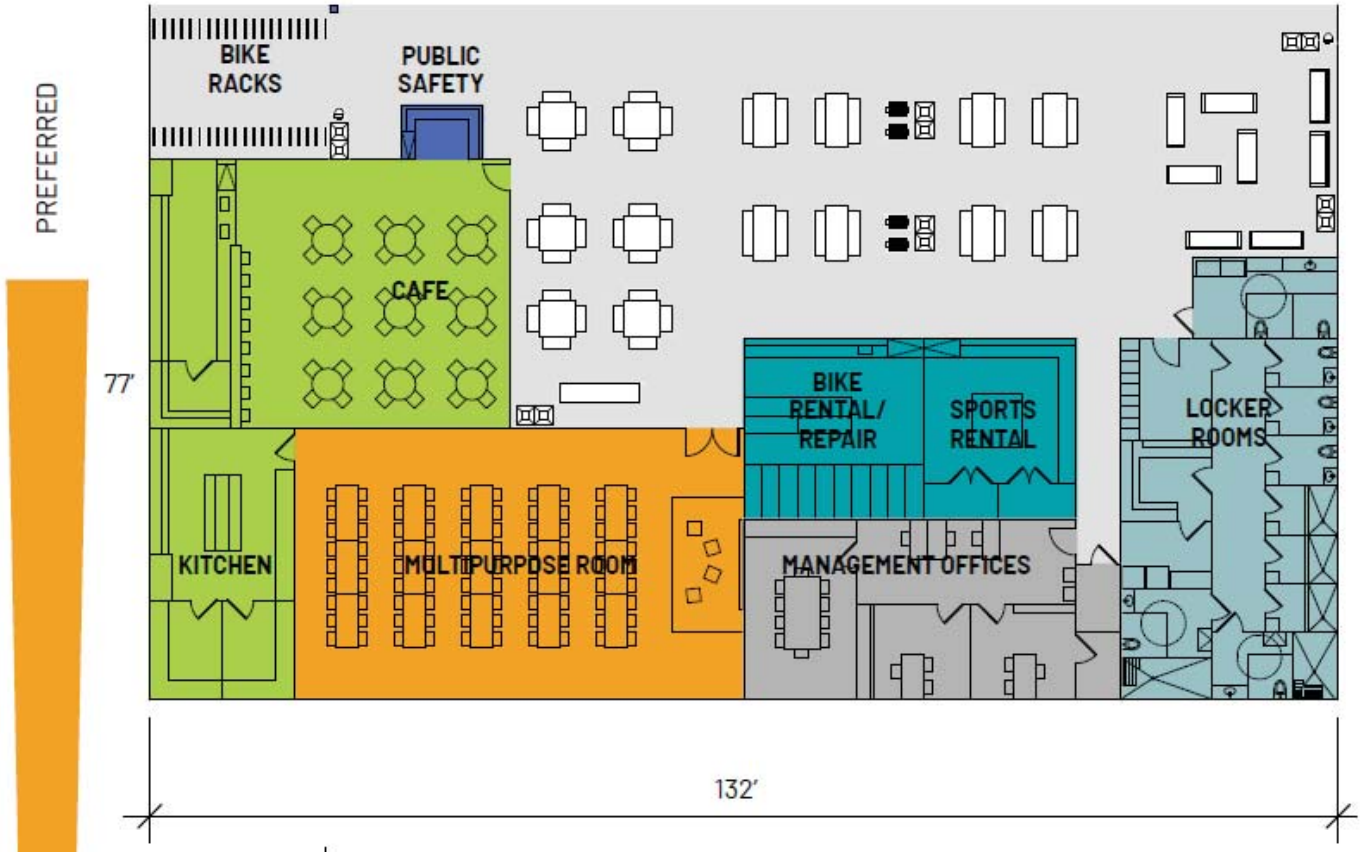
SOURCE: 2020 LA RIVER MASTER PLAN



Figure 289. Plan of an example Gathering Pavilion (Tier III) at river mile 28.4.

SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-16
COMMON ELEMENTS TYPICAL PROJECT LAYOUT



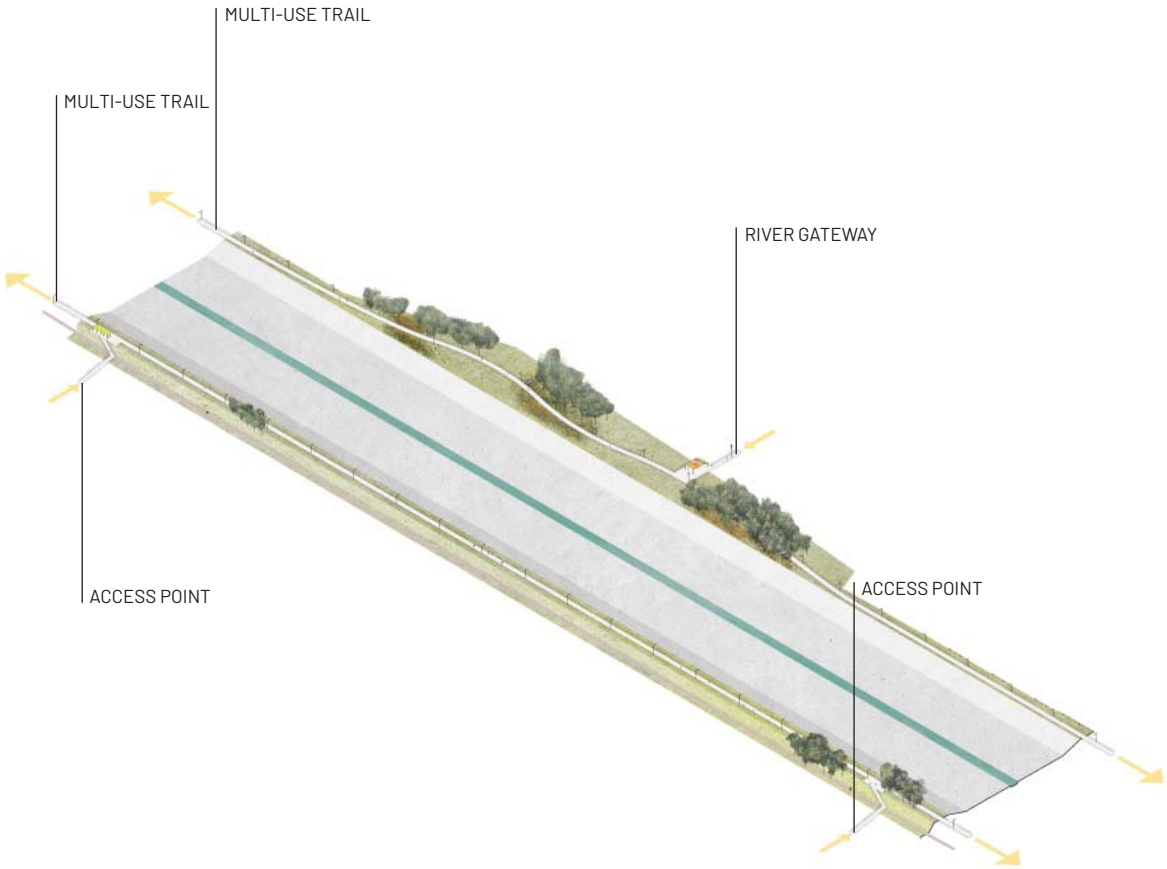
EXPANDED

- Approximately 500 occupants
- Approximately 10,500 sq ft
- Enlarged cafe and locker room
- Multipurpose room and community kitchen provides large, flexible event space
- Includes sports equipment rental to supplement adjacent sports fields and courts
- If using single-sex locker rooms, supplement with family locker room

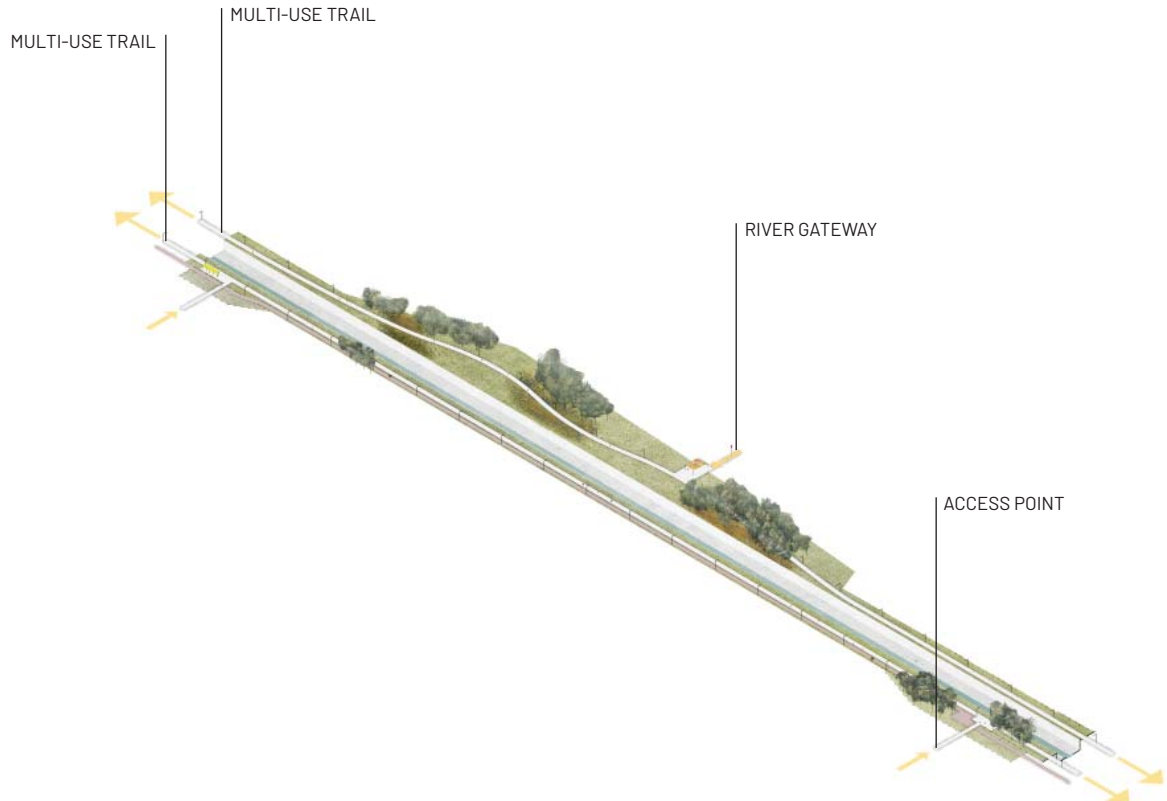
FIGURE 2-17

COMMON ELEMENTS TYPICAL PROJECT: EXAMPLE CONFIGURATION OF A TIER III PAVILION

SOURCE: 2020 LA RIVER MASTER PLAN



Multi-Use Trails and Access Gateways Typical Project (Trapezoidal Channel)

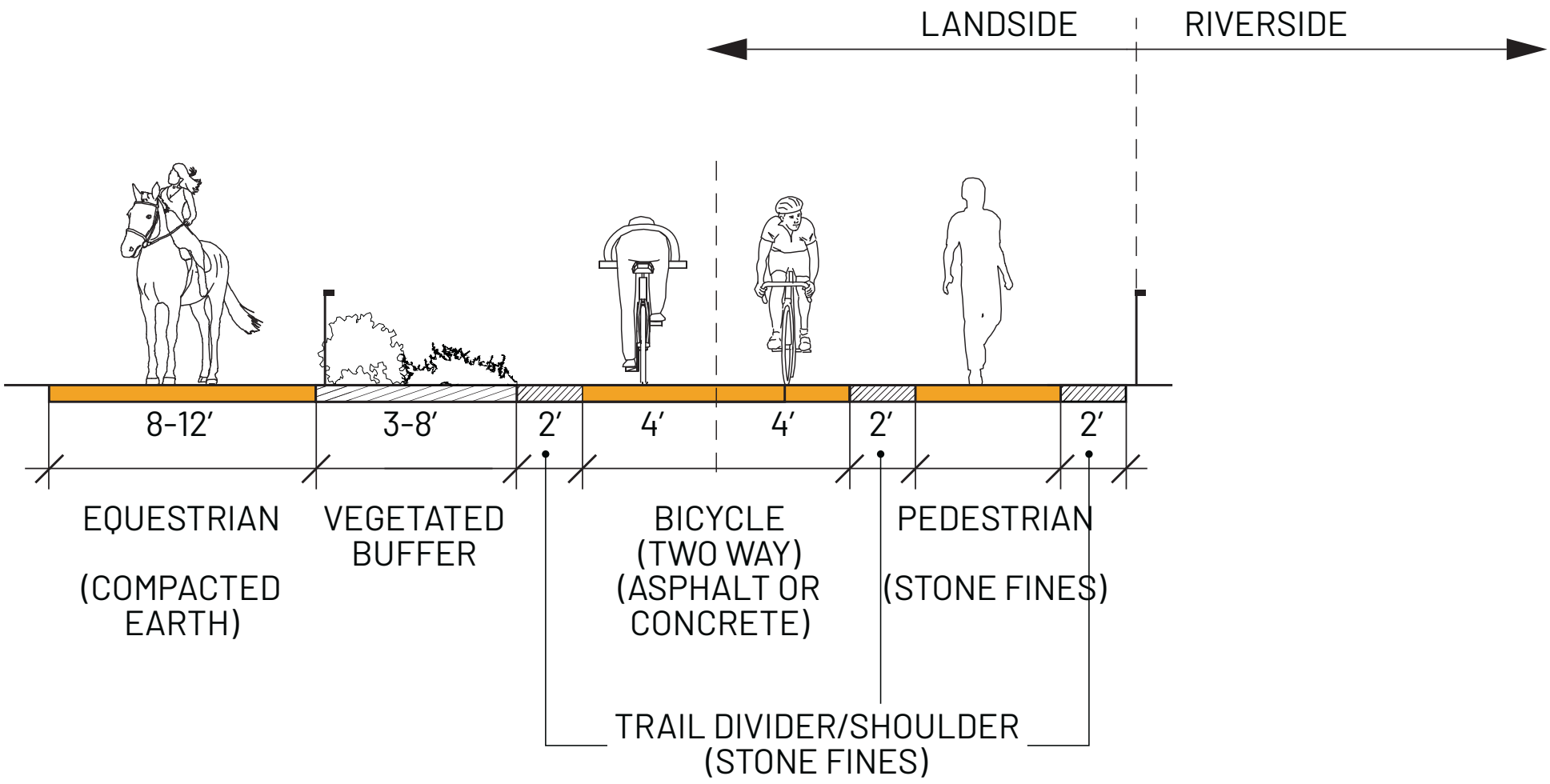


Multi-Use Trails and Access Gateways Typical Project (Box Channel)

SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-18

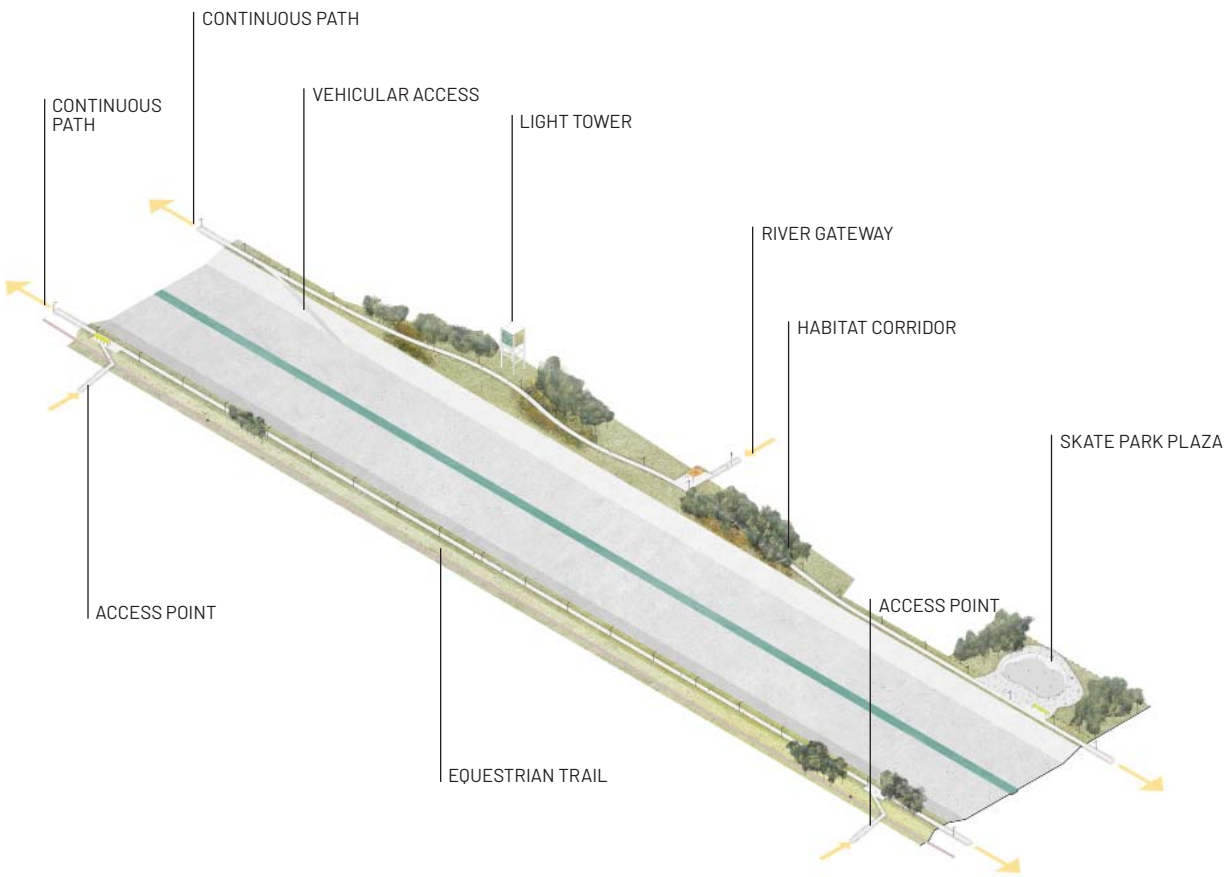
MULTI-USE TRAILS AND ACCESS GATEWAYS TYPICAL PROJECT (TRAPEZOIDAL CHANNEL AND BOX CHANNEL)



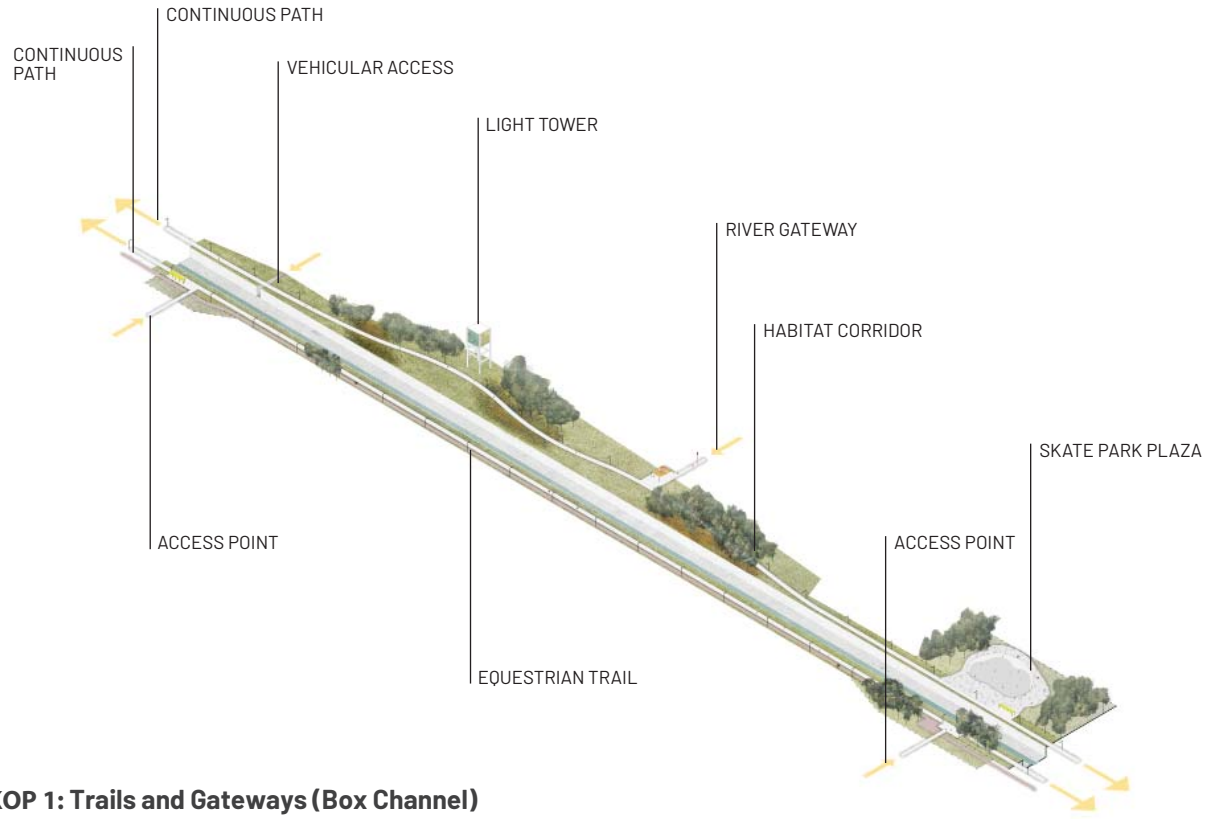
SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-19

MULTI-USE TRAILS AND ACCESS GATEWAYS TYPICAL PROJECT CROSS-SECTION



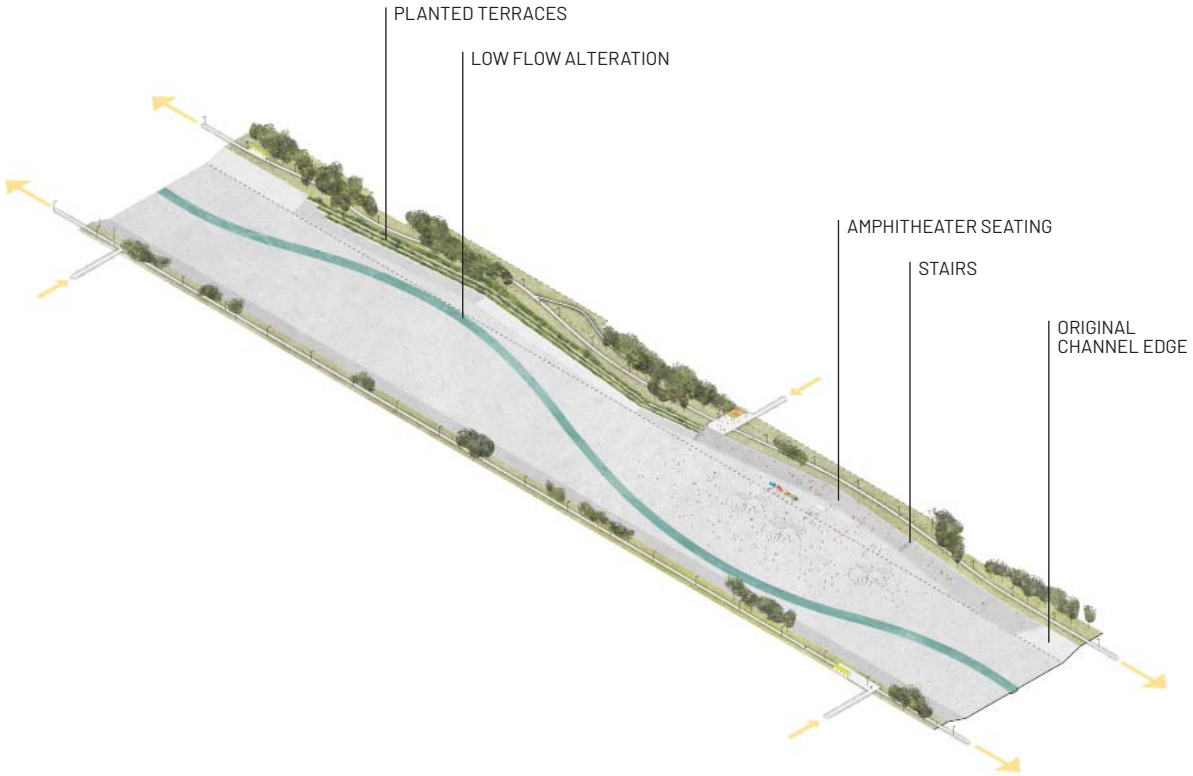
KOP 1: Trails and Gateways (Trapezoidal Channel)



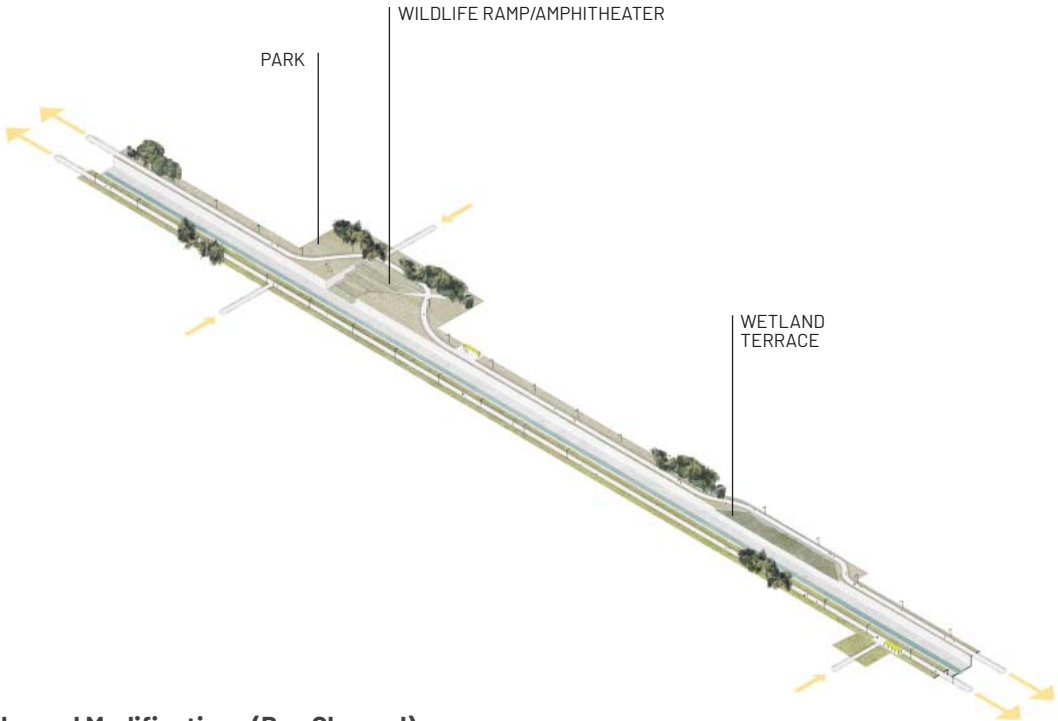
KOP 1: Trails and Gateways (Box Channel)

SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-20
KOP 1: TRAILS AND ACCESS GATEWAYS (TRAPEZOIDAL AND BOX CHANNEL)



KOP 2 Channel Modifications (Trapezoidal Channel)

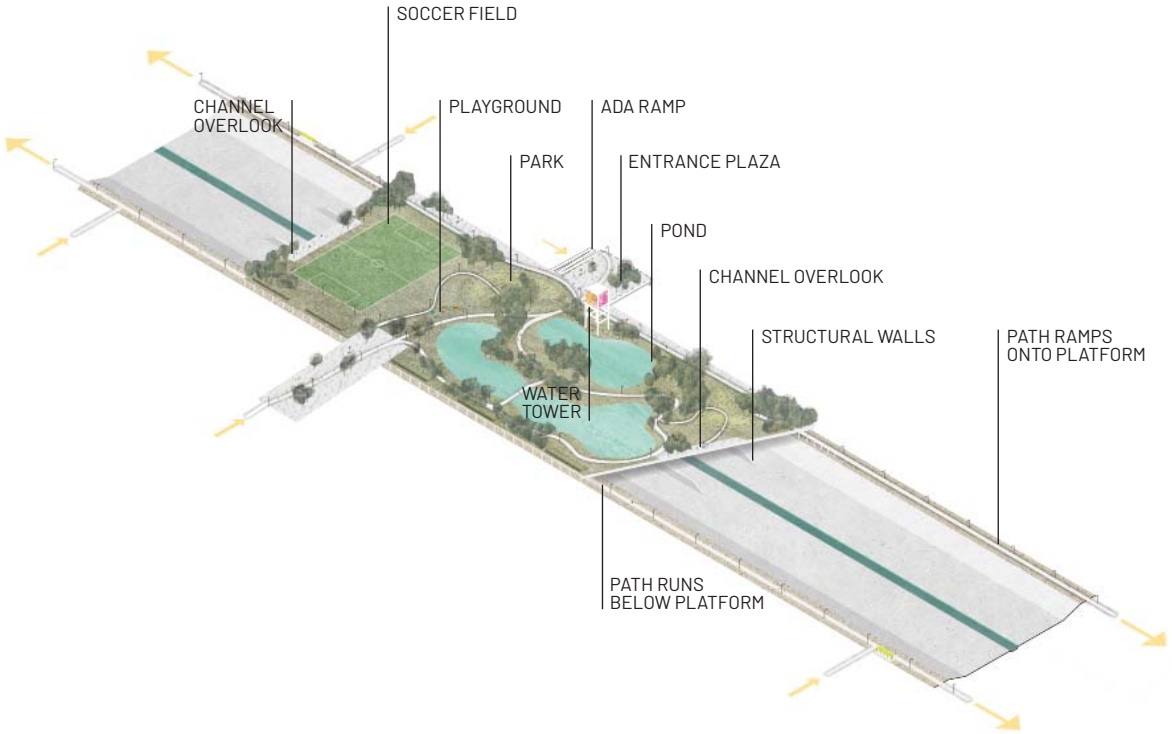


KOP 2 Channel Modifications (Box Channel)

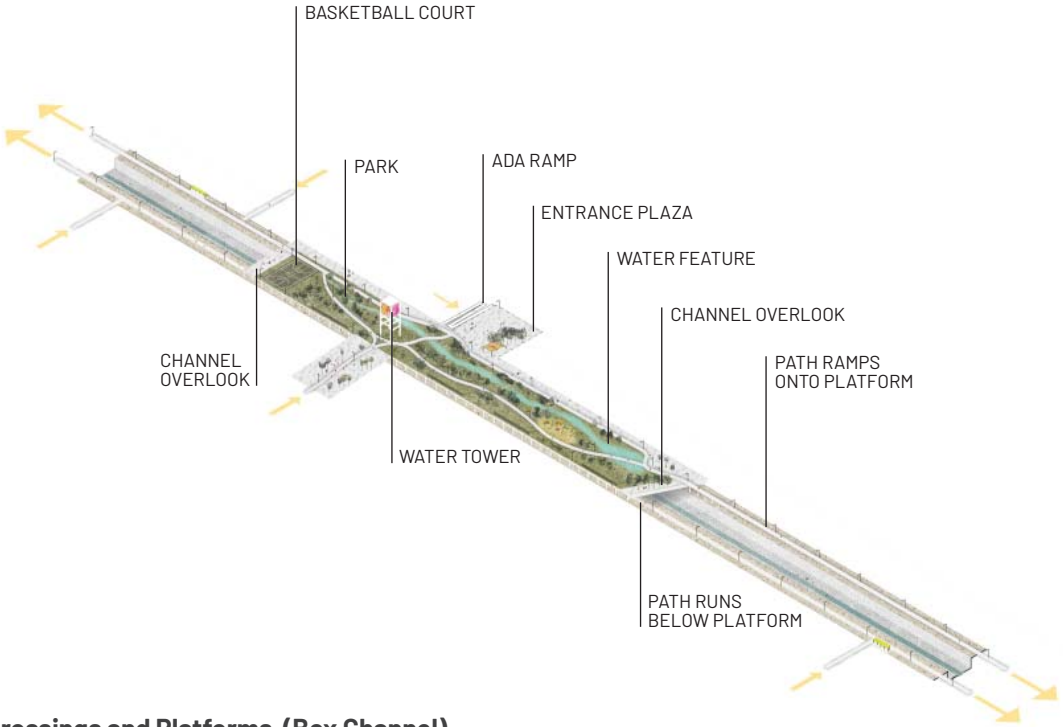
SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-21

KOP 2: CHANNEL MODIFICATIONS (TRAPEZOIDAL CHANNEL AND BOX CHANNEL)



KOP 3 Crossings and Platforms (Trapezoidal Channel)

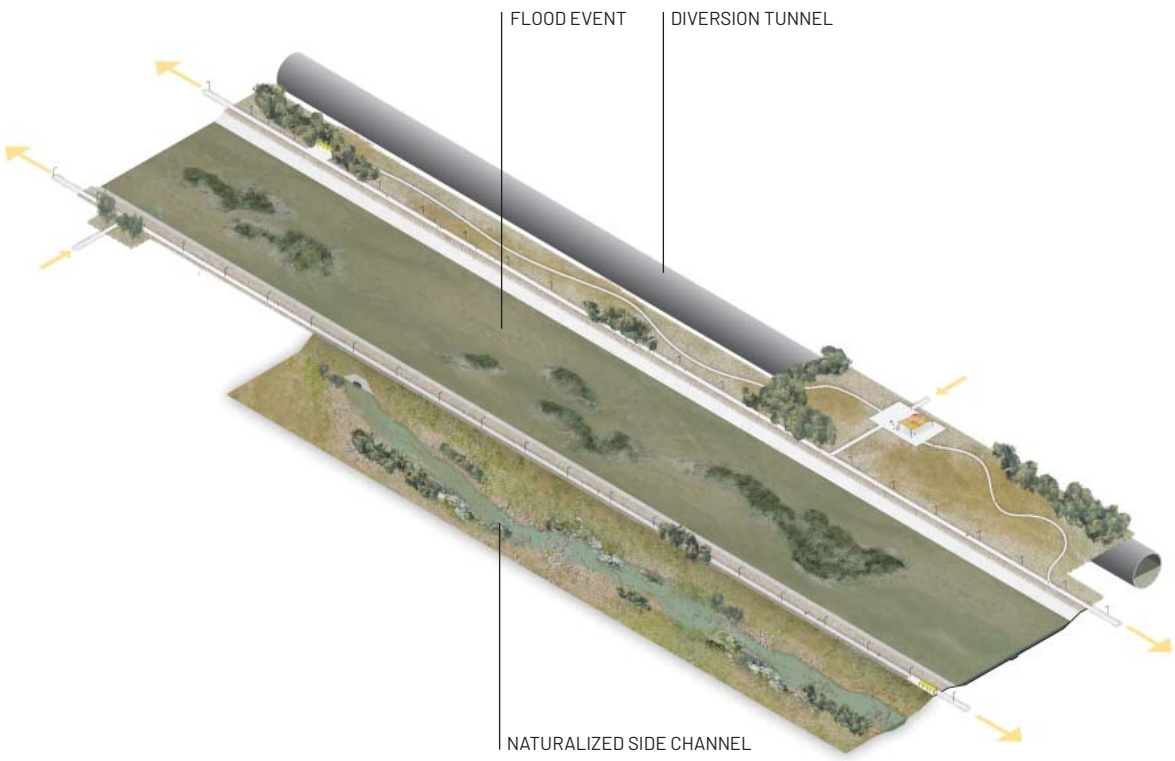


KOP 3 Crossings and Platforms (Box Channel)

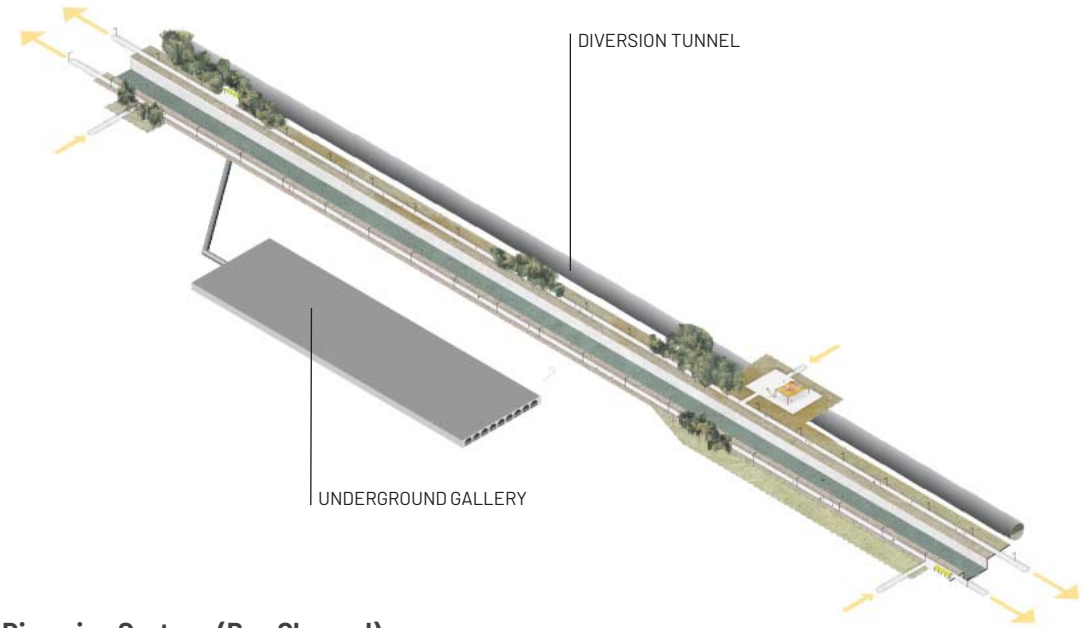
SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-22

KOP 3: CROSSINGS AND PLATFORMS (TRAPEZOIDAL CHANNEL AND BOX CHANNEL)



KOP 4 Diversion System (Trapezoidal Channel)

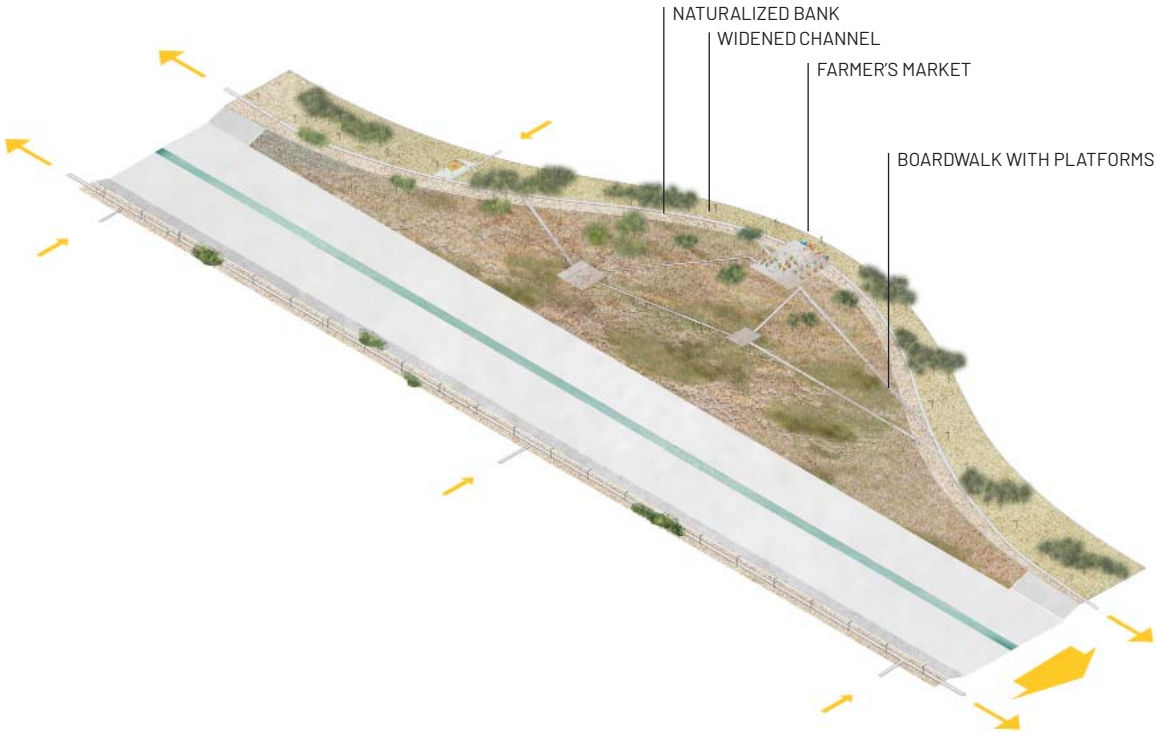


KOP 4 Diversion System (Box Channel)

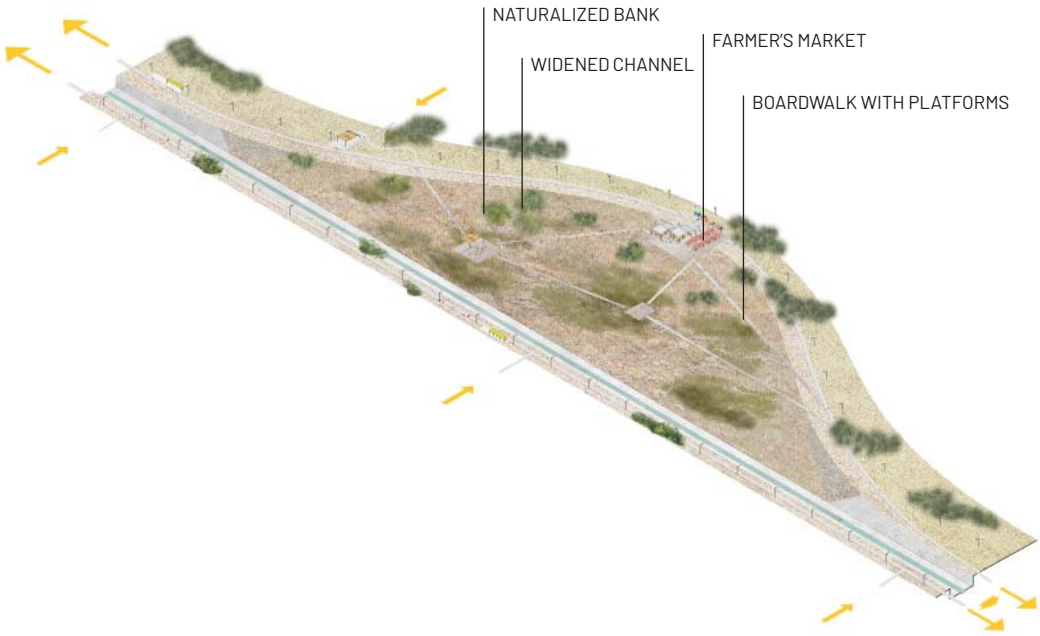
SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-23

KOP 4: DIVERSIONS (TRAPEZOIDAL CHANNEL AND BOX CHANNEL)



KOP 5 Floodplain Reclamation (Trapezoidal Channel)

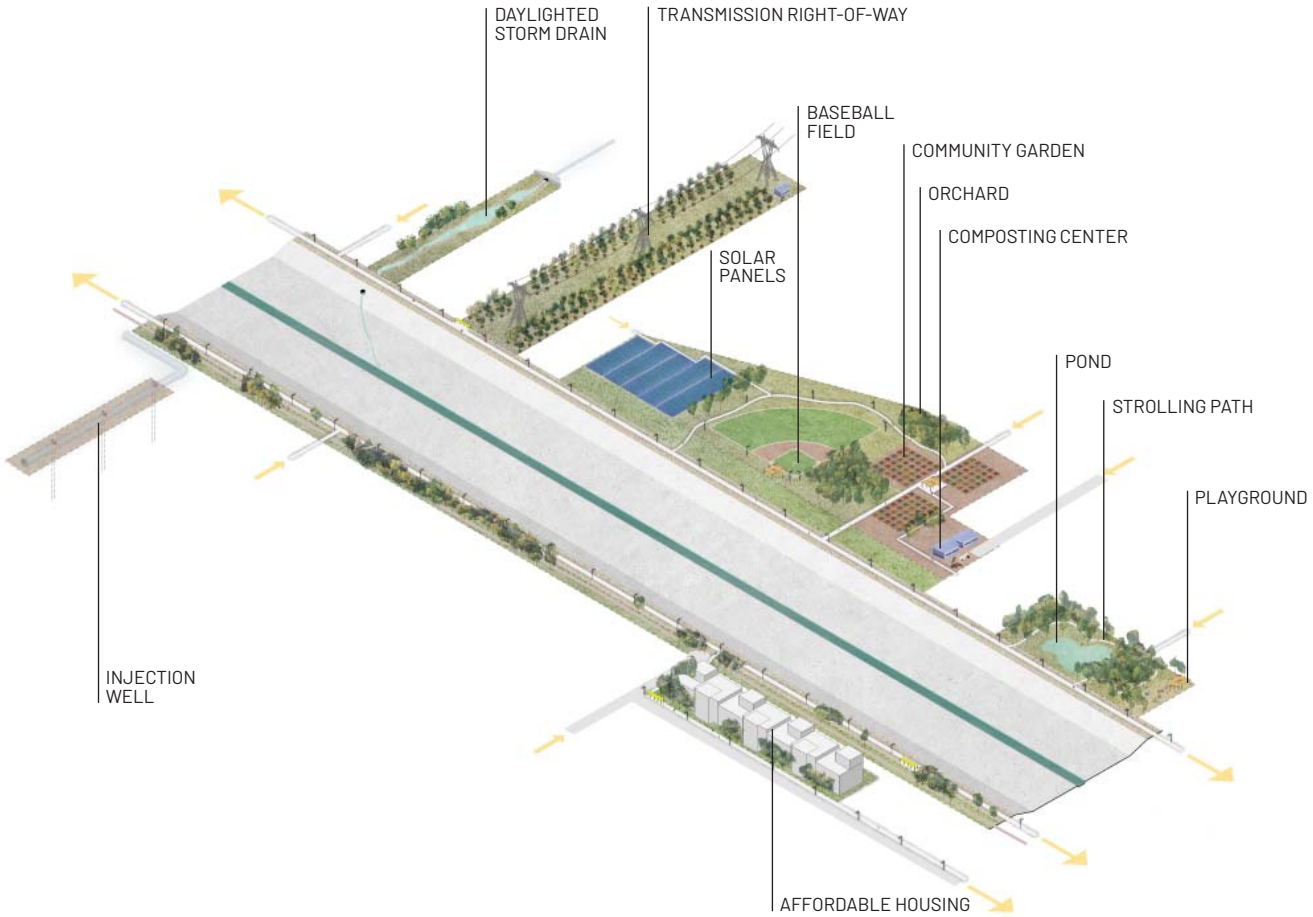


KOP 5 Floodplain Reclamation (Box Channel)

SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-24

KOP 5: FLOODPLAIN RECLAMATION (TRAPEZOIDAL CHANNEL AND BOX CHANNEL)



KOP 6 Off-Channel Land Assets (Trapezoidal Channel)



KOP 6 Off-Channel Land Assets (Box Channel)

SOURCE: 2020 LA RIVER MASTER PLAN

FIGURE 2-25

KOP 6: OFF-CHANNEL LAND ASSETS (TRAPEZOIDAL CHANNEL AND BOX CHANNEL)

Chapter 3
CEQA Environmental Impact Assessment

3.0.1 Introduction to the Impact Analysis

This chapter describes the existing environmental conditions in the project area, the thresholds used to determine the significance of potential impacts, the construction and operational impacts that could occur due to the *2020 LA River Master Plan*, measures to mitigate impacts that are identified as significant, and potential cumulative impacts. The thresholds that have been identified to determine the significance of project impacts are based on the environmental checklist questions in Appendix G of the State CEQA Guidelines; where agencies that have jurisdiction over resources that could be affected by the proposed Project have established specific quantifiable thresholds, those thresholds have been used in addition to Appendix G to determine the significance of project impacts.

3.0.1.1 Organization of the Environmental Analysis

The notice of preparation (NOP) and public responses to the NOP were used to identify those impacts requiring further analysis in this chapter (Appendix A includes the NOP and NOP comments). This chapter is organized by the following resource topics:

- Section 3.1, *Aesthetics*
- Section 3.2, *Air Quality*
- Section 3.3, *Biological Resources*
- Section 3.4, *Cultural Resources*
- Section 3.5, *Energy*
- Section 3.6, *Geology, Soils, and Paleontological Resources*
- Section 3.7, *Greenhouse Gas Emissions*
- Section 3.8, *Hazards and Hazardous Materials*
- Section 3.9, *Hydrology and Water Quality*
- Section 3.10, *Land Use and Planning*
- Section 3.11, *Mineral Resources*
- Section 3.12, *Noise*
- Section 3.13, *Population and Housing*
- Section 3.14, *Public Services*
- Section 3.15, *Recreation*

- Section 3.16, *Transportation*
- Section 3.17, *Tribal Cultural Resources*
- Section 3.18, *Utilities/Service Systems*
- Section 3.19, *Wildfire*

Due to the absence of agricultural and forestry resources in the study area, the NOP eliminated this resource topic from detailed study in the PEIR.

3.0.1.2 Format of the Environmental Analysis

Each of the environmental resource sections presented in this chapter contains the following subsections:

- **Environmental Setting**
    - **Geographic Setting.** This subsection presents a description of the baseline physical environmental conditions in the vicinity of the proposed Project with respect to the environmental resource topics. Baseline environmental conditions are the physical conditions that existed at the time of publication of the proposed Project's NOP (July 7, 2020).
    - **Regulatory Setting.** This subsection describes the relevant laws and regulations that apply to the environmental resource in the study area and the governmental agencies responsible for enforcing those laws and regulations.
- **Environmental Impact Analysis.** This subsection evaluates the potential for the proposed Project to adversely affect the physical environment described in the environmental setting. Significance criteria for evaluating environmental impacts are defined for each resource topic and based on Appendix G of the State CEQA Guidelines. As noted above, only the significance thresholds that are relevant to the specific subtopics identified for each environmental resource as needing further study in the PEIR are used in the impact analysis. The impact analysis concludes by determining the significance of the respective impacts from the proposed Project. The environmental impact analysis discussion for each resource topic is organized into the following sections:
    - Typical Projects
        - Common Elements
        - Multi-Use Trails and Access Gateways
    - Six Kit of Parts
        - KOP Category 1: Trails and Access Gateways
        - KOP Category 2: Channel Modifications
        - KOP Category 3: Crossings and Platforms
        - KOP Category 4: Diversions
        - KOP Category 5: Floodplain Reclamation
        - KOP Category 6: Off-Channel Land Assets

- Overall *2020 LA River Master Plan* Implementation
- Cumulative Impacts

Chapter 2, *Project Description*, describes the Typical Projects, kit of part categories, and overall *2020 LA River Master Plan* in detail. The regulatory setting and approach to the cumulative impacts analysis for all the resource topics are described in detail below.

3.0.1.3 Impact Determinations in this PEIR

As described in Chapter 1, *Introduction*, the impact analysis in the PEIR is at a program level because the exact location and design of projects under the *2020 LA River Master Plan* have not yet been determined. As such, impact determinations presented in this PEIR could change once specific information for later activities or subsequent projects is known. Therefore, a conclusion of a significant and unavoidable impact determination in this PEIR does not preclude a less-than-significant impact determination for subsequent project approvals, if supported by substantial evidence.

3.0.1.4 County and Non-County Impact Determinations

The analysis in this chapter includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.0.2 Cumulative Impacts

3.0.2.1 Introduction

Cumulative impacts analysis for each of the resource topics in Sections 3.1 through 3.19 are also presented in in their respective sections of this chapter.

3.0.2.2 Regulatory Setting and Approach to Cumulative Impacts Analysis

According to State CEQA Guidelines Section 15130(a)(1), a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the environmental impact report (EIR) together with other projects causing related impacts. As stated in State CEQA Guidelines Section 15130(a)(1), the cumulative impacts discussion in an EIR need not discuss impacts that do not result in part from the project evaluated in the EIR. Therefore, those thresholds

of significance that result in no adverse impacts from a proposed project are not required to be subjected to cumulative impact analysis.

Section 15355 of the State CEQA Guidelines defines cumulative impacts as two or more individual effects that, when considered together, are considerable and may compound or increase other environmental impacts. Cumulative impacts can result from individually minor, but collectively significant, projects occurring over a period of time (Section 15355(b)). Section 15130 of the State CEQA Guidelines stipulates that EIRs must consider the significant environmental effects of a proposed project as well as its contribution to cumulative impacts when the project's incremental effect is cumulatively considerable. Per Section 15065(a)(3), *cumulatively considerable* means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The standards for "significant" or "cumulatively considerable" are based on the established significance thresholds for each resource area. Per Sections 15130(b)(1)(B) and 15130(d), consistency with the projections or requirements of previously approved local, regional, statewide, or planning documents may also be a guide to determining whether a project's impact is cumulatively significant.

State CEQA Guidelines Section 15130(b) identifies the following elements as necessary for an adequate discussion of cumulative effects:

- Cumulative context in the form of a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified and that described or evaluated regional or area-wide conditions contributing to the cumulative impact.
- The geographic scope of the area affected by the cumulative effect and a reasonable explanation for the geographic limitation used.
- A summary of the expected environmental effects to result from those projects with specific reference to additional information stating where that information is available.
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

The cumulative impacts analysis considers both short-term construction effects and long-term effects of the *2020 LA River Master Plan* over a 25-year horizon. Both construction and operations cumulative impacts are discussed in each resource topic, though not under separate headings in this program-level analysis because sufficient information—such as specifics related to detailed phasing, duration, opening year, and operations and maintenance—is not available for construction and operation of all projects proposed under the overall *2020 LA River Master Plan*. Therefore, the discussion is kept together. These impacts may not be apparent in the near term, but they may evolve into adverse impacts in the long term. According to the State CEQA Guidelines, the discussion and evaluation of cumulative impacts need not be as detailed as the discussion of environmental impacts attributable to the proposed Project alone. Additionally, the discussion should be guided by the standards of practicality and reasonableness. Beneficial impacts are also considered in this analysis of cumulative impacts. Beneficial cumulative impacts of the *2020 LA River Master Plan* could be associated with increased recreational opportunities and community and trail connectivity as well as flood management improvements.

There are two ways to address the question of which related actions should be considered in the context of past, present, and reasonably foreseeable actions when considered with the proposed Project. State CEQA Guidelines Section 15130(b) specifically identifies the following methodologies:

1. A "list of past, present, and probable future projects producing related or cumulative impacts," or
2. A "summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative impact. Such plans may include: a general plan, regional transportation plan or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified environmental document for such a plan."

For this PEIR, related plans and programs with a potential to contribute to cumulative impacts were analyzed using the "projection" methodology (i.e., the second methodology identified above). Therefore, the cumulative impacts analysis for each resource area considers impacts related to general growth projected for the area, as well as policies and programs that are in place (i.e., adopted) to protect and conserve environmental resources (e.g., biological resources and water quality) and minimize resulting impacts on human health. It should be noted that if the *2020 LA River Master Plan* is found to have *no impact* for a particular significance criterion, then there would be no cumulative impact either and no discussion pertaining to that significance criterion.

3.0.2.3 Past, Present, and Reasonably Foreseeable Related Actions

Comprehensive land use planning for the region is provided by the Southern California Association of Governments (SCAG), as well as county and city general plans, which local governments are required by State law to prepare as a guide for future development. The regional plans and programs for land use and mobility were consulted for planned future conditions. The *Los Angeles County General Plan* and the SCAG 2020–2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) (*Connect SoCal*) provide information on trends as well as forecasts relevant to the cumulative impact analysis for specific disciplines. The regional growth forecast represents the most likely growth scenario for the Southern California region in the future, taking into account a combination of recent and past trends, reasonable key technical assumptions, and regional growth policies. The regional growth forecast is completed through collaboration among the various stakeholders. In addition to regional growth forecasts, the California Department of Finance provides annual growth projections.

Through a literature review and contribution from Steering Committee members, Chapter 7 of the *2020 LA River Master Plan* identifies more than 1,800 LA River Watershed enhancement projects that are currently proposed or planned by stakeholders within the watershed. These projects have been identified for the entire LA River Watershed. Some of these projects are within the *2020 LA River Master Plan* study area, while others are outside that geographic context and cover a much larger geographic area.

For purposes of this PEIR, the geographic boundary considered in the environmental analysis varies depending on the type of resource considered. For instance, impacts related to air quality would be regional because the emissions from construction and operation of the Project would not be restricted to the immediate project area. Consequently, the cumulative impact analysis considers environmental impacts within the South Coast Air Basin (Basin). Greenhouse gas (GHG) emissions,

similarly, are cumulative and global in nature. Generally, however, the cumulative impacts analysis considers the geographic scope to include the study area and beyond as relevant, and reflects consideration of whether the Project would cause a new significant cumulative impact or result in a cumulatively considerable contribution to a previously identified significant cumulative impact included in an adopted local, regional, or statewide plan.

The California Department of Finance provides population projections annually. Table 3-1 summarizes the population estimates for Los Angeles County for 2020–2040, covering the majority of the 25-year planning period for the *2020 LA River Master Plan* in 5-year increments. Population growth estimates are not yet available for 2045, the horizon year of the *2020 LA River Master Plan*; however, based on the growth trends over 20 years (Table 3-1), it is not anticipated that the population growth would be substantial by 2045.

Table 3-1. Department of Finance Population Growth Estimates (Los Angeles County)

2020	2025	2030	2035	2040
10,257,557	10,314,467	10,380,446	10,386,380	10,335,448

Source: *California Department of Finance, Projections*

The discussion below describes the plans, programs, and projections, and the context in which the proposed Project may contribute to potential cumulative impacts.

Southern California Association of Governments Regional Comprehensive Plan

SCAG is designated by the federal government as the Southern California region's Metropolitan Planning Organization and Regional Transportation Planning Agency. SCAG's jurisdiction includes Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. SCAG addresses regional planning through various plans and programs, including the 2008 Regional Comprehensive Plan (RCP).

The RCP addresses regional issues, such as housing, traffic/transportation, water, and air quality, and serves as an advisory document to local agencies in the Southern California region to use when preparing local plans and handling local issues of regional significance. These policies represent ideas that should be considered for general plan updates and development projects. The RCP contains the following land use and housing, open space and habitat, transportation, and air quality goals that are relevant to a discussion of land use impacts for the proposed Project:

- Land Use and Housing
    - Successfully integrate land and transportation planning and achieve land use and housing sustainability.
- Open Space and Habitat
    - Ensure a sustainable ecology by protecting and enhancing the region's open space infrastructure and mitigate growth- and transportation-related impacts on natural lands by:
        - Conserving natural lands that are necessary to preserve the ecological function and value of the region's ecosystems;
        - Conserving wildlife linkages as critical components of the region's open space infrastructure; and

    - Coordinating transportation and open space to reduce transportation impacts on natural lands.

- Transportation
    - A more efficient transportation system that reduces and better manages vehicle activity.
    - A cleaner transportation system that minimizes air quality impacts and is energy efficient.
- Air Quality
    - Reduce emissions of criteria pollutants to attain federal air quality standards by prescribed dates and State ambient air quality standards as soon as practicable.
    - Reverse current trends in GHG emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas.
    - Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to businesses and residents.

SCAG Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy)

On May 7, 2020, SCAG's Regional Council adopted *Connect SoCal* (2020–2045 RTP/SCS) for federal transportation conformity purposes only. The Regional Council approved *Connect SoCal* on September 4, 2020. *Connect SoCal* is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. *Connect SoCal* charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The goals of *Connect SoCal* fall into four core categories: economy, mobility, environment, and healthy/complete communities. The 2020–2045 *Connect SoCal* goals are as follows:

1. Encourage regional economic prosperity and global competitiveness.
2. Improve mobility, accessibility, reliability, and travel safety for people and goods.
3. Enhance the preservation, security, and resilience of the regional transportation system.
4. Increase person and goods movement and travel choices within the transportation system.
5. Reduce GHGs and improve air quality.
6. Support healthy and equitable communities.
7. Adapt to a changing climate and support an integrated regional development pattern and transportation network.
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options.
10. Promote conservation of natural and agricultural lands and restoration of habitats.

SCAG projects that the region will add 3,672,000 people, 1,621,000 households, and 1,660,000 jobs over the RTP/SCS planning horizon (2016–2045). Total projected population growth for Los

Angeles County through 2045 is 11,674,000 people. Historically, the SCAG region's population growth has dramatically outpaced that of the U.S.—1.7 percent compared to 1.1 percent for the period from 1970 to 2000. However, since 2000, average annual growth rates in the region have been comparable with those of the U.S. at roughly 0.8 percent annually (SCAG 2020). Slow growth is expected to continue for the region for the foreseeable future, through the entire planning period of the *2020 LA River Master Plan*. However, while growth rates are at a historic low, this still results in gradual increases to the total population.

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Los Angeles County Board of Supervisors on October 6, 2015. The general plan provides the policy framework for how and where the unincorporated County will grow through the year 2035, while recognizing and celebrating the County's wide diversity of cultures, abundant natural resources, and status as an international economic center. The general plan discusses new housing and jobs within the unincorporated areas in anticipation of population growth in the County and the region. The Land Use Element provides strategies and planning tools to facilitate and guide future development and revitalization efforts. In accordance with the California Government Code, the Land Use Element designates the proposed general distribution and general location and extent of uses and serves as a blueprint for how land will be used to accommodate growth and change in the unincorporated areas. The general plan Land Use Policy Map and Land Use Legend serve as the "blueprint" for how land will be used to accommodate growth and change in the unincorporated areas. Land use policies for projects within unincorporated Los Angeles County along the LA River would be relevant to the proposed Project.

The general plan's growth forecast is from the SCAG 2012 RTP. The projections do not account for unforeseen future events or changes in general plan policies. The plan projects growth in population of 1,399,500 by 2035, an increase of 33 percent compared to 2008 data.

Local Jurisdictions' General Plans

Cumulative growth assumptions for the incorporated cities use the growth projections contained in SCAG's RTP/SCS. Each of the 17 other jurisdictions along the river's extent has an adopted general plan, for which an EIR was certified. Each of the applicable general plans covers various horizon planning periods ranging from 2010 to 2040 and contains goals and policies directed at mitigating or avoiding environmental impacts on various environmental topics (please see individual resource sections for a list of goals and policies relevant to the particular resource topic). While each of these general plans is subject to periodic updates, projects under the *2020 LA River Master Plan* would be consistent with these goals and policies with few, if any, exceptions, as noted in Section 3.10, *Land Use and Planning*. The EIRs for these general plans may also contain mitigation measures designed to reduce impacts of development under the general plan. These mitigation measures would be applied, as applicable, as projects are proposed under the individual general plans. These mitigation measures would play an important role in mitigating potential significant impacts from future development within these jurisdictions.

2016 Air Quality Management Plan

The project area lies within the Los Angeles County portion of the Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County, Los Angeles

County (except for the Antelope Valley), the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Basin is a sub-region of SCAQMD's jurisdiction. Although air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the California Ambient Air Quality Standards and National Ambient Air Quality Standards (NAAQS). These plans require, among other emissions-reducing activities, control technology for existing sources, control programs for area sources and indirect sources, a SCAQMD permitting system that allows no net increase in emissions from any new or modified (i.e., previously permitted) emission sources, and transportation control measures. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the NAAQS for healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in GHG emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour ozone standard, the 2012 annual particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP includes both stationary and mobile-source strategies to ensure that rapidly approaching attainment deadlines are met, public health is protected to the maximum extent feasible, and the region is not faced with burdensome sanctions if the NAAQS are not met by the established date (SCAQMD 2017).

SCAQMD published the CEQA Air Quality Handbook in November 1993 to help local governments analyze and mitigate project-specific air quality impacts. This handbook provides standards, methodologies, and procedures for conducting air quality analyses as part of CEQA documents prepared within SCAQMD's jurisdiction. In addition, SCAQMD has several supplemental documents, including *Air Quality Significance Thresholds* (2019), *Localized Significance Threshold Methodology* (2003, revised 2008), and *Final Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds* (2006). These documents provide guidance for evaluating localized effects from mass emissions. All three were used in the preparation of this analysis (SCAQMD 2006, 2008, 2019).

The Project is also required to comply with all applicable SCAQMD rules and regulations pertaining to construction activities including, but not limited to, the following:

- **SCAQMD Rule 402—Nuisance:** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, endanger the comfort, repose, health, or safety of any such persons or the public, or cause, or have a natural tendency to cause, injury or damage to business or property. Odors are regulated under this rule.
- **SCAQMD Rule 403—Fugitive Dust:** This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the property line of the emission's source. During construction, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earthmoving and grading activities. These measures would include site pre-watering and re-watering as necessary to maintain sufficient soil moisture content. Additional requirements apply to construction projects on properties with 50 or more acres of disturbed surface area or any earthmoving operation with a daily earthmoving or throughput volume of 5,000 cubic yards

or more three times during the most recent 365-day period. These requirements include submittal of a dust control plan, maintenance of dust control records, and designation of an SCAQMD-certified dust control supervisor.

- **SCAQMD Rule 1108—Cutback Asphalt:** This rule specifies volatile organic compound content limits for cutback asphalt.
- **SCAQMD Rule 1113—Architectural Coatings:** This rule specifies volatile organic compound content limits for architectural coatings.
- **SCAQMD Rule 1403—Asbestos Emissions from Demolition/Renovation Activities:** This rule specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of asbestos-containing material. This rule is generally designed to protect uses surrounding demolition or renovation activity from exposure to asbestos emissions.
- **SCAQMD Rule 1470—Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** This rule specifies requirements for stationary diesel engines, including emergency standby generators. It requires owners or operators of emergency standby generators to keep monthly logs of usage, limits maintenance and testing to 20 hours per year, and requires emission rates to not exceed 0.40 gram per brake-horsepower hour.

Metro's Our Next LA Long Range Transportation Plan (Draft, 2020)

Metro's *2020 Long Range Transportation Plan* (LRTP), titled *Our Next LA*, was adopted by the Metro Board of Directors on September 24, 2020. It is the first update to the LRTP since 2009 and provides a vision for transportation in Los Angeles County through 2047. The plan aims to address population growth, changing mobility needs and preferences, technological advances, equitable access to opportunity, and adaptation to a changing environment. The plan details construction of an additional 100 miles of fixed-guideway transit, investments in arterial and freeway projects to reduce congestion, and construction of regional-scale bicycle and pedestrian projects to increase active transportation, including the Rail to Rail Active Transportation Corridor and the LA River Path. Other efforts detailed in the plan include traffic management practices for congested roadways (e.g., Express Lanes toll lanes), maintaining and upgrading the existing transportation system for all modes, and partnering with local, State, and federal agencies and the private sector. *Our Next LA* includes transit and highway improvements funded by Measure M, as well as expansions of off-peak transit service, of the active transportation network, and of programs such as Express Lanes; partnerships to provide bus-only lanes and freight management policies; and bold policy proposals, including free transit, faster bus trips, and sub-regional congestion pricing. The updated LRTP will serve as a blueprint for how Metro will spend anticipated revenues in the next 30 years. The 2020 Draft LRTP projects a population growth of 1.7 million people between 2020 and 2047 (Metro 2020).

Section 3.1
Aesthetics

3.1.1 Introduction

This section describes the geographic and regulatory setting for aesthetics and visual resources, discusses impacts that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible. The consistency of the proposed Project with the applicable aesthetic and visual resource goals and policies that are identified in Section 3.1.2.2, *Regulatory*, below is also discussed.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.1.2 Setting

3.1.2.1 Geographic

Regional Setting

The LA River traverses the Los Angeles Basin, flowing from the San Fernando Valley and eastern Los Angeles County, running through central Los Angeles and ending at the Pacific coast in Long Beach. The material, shape, and size of the LA River change along its length. More than 75 percent of the length of the LA River consists of a concrete bed surrounded by hardscape materials, with minimal vegetation, unique rock features, or other scenic attributes. However, portions of the LA River include a "soft bottom" that contains heavy silt, vegetation, and habitat for wildlife, presenting an organic and natural appearance. This most notably occurs in the Glendale Narrows, the Sepulveda Flood Control Basin, and the Estuary region. The shape of the concrete-lined LA River channel is predominantly trapezoidal, with sides that flare out as they move up and away from the bottom of the channel. Concrete-lined rectangular sections of the channel, where its sides are completely vertical, are limited to the San Fernando Valley between Sherman Oaks and Burbank and a 1-mile stretch near Vernon. To manage additional flood risk, the sides of the channel are often higher than the ground level of surrounding communities, forming levees or flood walls. The width of the channel generally increases as it moves downstream from Canoga Park to Long Beach. At its

narrowest, between Sherman Oaks and Studio City, the channel is about 55 feet wide. At its widest, where the river meets the Pacific Ocean, the channel is 585 feet wide from bank to bank, more than 10 times its narrowest width. During most of the year, the concrete-lined channels have minimal water flows and include various amounts and species of vegetation. In addition to the channel, the LA River right-of-way (ROW) includes flood management structures such as levees and access roads. In some sections, various recreational amenities such as bike paths, parks, and trails are found within the ROW, while in other areas these amenities are directly adjacent to the ROW.

The LA River passes through a highly urbanized area of Los Angeles County. A variety of different communities, each with its own unique visual character, line the riverfront. Particularly within the reaches of the lower LA River, visible adjacent land uses include businesses such as warehouses, storage facilities, construction companies, and residential neighborhoods. Many of the land uses adjacent to the LA River are separated by fencing, with the front of buildings oriented away from the riverfront. As such, it is difficult to see the LA River from many surrounding streets and other vantage points. In addition, major transportation infrastructure and corridors operate adjacent to the LA River. These include commuter and freight rail lines, the Port of Long Beach, and Interstate (I-) 5, I-710, State Route (SR-) 91, I-110, and SR-134. These infrastructure elements often separate the LA River from surrounding land uses and dominate much of the visual landscape.

In downtown Los Angeles, there is limited physical and visual access to the LA River, which is adjacent to an intensely urban and industrial riverfront. Scenic resources in downtown Los Angeles are provided by a series of historic Art Deco– and Classical Revival–style bridges that span the river. Other historic buildings and sites add to the unique landscape of the urban environment.

The upper LA River is bordered by a more diverse mixture of land uses and therefore has a more varied visual character. Within the Elysian Valley neighborhood, also known as Frogtown, an eclectic mixture of restaurants, shops, art studios, and businesses front the LA River, leading to an active and vibrant visual environment.

The main vantage points from which to view the LA River are the adjacent bicycle and pedestrian trails along nearly 30 of the 51 miles of the LA River. The LA River Bike Path includes the LA River Bikeway section, the Glendale Narrows Elysian Valley section, and the North Valleyheart Riverwalk, as well as smaller sections in the San Fernando Valley. Generally, there is a trail along only one side of the river at a time; currently, only 5 miles of the 51-mile stretch offer access on both banks. The longest continuous segments of the LA River Bike Path are a 12-mile stretch between Imperial Highway and the mouth of the LA River at Long Beach and a 7-mile stretch along the Glendale Narrows. In the San Fernando Valley, the trail becomes more fragmented. The trails vary substantially in width and material, from a 17-foot-wide stone fines path to an 8-foot-wide striped asphalt bikeway.

Where available, the bicycle and pedestrian paths offer the most continuous vantage points to view the LA River. Because the paths are wedged between the LA River, adjacent freeways, and disjointed and fenced land uses, views of the LA River and ROW from these paths are often urban in nature and are not particularly valuable. However, several parks, wildlife areas, and open spaces along the pathway are notable scenic areas. In some areas, such as the North Valleyheart Riverwalk in the City of Los Angeles, the path itself is bordered by landscaping and decorative elements, creating a scenic green corridor along the LA River.

From the LA River, views may extend out to include portions of the Los Angeles, Glendale, Burbank, and Long Beach cityscape skylines, the Pacific Ocean near Long Beach, the hills of Elysian Park and

Griffith Park, and, on a clear day, the distant Verdugo Mountains. Lighting along the LA River is provided by the surrounding surface street and bridge lighting and spillover lighting from development, infrastructure, parks, and sports fields. Direct lighting on the LA River itself is intermittent and direct, pole-mounted lighting is most visible within the City of Los Angeles and City of Burbank near Griffith Park and the west San Fernando Valley. Direct, pole-mounted lighting is absent in some areas within Long Beach, downtown Los Angeles, Compton, Paramount, Downey, Lynwood, and South Gate. Nighttime lighting often fluctuates due to motor vehicle headlights.

Study Area Setting

As described in Chapter 2, *Project Description,* the study area is divided into a series of nine distinct geographical sections, or planning frames, related to jurisdictional, hydraulic, and ecological zones. Each of these frames has unique visual and aesthetic characteristics. The visual characteristics of each frame are described below.

Frame 1

Frame 1 is almost entirely within the City of Long Beach and extends from the mouth of the LA River from the Pacific Ocean and Port of Long Beach at river mile 0.0 to 4.0. The LA River channel bed is a trapezoidal channel that has a soft bottom near the Pacific Ocean and transitions to a concrete-lined channel near West Willow Street. Because this frame is closest to the Pacific Ocean, it has a unique visual character. Figure 3.1-1 shows typical views of the LA River and adjacent uses in Frame 1. A small portion of the City of Los Angeles is located in this frame, on the western boundary near the West Anaheim Street/West 9th Street intersection; however, no known City of Los Angeles aesthetic or visual resources are located in this frame. As such, the City of Los Angeles is discussed in greater detail for subsequent frames below where applicable.

As described above, the LA River starts at river mile 0.0; near the mouth, the river is at its widest point. Views of the LA River in this location are scenic and expansive, with the water of the LA River blending with the Pacific Ocean and marine-related uses such as the iconic Queen Mary, smaller vessels, and industrial port-related facilities that define the City of Long Beach's southern waterfront edge. Numerous species of birds and wildlife are visible along the LA River, and this frame supports a marine ecosystem that contains algae, fish, and shellfish.

Most notably, along the eastern portion of the LA River from mile 0.0 to mile 1.0 are numerous landscaped parks and recreational areas that offer expansive views, landscaping, and recreational opportunities that create a positive aesthetic environment. These include the Golden Shore Marine Biological Reserve Park, Golden Park, and Cesar E. Chavez Park. The LA River Bike Path is used by bicyclists and pedestrians traveling along the east side of the LA River. The LA River Bike Path travels south to north from the City of Long Beach to the City of Vernon.

On the west side of the LA River, pedestrian and visual access to the LA River is limited, as land uses from the shoreline to Pacific Coast Highway are industrial in nature and include warehouse, industrial, and port-related uses that are set behind concrete and steel fences. I-710 also parallels the LA River on the west, separating adjacent neighborhoods from the LA River in this frame.

The LA River transitions from a soft channel bottom at mile 3.0 to a concrete-bottom section with hard rip-rap sides. From mile 1.0 to mile 4.0, land uses on the east side of the LA River include industrial and residential land uses. Many of these land uses back onto the LA River and are separated by fencing and embankments. As such, views of the LA River in this area are of an urban

hardscape and are not scenic or unique. However, several recreational areas along the LA River, including Avila Park, include landscaping, trails, and playground and picnic areas, which are scenic attributes in a relatively urban area. While views of Avila Park are available from the LA River Bike Path, views of the LA River from Avila Park are more limited because the LA River is set behind an embankment in this area. The Wrigley Greenbelt on the west bank of the LA River from river mile 2.9 to 4.0 is a notable scenic open space with a walking/bicycling trail and areas of native California landscaping.

The *City of Long Beach General Plan, Land Use Element, Urban Design Element* identifies Ocean Boulevard as a local scenic route. In addition, future scenic corridors in the City of Long Beach Urban Design Element are planned to be expanded, including the LA River and San Gabriel River.

Figure 3.1-1. Typical Views of the LA River in Frame 1



Photo 1: View of the LA River looking south from the trail near Golden Shore Marine Biological Reserve Park



Photo 2: View of the LA River looking southwest from near the LA River Bike Path access point at DeForest Avenue and West 25th Street



Photo 3: View of the LA River looking south toward the Port of Long Beach from the east side of the LA River Trail



Photo 4: View of the LA River and surrounding residential development looking south on the east side of the LA River Trail in the City of Long Beach

Source: OLIN 2020; Los Angeles County Public Works 2020.

Frame 2

Frame 2 is located within the Cities of Long Beach, Carson, and Compton, and unincorporated County areas and extends from river mile 4.0 to 8.4. The channel in this frame is a trapezoidal, concrete-leveed cross-section with an approximate width of 350 feet. The majority of land uses surrounding the LA River in this frame are industrial and residential properties that have limited visual relationships to the riverfront. Utility and transportation infrastructure such as power lines, towers, and freeway on-ramps dominate much of the landscape. These attributes combine to give the LA River an urban, barren character, which remains uniform throughout this frame. However, there are notable scenic areas along the LA River—such as the Dominguez Gap Wetlands and DeForest Park—that serve as aesthetic resources for viewers along the riverfront. Figure 3.1-2 shows typical views of the LA River and adjacent uses in Frame 2.

Scenic resources in the City of Long Beach are described above under Frame 1. There are no designated scenic corridors or viewsheds in the City of Carson. The *Draft Compton General Plan 2030* (City of Compton 2011) identifies a number of roadway corridors highlighted for improvement by the City of Compton through design guidelines and regulations, public investment, and private incentives as identified in the city's general plan. However, none of these roadways intersect with the LA River.

The LA River Bike Path exists on the east bank of the LA River throughout the entirety of Frame 2 and is the prime viewing area of the LA River. Between West Wardlow Road and I-405, there is ROW that contains vegetation and trees immediately adjacent to the west of the LA River. On the east bank, the Dominguez Gap Wetlands is a mile-long open space area that provides an access point to the LA River Bike Path. The Dominguez Gap Wetlands is a 37-acre spreading ground basin that was converted into multi-benefit wetlands in 2008. The Dominguez Gap Wetlands sustain year-round habitat for plants and native wildlife. The open wildlife habitat is an expansive scenic resource and a stark visual contrast to the industrial uses present on the opposite side of the LA River.

Between Del Amo Boulevard and the end of Frame 2 within the Cities of Long Beach, Compton, and Carson and unincorporated County areas, the views of the west bank of the LA River are dominated by overhead power lines and transmission towers. On the east side of the LA River is DeForest Park and Wetlands within the City of Long Beach. A long, linear park, DeForest Park and Wetlands, provides notable habitat areas such as vernal pools, native grasslands, coastal scrub, and oak-sycamore woodlands. The natural qualities of DeForest Park and Wetlands offer a scenic resource for park users and those traveling on the LA River Bike Path.

From DeForest Park until the end of the Frame 2 within the Cities of Long Beach, Compton, and Carson and unincorporated County areas, views along the LA River transition back to a highly urban area with a lack of scenic resources. Particularly toward the end of the frame, tall vertical elements associated with bridges and on-ramps related to SR-91 and I-710 dominate much of the visual landscape.

Figure 3.1-2. Typical Views of the LA River in Frame 2



Photo 1: View of LA River looking south on the east side of the LA River Trail in the City of Long Beach



Photo 2: View of LA River looking northwest at river mile 4.9 with utility transmission towers visible



Photo 3: Looking south on the east bank of the LA River Bike Path with DeForest Park visible to the east



Photo 4: Looking north on the east bank of the LA River Bike Path with the 51st Street Greenbelt visible to the right

Source: OLIN 2020.

Frame 3

Frame 3 is located within the Cities of Compton, Paramount, Downey, Lynwood, South Gate, and Cudahy and extends from river mile 8.4 to 14.1. The channel in this frame is a trapezoidal, concrete-leveed cross-section with an approximate width of 400 feet. Similar to Frame 2, these characteristics give the LA River an urban, concrete quality in this frame. The LA River Bike Path exists throughout the entire frame, with the path switching from the east bank to the west bank near river mile 10.5. Surrounding land uses are mostly residential, industrial, and commercial. Throughout this frame, parcels are oriented away from the LA River and are separated by fencing, further establishing the viewshed of the LA River as urban rather than scenic or lush. However, there are areas along the LA River where wide tracts of ROW have been incorporated into recreational and open space, creating scenic areas for viewers along the LA River. Figure 3.1-3 shows typical views of the LA River and adjacent uses in Frame 3.

The most expansive open space area in this frame occurs from river mile 9.1 to 10, which begins with the Compton Three Par Golf Course within the City of Compton. Located on the east bank of the

LA River, the golf course offers expansive views of open green areas, landscaping, and trees, creating a scenic resource for golfers, bicyclists, and other viewers along the LA River. Immediately to the north of the golf course, the green corridor on the east embankment continues with Ralph C. Dills Park, a long, scenic linear park within the City of Paramount that includes lush landscaping, trails, and picnic areas that are accessible from the LA River Bike Path.

From river mile 10.0 until the terminus of Frame 3, views transition back to an urban landscape, with the exception of Hollydale Community Park within the City of South Gate. Hollydale Community Park features playgrounds, green landscaping, and trees. At river mile 10.5, the LA River travels under multiple overpasses as I-105 and I-710 merge. These large, vertical infrastructure elements dominate much of the landscape of the LA River, presenting an urban, utilitarian appearance.

The confluence of the LA River and the Rio Hondo occurs near river mile 12.0, where the LA River Bike Path terminates on the east bank and switches to the west bank; crossings and entrances are available via the Imperial Highway overpass. The Rio Hondo is also a concrete channel; therefore, the urban, concrete quality of the LA River is expanded at this confluence.

At approximately river mile 13.9, Cudahy Park within the City of Cudahy is west of the LA River. Cudahy Park contains open space, landscaping, and sports fields that are visible from the LA River Bike Path, which is higher in elevation at this point. However, the LA River and Cudahy Park are physically separated by fencing and River Road, diminishing the scenic relationship between the LA River Bike Path and Cudahy Park.

No designated scenic corridors or highways are identified in the general plans of the Cities of Paramount, Downey, Lynwood, South Gate, or Cudahy. The *Draft Compton General Plan 2030* (City of Compton 2011) is discussed in Frame 2, above.

Figure 3.1-3. Typical Views of the LA River in Frame 3



Photo 1: View of the LA River looking north with Ralph C. Dills Park to the right



Photo 2: View of the LA River looking south with Hollydale Community Park to the west



Photo 3: View of the LA River and overhead utility lines



Photo 4: Example of freeway infrastructure near the LA River

Source: OLIN 2020.

Frame 4

Frame 4 is located within the Cities of Bell Gardens, Bell, Maywood, Vernon, and Commerce and extends from river mile 14.1 to 19.5. The channel in this frame is a concrete-leveed, trapezoidal section that is approximately 415 feet wide at the southernmost end. It transitions to a concrete-entrenched, trapezoidal section and then to a concrete-entrenched, rectangular section at river mile 19 at the northern end, with a width of about 285 feet. This portion of the LA River occurs within a dense, industrial context with industrial development and rail lines limiting the landside ROW to less than 15 feet.

Large transmission towers with overhead power lines immediately adjacent to the east bank are visible throughout the majority of this frame. Maywood Riverfront Park within the City of Maywood is between river mile 15.7 and 15.8 along the west bank and is the only open green space immediately adjacent to the LA River throughout this frame. Maywood Riverfront Park offers an access point from the LA River Bike Path and contains lush, green landscaping, which lines the border of the LA River Bike Path. The park also includes amenities such as a playground and basketball court. The LA River Bike Path ends at South Atlantic Boulevard in Vernon, where rail lines

begin to parallel the west bank of the LA River for approximately 1.25 miles. The rest of the frame is dominated by industrial buildings, which results in a barren visual character for much of the remainder of this frame. Figure 3.1-4 shows typical views of the LA River and adjacent uses in Frame 4.

There are no scenic corridors or highways identified in the general plans of the Cities of Bell Gardens, Bell, Maywood, Vernon, or Commerce.

Figure 3.1-4. Typical Views of the LA River in Frame 4

<table>
<tr>
<td>
Photo 1: View of the LA River looking south toward East Olympic Boulevard</td>
<td>
Photo 2: View of the LA River and ROW looking north from the west side of the LA River near East Olympic Boulevard</td>
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<tr>
<td>
Photo 3: View of the LA River looking northwest from the Atlantic Boulevard Bridge</td>
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Source: OLIN 2020.

Frame 5

Frame 5 is within the City of Los Angeles and extends from river mile 19.5 to 24.5. The channel in this frame is an entrenched, concrete, trapezoid section with a typical width of 225 feet. In Frame 5, the LA River is adjacent to the nearby City of Los Angeles communities of downtown Los Angeles, Boyle Heights, the Arts District, Chinatown, and Lincoln Heights. Much of this area has an industrial building stock that developed due to its proximity to rail lines and facilities near and along the river. Views and observation points of the LA River are largely limited by buildings, industrial

infrastructure, and streets and highways, although views of downtown Los Angeles, Elysian Park, and the Verdugo Mountains are provided at discrete vantage points.

This portion of the LA River includes minimal vegetation and is bordered by industrial- and transportation-related uses, giving the area a predominantly urban and industrial aesthetic. No portions of the LA River Bike Path or LA River Trail exist within Frame 5 within the City of Los Angeles, and physical access to the LA River is limited. Residential housing adjacent to the LA River is concentrated in the William Mead Homes public housing development in the southwestern portion of the area along North Main Street and in a predominantly low-density multifamily area east of the LA River between North Broadway and North Main Street. Scattered single-family residential homes are also mixed in among industrial uses throughout the area. Figure 3.1-5 shows typical views of the LA River and adjacent uses in Frame 5.

Aesthetic value in this area is provided by a series of Art Deco– and Classical Revival–style bridges that span the LA River near downtown Los Angeles, including those at North Broadway, North Spring Street, and Main Street. Other historic bridges include the César Chávez Bridge, Macy Street Bridge, and 1st Street, 4th Street, 6th Street, and 7th Street viaducts. These taller bridges and viaducts are generally the most publicly accessible vantage from which to view the LA River in context with views of the expansive City of Los Angeles skyline.

Other notable aesthetic resources in the area include the 32-acre Los Angeles State Historic Park near river mile 23.5 along the west bank, which includes open space and pathways. However, while the park is adjacent to the LA River, direct views of the LA River are limited from this vantage point. Also located in this frame is the Arroyo Seco confluence near river mile 24.0, where I-110 crosses the LA River.

Scenic highways depicted within the City of Los Angeles have special controls for protection and enhancement of scenic resources. There are no scenic corridors or highways identified in the Los Angeles Central City, Central City North, or Boyle Heights Community Plan areas. The western boundary of the Mount Washington-Glassell Park Specific Plan is near the LA River. Mount Washington Drive and San Rafael Avenue provide opportunities for scenic views of the City of Los Angeles and the surrounding mountains and natural canyon vegetation. The Pasadena Freeway (I-110) is designated as a State Scenic Highway and is listed in the National Register of Historic Places. A portion of I-110 that is elevated over 30 feet crosses over the LA River near Griffith Park and the Arroyo Seco Confluence near the border of Frames 5 and 6.

Figure 3.1-5. Typical Views of the LA River in Frame 5



Photo 1: View of the LA River from the 7th Street Bridge in downtown Los Angeles

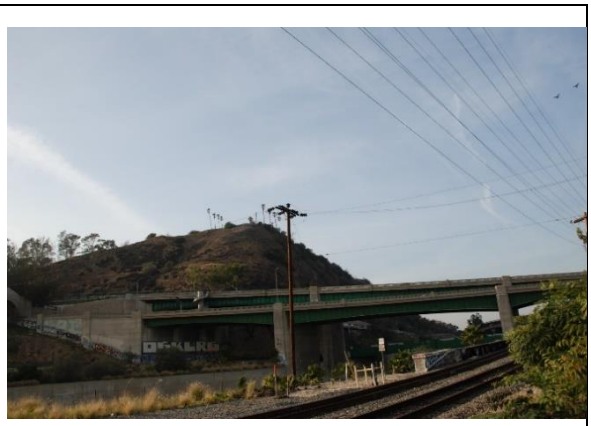

Photo 2: View of the LA River near the North Broadway Bridge looking northwest



Photo 3: View of the LA River near Elysian Park

Table cell is intentionally blank.

Source: OLIN 2020.

Frame 6

Frame 6 is located within the Cities of Los Angeles, Burbank, and Glendale and extends from river mile 24.5 to 32.0. Within this frame, the LA River primarily has a soft bottom that includes sediment, green vegetation, and wildlife, giving the LA River an organic and natural appearance. Frame 6 also contains the highest percentage of open space and recreation land uses of the study area. There is also a substantial amount of residential land uses scattered throughout the frame, with a concentration of industrial, commercial, and art and cultural uses that connect to the LA River on the west side. Figure 3.1-6 shows typical views of the LA River and adjacent uses in Frame 6.

Frame 6 begins near Elysian Park in the City of Los Angeles on the west bank, which includes extensive hiking and biking trails that offer panoramic views of the LA River and the Los Angeles basin skyline. While several trails within Elysian Park meander close to the LA River, direct physical access is largely separated by railroad infrastructure, I-5, SR-110, and other roadways. On the opposite side of the LA River, directly across from Elysian Park, are industrial land and institutional uses, often divided from the LA River by roadways, high fences, and walls. As such, the east side of the LA River until I-5 crosses the LA River, and has limited scenic resources and physical access.

Near the overpass of I-5, land uses transition to include more residential uses and a series of small parks begin. The first, Egret Park in the City of Los Angeles, features landscaping and interpretive displays as well as the start of access to the LA River Bike Path. From Egret Park, the LA River Bike Path travels along the west bank alongside and links several small parks including Steelhead Park, Elysian Valley Gateway Park, Marsh Street Nature Park, Lewis MacAdams Riverfront Park, Rattlesnake Park, and Sunnynook River Park in the City of Los Angeles. While small in size, each park provides a valued scenic amenity in an urban landscape and includes landscaping, seating areas, educational displays, and, often, artwork. This string of parks provides important linkages along the LA River Bike Path and offers scenic views of the lush LA River, creating valuable visual respite in a dense urban environment.

Within this area is the Elysian Valley neighborhood of Los Angeles, also known as Frogtown, which is flanked on the north by Atwater Village and on the south and southwest by Elysian Park. This neighborhood incudes an eclectic collection of art and performance spaces, cafés, restaurants, and community centers. Rather than turn away from the LA River, these land uses include entrances, signage, artwork, and seating areas along the LA River Bike Path, which serves as Frogtown's main visual and physical artery. As such, Frogtown has one of the most vibrant and active visual environments along the study area.

Starting at river mile 27.8, Griffith Park within the City of Los Angeles and City of Burbank begins on the west bank, extending into Frame 7. Griffith Park offers substantial scenic and recreational amenities including hiking, biking, and equestrian trails; picnicking areas; and museums. Elevated trails within Griffith Park offer expansive views of the LA River and the Los Angeles, Burbank, and Glendale skylines. Recreational users of the LA River Bike Path experience expansive views of higher elevations of Griffith Park's hillside areas. However, it should be noted that Griffith Park and the LA River are largely visually and physically separated from each other at the ground level by I-5 until the John Ferraro Athletic Fields.

From John Ferraro Athletic Fields, the LA River makes an approximately 90-degree curve to the south around Griffith Park. SR-134 crosses the LA River at the Verdugo Wash confluence in this area. The LA River Bike Path ends at Riverside Drive after a continuous 7.25-mile stretch. For a half mile, from just north of Confluence Park to Garden Street, the LA River Bike Path occurs on both sides of the bank. The half-mile portion of the bike path that occurs on the east bank is known as the Glendale Narrows Riverwalk in the City of Glendale. The scenic, 0.5-mile Glendale Narrows Riverwalk is lined with native California trees and shrubs as well as seating areas and public art installations.

Across from this area, partially in Frame 7, Bette Davis Park within the City of Glendale is a scenic recreational and picnic area that offers a lush green space and ground-level views of the LA River. Immediately to the west of Bette Davis Park, the LA River transitions to a concrete-lined channel.

In the City of Los Angeles, the general plan identifies the viewsheds of Elysian Park, the LA River, Echo Park Lake, and Silver Lake Reservoir as scenic. Scenic resources in this area in Glendale include the Glendale skyline to the north and Adams Hill and Forest Lawn Memorial Park to the south across the LA River.

Scenic vistas within Burbank near the LA River include views of the eastern Santa Monica Mountains to the south.

Figure 3.1-6. Typical Views of the LA River in Frame 6



Photo 1: View of the LA River from Sunnynook River Park



Photo: 2 View of Steelhead Park and the LA River Bike Path



Photo 3: View of LA River Bike Path near Spoke Bicycle Café in Frogtown



Photo 4: Elevated View of LA River near SR-2

Source: OLIN 2020.

Frame 7

Frame 7 is located within the Cities of Los Angeles and Burbank and extends from river mile 32.0 to 37.8. The LA River channel in this frame is almost entirely entrenched concrete channel with a typical width of approximately 130 feet. Land uses along the LA River in this frame are urban in nature and primarily consist of residential and commercial development. The LA River is largely fenced off from surrounding land uses with no adjacent bicycle trail system within this frame. As such, visual and physical access to the LA River are limited. Figure 3.1-7 shows typical views of the LA River and adjacent uses in Frame 7.

For a discussion of scenic corridors in the City of Burbank, see the discussion for Frame 6 above. As shown on Figure 3.1-7, an equestrian trail follows alongside and crosses the LA River near the Los Angeles Equestrian Center.

Figure 3.1-7. Typical Views of the LA River in Frame 7



Photo 1: Equestrian trail that crosses the LA River in the City of Burbank along the Mariposa Equestrian Bridge



Photo 2: Equestrian trail along the LA River near the Los Angeles Equestrian Center

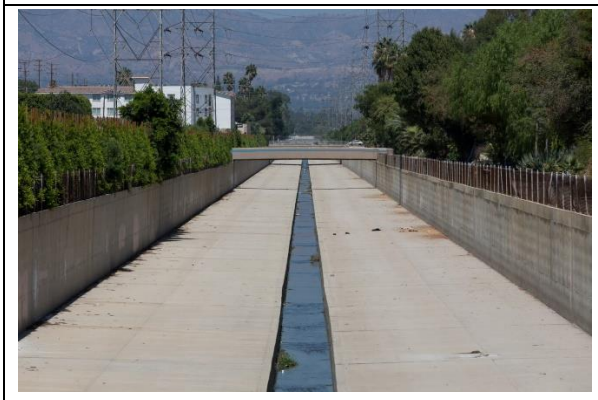

Photo 3: Photo of the LA River adjacent to residential development near where US 101 crosses the LA River

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Source: OLIN 2020; Los Angeles County Public Works 2020.

However, there are several notable aesthetic resources such as parks, recreational areas, and open spaces, many of which offer elevated views of the LA River. The largest open space is Griffith Park within the Cities of Los Angeles and Burbank on the east bank of the LA River from approximately river mile 32 to 34.5. Griffith Park includes an extensive trail system, much of which affords panoramic views of the LA River and the Los Angeles basin from elevated vantage points. Many of the recreational amenities at Griffith Park such as Travel Town are visually separated from the LA River by SR-134, which runs adjacent to the LA River and Griffith Park. However, there are several pedestrian and equestrian trails immediately adjacent to the LA River within Griffith Park and near the Los Angeles Equestrian Center in the City of Burbank. Most notably, the Mariposa Equestrian Bridge crosses the LA River and links equestrian trails within Griffith Park to the equestrian trail system within the Rancho neighborhood in the southeast corner of Burbank. Many of these trails are lined with trees and vegetation, presenting an attractive setting for riders and expansive views of the LA River.

Across from Griffith Park on the east bank between Frames 6 and 7 is Bette Davis Park, a scenic recreational and picnic area that offers a lush green space and ground-level views of the LA River. Along Bette Davis Park, the LA River is a soft-bottom bed that supports vegetation and wildlife, which blends visually with the green setting of the adjacent Bette Davis Park. Immediately to the west of Bette Davis Park, the LA River transitions to a concrete-lined channel.

Adjacent to Griffith Park on the west is a block of privately held open space associated with the Hollywood Reservoir in the City of Los Angeles. As with Griffith Park, expansive views of the LA River are primarily only available from elevated vantage points, as the LA River is separated at the ground level by Forest Lawn Drive. Across the LA River on the west bank is Warner Bros. Studios in the City of Burbank. The studio uses, including associated offices and surface parking, directly abut the LA River directly as no ROW exists.

Lakeside Golf Club in the City of Burbank lies along the LA River from mile 34.6 to 35.6 along the west bank. While portions of the Golf Club afford views of the LA River, trees line the perimeter of the Lakeside Golf Club adjacent to the LA River and therefore direct visual access to the LA River is limited.

North and South Weddington Parks are two parks that lie directly across from each other on both sides of the LA River in Studio City within the City of Los Angeles near the US 101 overcrossing. Both parks offer open green space, substantial landscaping, and recreational baseball fields and afford the user intermittent views of the LA River.

Frame 8

Frame 8 is in the City of Los Angeles and extends from river mile 37.8 to 43.1. In this frame, the LA River channel is an entrenched, rectangular-box, concrete channel with a typical width of 60 feet. The LA River transitions to an earthen, trapezoidal feature at the upstream limit of Frame 8, at the Sepulveda Dam. Land uses surrounding the LA River in this frame are primarily residential. In general, denser development characterized by multi-family and single-family homes on smaller lots are north of the river along the flatter portions of the City of Los Angeles. To the south, hillside development with curvilinear street patterns is located in areas of elevated topography along streets such as Coldwater Canyon Boulevard and Laurel Canyon Boulevard.

While the land use pattern along the LA River in this frame is largely developed with little visual or physical connection to the LA River, there are intermittent open spaces and greenways that offer positive aesthetic value along the riverfront. While not continuous, bicycle and walking trails occur at a number of points along this this frame. Figure 3.1-8 shows typical views of the LA River and adjacent uses in Frame 8.

North Valleyheart Riverwalk Park and greenway in the City of Los Angeles encompass 0.5 mile from river mile 38.0 to 38.5 from Coldwater Canyon to the east to Fulton Avenue to the west. Directly adjacent to the LA River, the park represents a positive aesthetic resource, offering views of the LA River, and includes bicycle and pedestrian trails, native vegetation, educational information, artwork, and other amenities. LA Riverfront Park at river mile 39.1 and 39.6 is a 0.5-mile bike path and greenway trail along the south bank of the river between Whitsett Avenue and Laurel Canyon Boulevard.

Ernie's Walk in the City of Los Angeles, one of the earliest community-based efforts to revitalize the LA River, is approximately at river mile 42.2 near the intersection of Huston Street and Valley Heart

Drive. Begun by retired local resident Ernie La Mere in 1987, the open space includes a 0.3-mile linear park that offers scenic trails along the LA River, including river rock seating walls and native and nonnative landscaping.

While it does not cross the LA River, Mulholland Highway is a designated scenic corridor across the entire San Fernando Valley and views of the LA River are visible from Mulholland Highway.

Figure 3.1-8. Typical Views of the LA River in Frame 8



Photo 1. View of LA River from North Valleyheart Riverwalk Park



Photo 2: View of the LA River from Ernie's walk, a 0.3-mile linear greenspace area near Valleyheart Drive



Photo 3: View of LA River and adjacent trail from Whitsett Avenue and Valleyheart Drive

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Source: OLIN 2020.

Frame 9

Frame 9 is in the City of Los Angeles and includes the City of Los Angeles communities of Encino Village, Reseda, Winnetka, Warner Center, and Canoga Park. The LA River extends from river mile 43.1 to 51. The majority of land uses surrounding the LA River in this frame are residential; however, this frame contains a notable amount of open space areas. Figure 3.1-9 shows typical views of the LA River and adjacent uses in Frame 9.

Within Frame 9, the LA River begins at the Sepulveda Basin in the City of Los Angeles, a flood management basin that includes 2,150 acres of open space and sports fields, golf courses, Balboa Lake, the Balboa Park and Sports Center, playgrounds, bike paths, hiking trails, tennis courts, and a Japanese garden. The Sepulveda Basin also includes the Sepulveda Basin Wildlife Reserve. Bisecting

the Sepulveda Basin, the LA River is earthen in form with a soft bottom that supports dense vegetation and wildlife. Views of the LA River are scenic and expansive in this area, and the green vegetation along the LA River combined with the surrounding open space and wildlife at the Sepulveda Basin create an attractive and lush visual environment.

Past the Sepulveda Basin for the remainder of the frame, the LA River transitions back to its urban form as a concrete, trapezoidal channel with minimal vegetation set behind chain link and concrete fencing. Most of the land uses surrounding the LA River to the end of the frame are urban in nature, with residences and business backing up to the riverfront, presenting a poor and disjointed visual relationship. However, there are a number of intermittent, smaller, scenic parks and trails that provide a scenic setting and expansive views alongside of the LA River.

Reseda Park near river mile 47 is a 2.8-acre park that spans both sides of the LA River and includes a pedestrian bridge across the river, linking both park areas. Reseda Park includes ample landscaping, trails, Reseda Park Lake, and sporting fields. While views of the LA River from Reseda Park are of a more barren, urban channel, the LA River is lined with trees and flanked with landscaping through Reseda Park, creating a positive visual context.

Aliso Creek Park is an aesthetic resource near Wilbur Avenue between river miles 47 and 48. Aliso Creek Park is a small park (1.7 acres) on the east side of the LA River that includes native landscaping, bioswales, a demonstration garden, walkways, and artistic elements that provide public access and views of the confluence of Aliso Creek and the LA River.

Farther west, the West Valley Bikeway begins alongside the LA River. This attractive trail consists of an uninterrupted 1.8-mile multi-use path along the southern bank of the LA River between Mason and Vanalden Avenues. This trail offers direct views of the LA River and is lined with trees, specialty lighting, benches, habitat areas and landscaping, a vegetated bioswale, and interpretive signage, all of which present a positive visual experience for users. At Mason Avenue, the trail transitions into the Headwaters Greenway Trail extending along both banks to Owensmouth Avenue. This 1.5-mile trail surrounding greenway is an aesthetic and active resource near the LA River, is landscaped with trees and native and drought-tolerant plants, and includes a rain garden for water conservation.

Within this frame, Kelowna Avenue is designated as scenic corridor within the City of Los Angeles through Balboa Park.

Figure 3.1-9. Typical Views of the LA River in Frame 9

<table>
<tr><td>
Photo 1: Reseda Park pedestrian bridge</td><td>
Photo 2: Aliso Creek Park and Trail</td></tr>
<tr><td>
Photo 3: Headwaters Greenway Trail</td><td>Table cell is intentionally blank.</td></tr>
</table>

Source: OLIN 2020.

3.1.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of aesthetics in this PEIR.

Federal

No federal land use regulations are applicable to the proposed Project and the aesthetics impact analysis.

State

Scenic Highway Program

Established in 1963, California's Scenic Highway Program is administered by the California Department of Transportation and is designed to preserve and protect scenic highway corridors from changes that would diminish their aesthetic value. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The city or county in which the highway is located must adopt a Corridor Protection Program

that consists of ordinances, zoning, and/or planning policies that would preserve the scenic quality of the corridor, or they must document such regulations that already exist in various portions of local codes. The Pasadena Freeway (110), or "Arroyo Seco Parkway" as it was originally called, is on the National Register of Historic Places as the first freeway in the Western United States. It is also designated as a State Scenic Highway, National Civil Engineering Landmark, and National Scenic Byway. A portion of I-110 crosses over the LA River near Griffith Park and the Arroyo Seco Confluence at the border of Frames 5 and 6. No other scenic highways are immediately adjacent to the LA River.

California Building Code

California Code of Regulations, Title 24

Title 24 of the California Code of Regulations, also known as the California Building Standards Code, consists of regulations to control building standards throughout the state. The following components of Title 24 include standards related to lighting.

(a) California Building Code and California Electrical Code

The California Building Code (Title 24, Part 1) and the California Electrical Code (Title 24, Part 3) stipulate minimum light intensities for pedestrian pathways, circulation ways, and paths of egress.

(b) California Energy Code

The California Energy Code (CEC) (Title 24, Part 6) provides lighting control requirements for various lighting systems with the aim of reducing energy consumption through efficient and effective use of lighting equipment. CEC Section 130.2 specifies requirements for outdoor lighting controls and luminaire cutoff requirements. All outdoor luminaires rated above 150 watts must comply with the backlight, up-light, and glare (BUG) ratings in accordance with Illuminating Engineering Society (IES) Technical Memorandum-15-11, Addendum A, and must be provided with a minimum of 40 percent dimming capability activated to full-on by motion sensor or other automatic control. This requirement does not apply to streetlights for the public ROW, signs, or building façade lighting. CEC Section 140.3 sets solar reflectance criteria for non-residential buildings and high-rise residential buildings.

CEC Section 140.7 sets forth outdoor lighting power density allowances in terms of watts per area for lighting sources other than signage. The lighting allowances are provided by lighting zone, as defined in CEC Section 10-114. Under Section 10-114, all urban areas within California are designated as Lighting Zone 3. Additional allowances are provided for building entrances or exits, outdoor sales frontage, hardscape ornamental lighting, building façade lighting, canopies, outdoor dining, and special security lighting for retail parking and pedestrian hardscape.

CEC Section 130.3 stipulates that sign lighting controls with any outdoor sign that is on both day and night must include a minimum 65 percent dimming at night. CEC Section 140.8 sets forth lighting power density restrictions for signs.

(c) California Green Building Standards Code

The California Green Building Standards Code (Title 24, Part 11) is commonly referred to as the CALGreen Code. The CALGreen Code stipulates maximum allowable light levels, efficiency requirements for lighting, miscellaneous control requirements, and light trespass requirements for

electric lighting and daylighting. Paragraph 5.1106.8, Light Pollution Reduction, specifies that all non-residential outdoor lighting must comply with the following:

- The minimum requirements for Lighting Zones 1–4 as defined in Chapter 10 of the California Administrative Code; BUG ratings as defined in the IES Technical Memorandum-15-07; and Allowable BUG ratings not exceeding those shown in Table A5.106.8 in Section 5.106.8 of the CALGreen Code; or
- With a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Regional

Los Angeles County

Los Angeles County General Plan

The *Los Angeles County General Plan* (Los Angeles County 2015) was adopted by the Los Angeles County Board of Supervisors on October 6, 2015. The general plan provides the policy framework for how and where the unincorporated County areas will grow through the year 2035, while recognizing and celebrating the County's wide diversity of cultures, abundant natural resources, and status as an international economic center. The general plan Land Use Element provides strategies and planning tools to guide future development and conserve scenic resources. The Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. The Mobility Element provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. Goals and polices within the *Los Angeles County General Plan* related to aesthetics are listed in Table 3.1-1.

Table 3.1-1. Local Plans: Applicable Goals, Policies, and Objectives of the *Los Angeles County General Plan* Related to Aesthetics

Plan	Policies and Objectives
Land Use Element	**Goal LU 3:** A development pattern that discourages sprawl, and protects and conserves areas with natural resources and SEAs. • **Policy LU 3.1**: Encourage the protection and conservation of areas with natural resources, and SEAs. • **Policy LU 3.2:** Discourage development in areas with high environmental resources and/or severe safety hazards. • **Policy LU 6.8:** Encourage land uses and developments that are compatible with the natural environment and landscape. • **Policy LU 7.1:** Reduce and mitigate the impacts of incompatible land uses, where feasible, using buffers and other design techniques. **Goal LU 10:** Well-designed and healthy places that support a diversity of built environments. • **Policy LU 10.2:** Design development adjacent to natural features in a sensitive manner to complement the natural environment. • **Policy LU 10.3**: Consider the built environment of the surrounding area and location in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament. • **Policy LU 10.4**: Promote environmentally-sensitive and sustainable design.

Plan	Policies and Objectives
	• **Policy LU 10.5:** Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction. • **Policy LU 10.6:** Encourage pedestrian activity through the following: o Designing the main entrance of buildings to front the street; o Incorporating landscaping features; o Limiting masonry walls and parking lots along commercial corridors and other public spaces; o Incorporating street furniture, signage, and public events and activities; and o Using wayfinding strategies to highlight community points of interest • **Policy LU 10.8:** Promote public art and cultural amenities that support community values and enhance community context. • **Policy LU 10.10**: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces. • **Policy LU 10.12:** Discourage gated entry subdivisions ("gated communities") to improve neighborhood access and circulation, improve emergency access, and encourage social cohesion.
Mobility Element	• **Policy M 2.1**: Provide transportation corridors/networks that accommodate pedestrians, equestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban, suburban, and rural communities whenever appropriate and feasible. • **Policy M 2.4**: Ensure a comfortable walking environment for pedestrians by implementing the following, whenever appropriate and feasible: o Designs that limit dead-end streets and dead-end sidewalks. o Adequate lighting on pedestrian paths, particularly around building entrances and exits, and transit stops. o Designs for curb ramps, which are pedestrian friendly and compliant with the American Disability Act (ADA) o Perpendicular curb ramps at locations where it is feasible. o Pedestrian walking speed based on the latest standard for signal timing. Slower speeds should be used when appropriate (i.e., near senior housing, rehabilitation centers, etc.) o Approved devices to extend the pedestrian clearance times at signalized intersections. o Accessible Pedestrian Signals (APS) at signalized intersections. o Pedestrian crossings at signalized intersections without double or triple left or right turn lanes. o Pedestrian signal heads, countdown pedestrian heads, pedestrian phasing and leading pedestrian intervals at signalized intersections. o Exclusive pedestrian phases (pedestrian scrambles) where turning volume conflicts with very high pedestrian volumes. o Advance stop lines at signalized intersections. o Pedestrian Hybrid Beacons. o Medians or crossing islands to divide long crossings. o High visibility crosswalks. o Pedestrian signage.

Plan	Policies and Objectives
	○ Advanced yield lines for uncontrolled crosswalks. ○ Rectangular Rapid Flashing Beacon or other similar approved technology at locations of high pedestrian traffic. ○ Safe and convenient crossing locations at transit stations and transit stops located at safe intersections. • **Policy M 2.6**: Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible. • **Policy M 2.7**: Require sidewalks, trails and bikeways to accommodate the existing and projected volume of pedestrian, equestrian and bicycle activity, considering both the paved width and the unobstructed width available for walking. • **Policy M 2.8:** Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations. • **Policy M 2.9**: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features. • **Policy M 2.10**: Encourage the provision of amenities, such as benches, shelters, secure bicycle storage, and street furniture, and comfortable, safe waiting areas near transit stops. • **Policy M 2.11**: In urban and suburban areas, promote the continuity of streets and sidewalks through design features, such as limiting mid-block curb cuts, encouraging access through side streets or alleys, and promoting shorter block lengths.
Conservation and Natural Resources Element	**Goal C/NR 13**: Protected visual and scenic resources. • **Policy 13.3**: Reduce light trespass, light pollution and other threats to scenic resources. • **Policy 13.**4: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.

Source: Los Angeles County 2015.

Los Angeles County Code

Subdivision and Zoning Codes (Title 21 and 22)

The Los Angeles County Zoning Code (Los Angeles County 2002), Subdivision Code, and zoning map are implementation tools of the general plan that provide details on specific allowable uses, design and development standards, and procedures. Zoning and subdivision regulations govern the division, design, and use of individual parcels of land, including minimum lot size, lot configuration, access, height restrictions, and yard setback standards for structures.

Los Angeles County Code Section 22.44.1270

Exterior Lighting Section 22.44.1270 establishes light performance standards for development within Los Angeles County, including standards related to acceptable power of lighting, types of lighting, height of lighting support structures, lighting shielding, sign lighting, and hours of operation.

Local

Frame 1

Frame 1 includes the City of Long Beach and a small portion of the City of Los Angeles. Applicable plans and policies pertaining to the City of Long Beach are described below. Plans and polices pertaining to the City of Los Angeles are discussed in greater detail in Frame 5.

City of Long Beach

City of Long Beach General Plan

The *City of Long Beach General Plan* is a policy document that establishes the goals, policies, and directions the City of Long Beach will take to guide the future development of the city. The *City of Long Beach General Plan* includes a number of elements that address aesthetic resources in the city, including the Urban Design Element, Land Use Element, Open Space and Recreation Element, and Conservation Element.

In addition, the *Local Coastal Program: An Element of the City General Plan* applies to areas south of the city's coastal zone boundary as depicted in Land Use Element Map LU-2 (Local Coastal Zone) that includes a portion of the entrance to the LA River. Goals and polices within the *City of Long Beach General Plan* related to aesthetics are listed in Table 3.1-2.

Table 3.1-2. Local Plans: Applicable Goals, Policies, and Objectives of the City of Long Beach General Plan Related to Aesthetics

Element	Goals, Policies, and Strategies
Urban Design Element (2019)	**Goals** • **Creating Great Places:** Creating Great Places allows for friends and strangers to interact in a space that encourages activity, spontaneity, exploration and discovery. Great Places encourage businesses to relocate for both the quality of life of employees and their families. These Great Places are timeless and demand to be visited over and over again. • **Urban Fabric:** Defining patterns within the existing Urban Fabric successfully expresses what makes Long Beach unique, and is reflective of the neighborhoods and context of the City. It allows for the establishment of new development patterns that do not detract from successful, historical development patterns, but rather builds upon and celebrates the pre-existing Urban Fabric, both natural and man-made, as a component of place. • **Public Spaces:** Integrating Public Spaces that allow for the community to come together for informal and formal events, where public art can be put on display, where both children and adults can engage in physical activities, and where civic engagement can occur. These Public Spaces are informed by the context of Long Beach and its history of diversity, uniqueness, and civic involvement. • **Edges, Thoroughfares, and Corridors:** Edges, Thoroughfares, and Corridors reflect the uniqueness of the natural and urban environments and the neighborhoods that they traverse. Natural and man-made edges, such as the Pacific Ocean, Port of Long Beach, Los Angeles River, and San Gabriel River, act as catalysts for improved environmental health, quality of life, and opportunities for non-motorized modes of transit. Thoroughfares act to define the larger commercial activities of the City, while at the same time

Element	Goals, Policies, and Strategies
	integrating pedestrian amenities that allow for transitioning into adjacent districts. Corridors are the heart of the community where individual neighborhood characteristics are celebrated, opportunities for the 'public room' concept are provided, and a wide-array of multimodal transportation options are supported. Functioning corridors enhance the quality of adjacent neighborhoods, connectivity to them, and accessibility to goods and services. **Natural Area and Parks to Built Area** **Strategy No. 17:** Define boundaries between natural areas, parks, and built areas. • **Policy UD 17-1:** Restrict development from encroaching into natural areas to protect viewsheds and access to public space. • **Policy UD 17-2:** Enhance linkages and access points with lighting and signage. • **Policy UD 17-3:** Establish appropriate buffers between natural resources and the built environment. • **Policy UD 17-4:** Wetlands and passive and active utility corridors should incorporate buffers and screening as transitions to urban areas. **Scenic Routes and Iconic Sites** **Strategy No. 18:** Improve and preserve the unique and fine qualities of Long Beach to strengthen the City's image and eliminate undesirable or harmful visual elements. • **Policy UD 18-1:** Carefully consider the development of iconic sites with visual corridors or structures of the highest visual and architectural quality. • **Policy UD 18-2:** Expand the existing network of scenic routes to include additional routes, corridors, and sites. • **Policy UD 18-4:** Prioritize aesthetics to enhance the quality of new and existing developments within scenic areas and iconic sites. • **Policy UD 18-5:** Include aesthetic design considerations for all roadway and appurtenances within scenic areas. • **Policy UD 18-9:** Link and enhance significant recreational, cultural, and educational opportunities through a network of scenic corridors. • **Policy UD 18-10:** Follow the principles of the former scenic highways element, now incorporated into the General Plan as part of street character change (Mobility Element, Page 89, Map 16), and as part of the Street Design Manual, implementation measure MOP IM-1, Page 122. **Public Spaces** *Natural Areas, Watersheds, and Views* **Strategy No. 29**: Restore and protect Long Beach's natural features, which include: the Pacific Ocean, beaches, bluffs, San Gabriel and Los Angeles Rivers, ranchos and adjacent land, Dominguez Gap, the Los Cerritos Wetlands, and waters in Alamitos Bay. • **Policy UD 29-1:** Provide leadership and work with the community to restore and rehabilitate habitats and lands along the San Gabriel River and Los Angeles River, the Los Cerritos Wetlands, Colorado Lagoon, and the Alamitos Bay. • **Policy UD 29-2:** Support and expand the City's urban forest and provide additional planting, tree cover, and upgrade dated facilities at natural features per the Urban Forest Plan contained in the Conservation Element.

Element	Goals, Policies, and Strategies
	• **Policy UD 29-3:** Integrate learning components at natural feature sites to connect people with the natural environment and support a collective pride in stewardship of local natural areas. *Open Spaces and Parks* **Strategy No. 30:** Provide greater access to the open space network to promote pedestrian and bicycle activity, to support the health and well-being of residents, and to increase opportunities for recreation. • **Policy UD 30-1:** Preserve and enhance access to existing open space through improvements to existing facilities and wayfinding programs for new and existing open spaces. • **Policy UD 30-2:** Seek opportunities to provide new publicly accessible open spaces and linkages to the greater open space network within residential projects. **Scenic Routes** The Urban Design Element identifies the existing designated scenic route of Ocean Boulevard and Livingston Drive will continue to be a scenic route within Long Beach. In addition, the system will be expanded to include Ocean Boulevard on the Belmont Peninsula, the Promenade in Downtown Los Angeles, the Los Angeles River and San Gabriel River corridors, Appian Way along the Colorado Lagoon, Marine Stadium, Studebaker Road, the approach road to Rancho Los Cerritos, and the entire stretch of Pacific Coast Highway. These roadways are, or will become by 2030, scenic highways. Future projects along these scenic routes will be scrutinized for their architectural contributions to the overall aesthetic value of these important corridors.
Land Use Element (2019)	**Strategy No 8:** Enhance and improve the waterfront areas. • **LU Policy 18-1:** Require that new development creatively and effectively integrates private open spaces into project design, both as green spaces and landscaped courtyards. • **LU Policy 19-1:** Develop and maintain a high-quality network of natural and urban parks and open spaces that meet the needs of families, young adults, seniors, children and disabled individuals. • **LU Policy 21-1:** Transition the Los Angeles and San Gabriel Rivers to more attractive, multi-functional, healthier environments that are easily accessible for passive recreation. • **LU Policy 21-5:** Encourage the creation and expansion of nature centers, interpretive displays and wildlife habitats along the Los Angeles and San Gabriel Rivers. • **LU Policy 21-7:** Support opportunities for eco-tourism to celebrate and showcase natural assets such as the Los Cerritos Wetlands, the Los Angeles River, the Dominguez Gap Wetlands and the beachfront, while creating a stronger tourism draw for the City.
Conservation Element (1973)	**Goal:** To create and maintain a productive harmony between man and his environment through conservation of natural resources and protection of significant areas having environmental and aesthetic value. **Goal:** To identify and preserve sites of outstanding scenic, historic, and cultural significance or recreational potential.
Open Space and Recreation Element (2002)	**Policy 1.2:** Protect and improve the community's natural resources, amenities, and scenic values, including nature centers, beaches, bluffs, wetlands, and water bodies.

Element	Goals, Policies, and Strategies
Local Coastal Program (1980)	**Recreation and Visitor Serving Facilities** Lighting shall carry out the common theme of the total boardwalk, be attractive and provide adequate light for public safety and comfort. Area lighting for public use recreation areas shall be designed for energy conservation and to minimize adverse visual impacts of lighting interfering with attractive night views across shoreline areas, and if at all possible, light sources other than low pressure sodium vapor shall be utilized. All parks should be well lit. Area lighting for public use recreation areas shall be designed for energy conservation and to minimize adverse visual impacts of lighting interfering with attractive night views across shoreline areas, and if at all possible, light sources other than low pressure sodium vapor shall be utilized.

Sources: City of Long Beach 1973, 1980, 2002, 2019a, 2019b.

Long Beach Municipal Code

Title 21, Zoning, of the Long Beach Municipal Code (City of Long Beach 2020) includes property development standards, as well as design guidelines, for development projects within the City of Long Beach. Among the aspects of development regulated by the municipal code are types of allowable land uses, setback and height requirements, landscaping, walls, fencing, signage, access, parking requirements, storage areas, and trash enclosures. The Long Beach Municipal Code also provides performance standards for various land use types to measure development projects' consistency with such regulations.

Lighting Standards

As described in the Long Beach Municipal Code, all lighting proposed as part of a parking lot and/or garage must be illuminated with lights directed and shielded to prevent light and glare from intruding onto adjacent sites. All lights must be illuminated to the applicable standards of the IES. Additional details pertaining to parking lot lighting are provided in Section 21.41.259, Parking areas-Lighting, of the Long Beach Zoning Code.

Landscaping Design Guidelines

Chapter 21.42, Landscaping Standards, of the Long Beach Municipal Code establishes landscape guidelines for development projects. As described in this section, the City of Long Beach requires that landscaping be composed of a minimum of 90 percent drought-tolerant and native plant materials in the interest of promoting water conservation. If the proposed planted area contains less than 90 percent of land covered with very-low- to low-water-use planting, a Landscape Document Package showing the estimated total water usage of all proposed plantings is required for review and approval by the City of Long Beach. The landscaping standards would be applicable to all projects requiring site plan review.

Frame 2

City of Carson

Carson General Plan

The *Carson General Plan* provides the framework for all zoning and land use decisions within the community. Applicable goals and policies related to aesthetics within the *Carson General Plan* are contained in the Open Space and Conservation Element, Land Use Element, and Economic Development Element, as listed in Table 3.1-3.

Carson Municipal Code

The Carson Municipal Code (City of Carson 2020) does not include specific lighting standards. The City of Carson has adopted the California Building Code and the CEC, which guides illuminance limits with the city.

City of Compton

Draft Compton General Plan 2030

The *Draft Compton General Plan 2030* serves as the blueprint for planning and development in the City of Compton and indicates the community's vision for the future. The Urban Design Element of the general plan is meant to facilitate the ongoing revitalization of the city. Applicable goals and policies related to aesthetics are contained in the Urban Design Element, as listed in Table 3.1-3.

Compton Municipal Code

Chapter XXIV of the Compton Municipal Code (City of Compton 1985) specifies that lighting should be used to highlight landscaping features such as trees and pedestrian areas.

City of Long Beach

Applicable regulations for the City of Long Beach are described above.

Los Angeles County

Applicable regulations for unincorporated County areas are described above.

Table 3.1-3. Local Plans: Applicable Goals, Policies, and Objectives of General Plans Related to Aesthetics within Frame 2

Plan/Element	Goals, Policies, or Objectives
City of Carson General Plan	
Open Space and Conservation Element	**Goal OSC-1:** Enhancement of Carson's open space resources. • **Policy OSC-1.1** Preserve and enhance the existing open space resources in Carson. • **Policy OSC-1.2** Maintain existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community. ○ **Implementation Measure OSC-IM-1.1** Work with other South Bay cities and the County to create and implement a plan to: (1) enhance

Plan/Element	Goals, Policies, or Objectives
	Dominguez Channel with landscaping and walking and bicycle trails, and (2) provide landscaping along Compton Creek. (Implements OSC-1.1) ○ **Implementation Measure OSC-IM-1.4** Require landscaping of graded areas along public rights-of-way concurrent with project development to minimize erosion and enhance the visual aspects of the community. (Implements OSC-1.1 and OSC-1.2)
Land Use Element	• **Policy LU-9.5** Develop design standards to address permanent and effective screening of areas in transition and heavy industrial uses such as outdoor storage yards, pallet yards, salvage yards, auto dismantling yards, and similar uses. • **Policy LU-9.7** Maintain and upgrade the City's parks, eliminating evidence of vandalism, wear and deterioration. • **Policy LU-9.8** Maintain City properties in compliance with applicable regulations and adhere to design and maintenance standards as a model for private development. **Goal LU-12:** Create a visually attractive appearance throughout Carson. • **Policy LU-12.2** Adopt a "Carson Green" program to encourage public/private partnerships in the landscaping of the community. • **Policy LU-12.3** Review landscape plans for new development to ensure that landscaping relates well to the proposed land use, the scale of structures, and the surrounding area. • **Policy LU-12.4** Amend the landscaping requirements in the Zoning Ordinance to enhance the appearance of the community and to provide for the use of trees to provide shade. • **Policy LU-12.5** Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. Mandate continued upkeep of landscaped areas. ○ Implementation Measure LU-IM-12.1: Develop a Citywide Urban Design Plan which addresses: • Site planning and design, • Architectural design guidelines, • Landscape programs, • Entries into the city, • View corridors such as the I-405 and I-110 Corridors, • Streetscape programs (to include street furnishings, lighting, walls and fencing, monumentation), • Design guidelines appropriate for each area of the City, • Financing, and • Priorities. (Implements LU-12.1) ○ **Implementation Measure LU-IM-12.6:** Require new development to incorporate street tree planting mature enough to shade and beautify the area. (Implements LU-12.3) ○ **Implementation Measure LU-IM-12.8: Address** tree preservation and the removal and replacement of mature trees in the landscape section(s) of the City's Ordinance. (Implements LU-12.4) ○ **Implementation Measure LU-IM-12.11:** Require exposed structural sidewalls to be screened with landscaping. (Implements LU-12.5) ○ **Implementation Measure LU-IM-12.12:** Require landscaping to provide visual continuity along a street, even where the buildings are in different zones or land use districts. (Implements LU-12.5)

Plan/Element	Goals, Policies, or Objectives
	Goal LU-13: Encourage interesting and attractive streetscapes throughout Carson. • **Policy LU-13.4** Encourage architectural variation of building and parking setbacks along the streetscape to create visual interest, avoid monotony and enhance the identity of individual areas. Encourage pedestrian orientation by appropriate placement of buildings. • **Policy LU-13.5** Continue to require landscaping treatment along any part of a building site which is visible from City streets. • **Policy LU-13.6** Consider the use of contrasting paving for pedestrian crosswalks to add visual interest to the streetscape and create pedestrian amenity. **Goal LU-15**: Promote development in Carson which reflects the "Livable Communities" concepts. • **Policy LU-15.5** Ensure that the design of public spaces encourages the attention and presence of people at all hours of the day and night.
Economic Development Element	**Policy ED-1.4** Strengthen the physical image of Carson through visual enhancement along freeway corridors, major traffic routes, and areas adjoining residential neighborhoods. To this end: • Aggressively pursue code enforcement activities; • Develop good design standards; and • Establish a City identity. ○ Implementation Measure ED-IM-1.3 Develop design standards and guidelines and special plans for targeted areas, such as Carson Street, Automobile Row, and others. (Implements Policy ED-1.4)
City of Compton General Plan	
Urban Design Element	**<u>Lighting Standards</u>** • Exterior building materials and the on-site lighting plan shall be reviewed by the City to minimize the potential for light and glare impacts. • The lighting plan for the exterior parking areas shall be designed to direct all light sources downward and onto the site. Outdoor lighting shall be designed and installed so that all direct illumination is confined to the site, and adjacent properties are protected from spillover illumination. • Low-wattage security lighting directed away from light-sensitive uses shall be utilized and shall be shielded to prevent spill-over and glare. • Street lights must be consistent with the development in terms of scale and design and their height should not exceed 25 feet. • The creative use of building security lighting will be required in all sub-areas. Ground lighting fixtures directed upwards along exterior walls may also serve as effective illumination. • Ground-mounted lighting shall be installed in the landscaped medians, entryways, and activity nodes as a means to enhance these features during the nighttime periods. • The use of decorative lighting treatments in landscaping, pedestrian activity areas, and nodes and entryways will be encouraged. These treatments may also be incorporated into the overall architectural design of future buildings. **<u>Landscaping/Open Space Guidance</u>** • Landscape and irrigation plans to be prepared by a landscape architect and will require City review and approval.

Sources: City of Carson 2004a, 2004b, 2004c; City of Compton 2011.

Frame 3

City of Compton

Applicable regulations for the City of Compton are described above.

City of Cudahy

Cudahy 2040 General Plan

In 2018, the City of Cudahy updated its general plan. The *Cudahy 2040 General Plan* establishes the basis for zoning regulations, provides guidance in the evaluation of development proposals, and creates the framework for economic development, mobility improvements, and balancing the community's desires regarding sustainability, city services, and parks. Applicable goals and policies related to aesthetics are contained in the Land Use Element and Open Space and Conservation Element, as listed in Table 3.1-4.

Cudahy Municipal Code

Sign Placement

Section 20.40.040 (City of Cudahy 2018a) establishes that the Planning Commission must consider whether the design, lighting, and placement of signs are appropriately related to the structure and grounds and are in harmony with the general development of the site.

Lighting Standards

Section 20.88.060 (City of Cudahy 2018a) establishes lighting standards, specifying that all on-site lighting fixtures, including parking lot lighting, security lighting, and decorative lighting, may be indirect or diffused, or, if not, must be shielded or directed away from a residential-zoned district.

City of Downey

Downey Vision 2025 General Plan

The *Downey Vision 2025 General Plan* (City of Downey 2005) serves as a guide to the long-term physical development and growth of the community. Applicable goals and policies related to aesthetics are contained in the Design Element, as listed in Table 3.1-4.

Downey Municipal Code

Section 9250 of the Downey Municipal Code (2017) establishes landscaping, lighting, and wall regulations. The intent of these regulations, as related to aesthetics, includes creating an atmosphere of orderly development and uniformly pleasant and attractive surroundings in the City of Downey to enhance, conserve, and stabilize property values; preserve existing mature landscaping; and enhance the visual appearance of the city.

Landscaping Requirements

Section 9520.04 establishes landscaping and planting requirements for all zones, which includes tree sizing, placement, maintenance, and preservation standards. This section also establishes the requirements of a landscaping plan for all uses that include a landscaping project.

Outdoor Lighting

Section 9520.06 establishes standards for outdoor lighting of walkways and parking lots including placement, type, intensity, and shielding.

Development Standards

Section 9322.06 sets the requirement of Site Plan Review for all new permitted structures and site improvements within the Open Space Zone.

Performance Standards

The purpose of Section 9516.02 is to protect persons and property from environmental nuisances and hazards by setting maximum limits on adverse and detrimental environmental effects caused by any activity or use of land and/or premises, including development activities.

Section 9516.06(g) establishes that no operation, activity, or lighting fixture shall create illumination that exceeds 0.5 foot-candles at any point on the lot lines of the use.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* contains the plan for the future development and operation of the City of Lynwood. Applicable goals and policies related to aesthetics are contained in the Community Development Element as listed in Table 3.1-4.

Lynwood Municipal Code

The City of Lynwood (City of Lynwood 2018) has adopted the California Building Code, the CALGreen Code, and the CEC, which guide illuminance limits with the city.

Development Standards

Article 10 of the Lynwood Municipal Code describes development standards that apply to all zoning districts, unless otherwise indicated. Section 25-10-3 establishes design compatibility and enhancement criteria for development projects that are designed to minimize and mitigate the environmental impacts of existing and proposed land uses within the community.

Performance and Lighting Standards

Article 90 of the Lynwood Municipal Code describes performance standards designed to minimize and mitigate the environmental impacts of existing and proposed land uses within the community. Section 25-90-4 establishes that light and glare associated with operations and illuminated signs must be shield or directed so as to not illuminate adjacent properties or cause glare to motorists.

City of Paramount

City of Paramount General Plan

The *Paramount General Plan* (City of Paramount 2007) serves as the blueprint for planning and development in the City of Paramount. Applicable goals and policies related to aesthetics are contained in the Land Use Element, Resource Management Element, and Economic Development Element as listed in Table 3.1-4.

Paramount Municipal Code

Chapter 10 of the Paramount Municipal Code (City of Paramount 2017) adopts the Los Angeles County Building Code, Los Angeles County Residential Code, and the Los Angeles County Green Building Standards Code. These codes include regulations pertaining to height, area, maintenance of all buildings, structures, and real property.

City of South Gate

South Gate General Plan 2035

The *South Gate General Plan 2035* was adopted in December of 2009 and is the primary legal document to guide long-term growth, development, and conservation in the City of South Gate. Applicable goals and policies related to aesthetics are contained in the Community Design Element, as listed in Table 3.1-4.

City of South Gate Municipal Code

Title 11 of the South Gate Municipal Code (City of South Gate 2020) details the city's zoning code, the purpose of which is to protect and promote public health, safety, and general welfare of the South Gate community; to implement the policies of the general plan; and to provide the economic and social advantages that result from the orderly planned use of land resources. Objectives of the zoning code include providing standards and guidelines for the continuing orderly growth and development that will assist in protecting the character of the City of South Gate and ensuring compatibility between different types of development and land uses.

Development and Design Standards and Guidelines

Chapter 11.23 of the South Gate Municipal Code describes development and design standards including guidelines for block size, massing, general building design, landscape design, and open space requirements.

General Property Standards

Chapter 11.30 of the South Gate Municipal Code establishes regulations intended to promote quality, orderly development within the city. This section describes development requirements that include buffer setback requirements and exterior building and landscape lighting requirements.

Los Angeles County

Applicable regulations for unincorporated County areas are described above.

Table 3.1-4. Local Plans: Applicable Goals, Policies, and Objectives of General Plans Related to Aesthetics within Frame 3

Plan/Element	Goals, Policies, or Objectives
City of Cudahy General Plan	
Land Use Element	**Policy LUE 1.1:** Develop, maintain, and enhance the beneficial and unique character of the different neighborhoods, districts, and open spaces. **Policy LUE 3.7** Require buildings and properties be designed to ensure compatibility within, and provide interfaces between, neighborhoods and districts.

Plan/Element	Goals, Policies, or Objectives
Open Space and Conservation Element	**Policy OSCE 3.5:** Enhance park aesthetics, lighting, and design to provide safe environments for all.
City of Downey General Plan	
Design Element	**Goal 8.1.** Promote quality design for new, expanded, and remodeled construction. • **Policy 8.1.1** Promote architectural design of the highest quality. ○ **Program 8.1.1.1.** Discourage construction with architectural design of poor quality. ○ **Program 8.1.1.2.** Assist homeowners and builders by providing design guidelines to illustrate good design. ○ **Program 8.1.1.3.** Utilize the Design Review Board to provide professional assistance to builders of multiple-family residential, commercial, and other non-residential developments. ○ **Program 8.1.1.5.** Encourage applicants to use licensed professionals to prepare architectural and landscaping plans. ○ **Program 8.1.1.6.** Encourage developments to be "internally compatible" in architectural design. ○ **Program 8.1.1.8.** Promote good quality sign design. • **Policy 8.3.3.** Promote the installation of new trees. ○ **Program 8.3.3.1.** Promote the installation of new trees throughout the City, but especially where visible from the street. **Policy 1.2.1.** Promote livable communities concepts that allow added flexibility in addressing land use needs. **Policy 1.3.1** Minimize or eliminate conflicts where incompatible land uses are in proximity to each other.
City of Lynwood General Plan	
Community Design Element	**Goal 1:** Encourage physical development that enhances the positive image of the City as a balanced residential community indicative of its All-American City status. **Goal 2:** Define urban design components that provide a unique visual character for the City and distinguish the City from its neighboring communities. • **Policy 5:** Ensure that signage is visually attractive, compatible within the neighborhood setting and provides a high-quality image for the City. **<u>Design Guidelines</u>** *Compatibility* • Individual site planning should consider the planning of adjoining parcels to ensure visual and functional compatibility. Each site plan submitted for review shall illustrate compatibility with adjoining parcels in the areas of building configuration, building design, landscaping materials, parking, and access. *Landscaping* • Minimum landscape improvements should be required for each new development. However, landscape specifications should be flexible enough to ensure that plantings are consistent with the size and scale of development. The use of drought-tolerant landscaping materials is encouraged.

Plan/Element	Goals, Policies, or Objectives
	• Existing trees should be maintained where feasible. New development should be required to either preserve existing trees or replace trees, which must be destroyed with equivalent new landscaping. • Front setback areas should be landscaped with a combination of trees, shrubs, and ground cover that help to soften the appearance of on-site structures and define pedestrian paths. • All landscaped areas shall be regularly maintained and watered by an automatic irrigation system. *Signage* • The City shall prepare a City-wide public signage master plan. This should include specifications for design (size, color, materials, logo, etc.) and locations. It is intended that signage provide an attractive, well-designed, and coordinated system of public information. Signage should be integrated into the overall site and architectural design process to provide signs that are consistent with the architectural style, colors, materials, and landscaping themes of the project as a whole. • Building signage should be integrated into the building façade design and/or landscape design rather than placed on the tops of buildings or extended horizontally from the building façade. The construction of new billboards, free-standing pole signs, and roof signs shall be prohibited. However, building identification or corporate insignia signs shall be allowed • All signs should be placed so that they do not adversely impact views or adjacent residences. *Colors and Materials* • Colors used should be consistent with the architectural characteristics of the node or district within which the building is located. • Earthtones with complementary accents in muted shades of reds, blues, greens, grays, and yellows should be encouraged. Monochromatic color schemes should be avoided. • Excessive use of smooth surface materials such as metal, plastic, and glass should be discouraged or off-set by overhangs or architectural projections. *Projections* • Buildings should provide weather protective overhangs at outdoor pedestrian areas and at building entrances. *Lighting* • Lighting shall be integrated architecturally throughout each new project to enhance security, surveillance, and identification for both pedestrians and motorists. • Lighting intended to aid pedestrians should be provided at a pedestrian scale and mounted on overhangs, walls, or poles at a level which meets the needs of pedestrians. *Public Art* • To the extent feasible the City will encourage art in public places. An example of this is the new artwork that is being developed at Plaza Mexico.

Plan/Element	Goals, Policies, or Objectives
City of Paramount General Plan	
Land Use Element	**Policy 7.** The City of Paramount will continue to maintain and conserve its existing residential neighborhoods. **Policy 16.** The City of Paramount will continue to maintain, and where possible, expand its open space resources. **Policy 17.** The City of Paramount will develop new open space areas in utility rights-of-way, along the Los Angeles River, and as part of future park development.
Resource Management Element	**Policy 5**. The City of Paramount will pursue a landscape program to improve the open space areas located next to the Los Angeles River. **Policy 6.** The City of Paramount will require special design and landscaping treatments along major roadways and other scenic corridors.
Economic Development Element	**Policy 13.** The City of Paramount will promote quality design as a means to ensure compatibility among commercial, industrial, and residential uses.
City of South Gate General Plan	
Community Design Element	**Goal CD 1:** An enhanced image and identity within the region • **Objective CD 1.2:** Pursue new uses and projects that make South Gate a great place to live, work, socialize and do business. o **P.1** The City will continue to actively pursue projects and activities that promote the image and identity of South Gate. These projects include, but are not limited to the revitalization of the Los Angeles River and Rio Hondo Channel. • **Objective CD 2.5:** Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations. o **P.4** Public buildings and sites will be designed to be compatible in scale, mass, and character with the vision for the specific Neighborhood, District, or Corridor. • **Objective CD 4.5:** Locate services and amenities within walking distance of neighborhoods. • **Objective CD 5.4:** Maintain and enhance the pedestrian-oriented character of the area. o **P.7** New benches, bollards, street lights and signage that reflect the desired unique character of the corridor should be installed. • **Objective CD 6.2:** Design landscaping, buildings, and sites to enhance the pedestrian environment and enhance the urban character of the City's Districts. o **P.1** New development in Districts will be designed and developed to achieve a high level of quality and distinctive character and architecture. • **Objective CD 7.2:** Design landscaping, buildings, and sites to enhance the pedestrian environment. o **P.1** Signage will be designed to consider the scale and materials of adjacent buildings, the desired character of each Corridor and pedestrian orientation. **Goal CD 8:** An improved visual appearance throughout the City • **Objective CD 8.1:** Ensure high quality architecture and urban design throughout the City.

Plan/Element	Goals, Policies, or Objectives
	○ **P.1** The City will encourage innovative and quality architecture in the City with all new public and private projects. ○ **P.2** New buildings will be constructed to create attractive, pedestrian-friendly places. ○ **P.5** The visual appearance of the City should be improved through programs and projects such as a "branding" program, citywide directional signage, and uniform streetscape characteristics. • **Objective CD 8.3:** Improve the visual quality of Corridors and Districts. ○ **P.3** Public art and other design features should be used to enliven the public realm. ○ **P.5** Citywide graphics and signage standards for street signs and other uses will be created that help provide a better sense of municipal boundaries. **South Gate Triangle District Plan** • **P.3** The confluence of the Los Angeles River and the Rio Hondo should be developed with an iconic building with dramatic architecture and/or a major destination that includes a highly visible use, such as a park, hotel, or sports/entertainment complex that will increase the visibility of South Gate to travelers on I-710 and will serve as a gateway to the City. • **P.4** As part of improvements to the Los Angeles River and Rio Hondo Channel, the City should improve public access to the riverfront and ensure that new developments contribute to the enhanced riverfront experience. **Tweedy Educational District Plan** • **P.4** The redevelopment of the District should provide direct and safe public access to the Los Angeles River through the site. **Rayo Industrial District Plan** • **P.4** New uses adjacent to the Los Angeles River should be designed and located to capitalize on the proximity and access to the river. P.5 New buildings should provide enhanced public connection to the regional trail system along the Los Angeles River.

Sources: City of Cudahy 2018b, 2018c; City of Downey 2005; City of Lynwood 2003; City of Paramount 2007a, 2007b, 2007c; City of South Gate 2009.

Frame 4

City of Bell

City of Bell 2030 General Plan

The *City of Bell 2030 General Plan* (City of Bell 2018) functions as a framework to guide the city's future growth and development plans. Applicable goals and policies related to aesthetics related to aesthetics are contained in the Land Use and Sustainability Element, as listed in Table 3.1-5.

Bell Municipal Code

The Bell Municipal Code (City of Bell 2020) has adopted the California Building Code, California Residential Code, CALGreen Code, and CEC, which guide illuminance limits with the city. Chapter 17 of the Bell Municipal Code describes development standards for each zoning district. Development standards include regulations on lots, yards, setbacks, landscaping, and building height. The purpose

of these regulations is to classify, designate, regulate, and restrict the use of buildings, land, and structures, with the aim of preserving a wholesome, serviceable, and attractive community.

Outdoor Lighting

Chapter 17 of the Bell Municipal Code designates additional lighting restrictions for residential zones, requiring that exterior lighting on a residential lot be arranged so as to reflect the light away from any other property.

Landscaping

Design requirements for landscaping and irrigation systems are contained in Chapter 17.88 of the Bell Municipal Code. Requirements are primarily focused on water conservation.

Development Plan Requirements

A development plan is required to be submitted with all applications for a conditional use permit or variance. This plan must include a schematic landscaping plan indicating the type and size of plant material to be used, and method of providing permanent maintenance to all planted areas and open space. Additionally, development plans submitted with an application for a conditional use permit or variance must adhere to the following design criteria: the overall plan must achieve and integrate land and building relationship; particular attention must be given to the retention of natural landscape features of the site; and architectural unity and environmental harmony within the development and within the surrounding properties must be attained.

City of Bell Gardens

City of Bell Gardens General Plan 2010

The *City of Bell Gardens General Plan 2010* is a comprehensive, long-range plan meant to guide the city. The *City of Bell Gardens General Plan 2010* does not contain specific policies or objectives relevant to aesthetics, as shown in Table 3.1-5.

Bell Gardens Municipal Code

Chapter 9 of the Bell Gardens Municipal Code (City of Bell Gardens 2020) intends to encourage, designate, regulate, restrict, and segregate the highest and best location and use of buildings, structures, and land with the aim of preserving a wholesome, serviceable, and attractive community.

Lighting

The Bell Gardens Municipal Code adopts the California Building Code, as amended by Title 26 of the Los Angeles County Building Code, which guides illuminance limits with the City of Bell Gardens.

Land Use Zones and Standards

Sections 9.06 through 9.18 establish land use zones and provide development standards for each zone including setback, building height, and lot coverage restrictions.

Supplemental Development Standards

Sections 9.22 through 9.48 contain supplemental development standards intended to provide clarification and amplification of the provisions and standards governing development in each zone. These standards govern building mass, fences, walls, hedges, landscaping, parking, signs, and yards.

City of Commerce

City of Commerce 2020 General Plan

The *City of Commerce 2020 General Plan* is meant to serve as the blueprint for future planning and development in the city. Applicable goals and policies related to aesthetics are contained in the Resource Management Element as listed in Table 3.1-5.

Commerce Municipal Code

Light and Glare

Chapter 19.19 of the Commerce Municipal Code (City of Commerce 2019) addresses light and glare. This section contains standards pertaining to lighting at entryways, along walkways, between buildings, and within parking areas. Chapter 19.19 notes that the candle power of all lights must be the minimum needed to accomplish the purpose of the light and all lights must be directed, oriented, and shielded to prevent light from shining onto adjacent properties, onto public ROWs, and into driveway areas in a manner that would obstruct drivers' vision.

Landscaping Standards

Chapter 19.23 of the Commerce Municipal Code contains landscaping standards that regulate the location, extent, and maintenance of landscaping in all zones. The landscaping standards include regulations regarding trees, shrubs, ground cover, walls, screening, and buffers. In addition, Chapter 19.24 includes water-efficient landscaping regulations.

City of Huntington Park

City of Huntington Park 2030 General Plan

In 2017, a focused general plan update for the City of Huntington Park was underway. The *City of Huntington Park 2030 General Plan* is meant to serve as a long-range comprehensive plan to regulate land uses and development in the city for the next 10 to 20 years. Applicable goals and policies related to aesthetics are contained in the Land Use and Community Development Element and Resource Management Element as listed in Table 3.1-5.

Huntington Park Municipal Code

Article 4 of the Huntington Park Municipal Code (City of Huntington Park 2020) describes landscaping standards for the City of Huntington Park. The purpose of the standards is to enhance the appearance of all development; protect public health, safety, and welfare; and decrease the use of water for landscaping purposes. The standards include requirements for trees and shrubs, landscaping plans, and irrigation.

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan* is intended to guide and influence long-term planning and development in the city. Applicable goals and policies related to aesthetics are contained in the Circulation, Conservation, Land Use, and Open Space Element Elements as listed in Table 3.1-5.

Maywood Municipal Code

The City of Maywood has adopted the California Building Code, CALGreen Code, and CEC, which guide illuminance limits with the city.

Landscaping Requirements

Chapter 8 of the Maywood Municipal Code (City of Maywood 2019) describes water-efficient landscaping requirements, the purpose of which is to promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible and to establish plans for designing, installing, and maintaining water-efficient landscapes in new projects.

City of Vernon

City of Vernon General Plan

The *City of Vernon General Plan* is intended to serve as a guide for the future of the city. Applicable goals and policies related to aesthetics are contained in the Resources Element as listed in Table 3.1-5.

City of Vernon Municipal Code

The City of Vernon has adopted the California Building Code, CALGreen Code, and CEC, which guide illuminance limits with the city.

Development and Performance Standards

Chapter 26 of the Vernon Municipal Code (City of Vernon 2020) describes development and performance standards for each land use designation. These standards include items such as building intensity, setbacks, and barrier requirements. Additionally, Chapter 26 designates that 5 percent of a parcel or lot must be dedicated to irrigated landscaping in the C-1 and C-2 Overlay Zones.

Unincorporated County

Applicable regulations for unincorporated County areas are described above.

Table 3.1-5. Local Plans: Applicable Goals, Policies, and Objectives of General Plans Related to Aesthetics within Frame 4

Plan/Element	Goals, Policies, or Objectives
City of Bell General Plan	
Land Use and Sustainability Element	**Land Use and Sustainability Element Policy 5.** The City of Bell shall encourage a high level of quality in construction and site design features. The City shall create and implement specific design guidelines to promote higher quality in construction.
City of Bell Gardens General Plan	
The *City of Bell Gardens General Plan 2010* does not contain specific policies or objectives relevant to aesthetics.	
City of Commerce General Plan	
Resource Management Element	**Policy 5.3.** The city of Commerce will continue to upgrade existing facilities to improve park appearance and utility.
City of Huntington Park General Plan	
Land Use and Community Development Element	**Policy 14.** The City of Huntington Park shall oversee the preparation of urban design guidelines that, together with the City's Zoning Ordinance, will serve as a guide for new development and rehabilitation. **Policy 15.** The City of Huntington Park shall establish a consistent design vocabulary for all public signage, including fixture type, lettering, colors, symbols, and logos.
Resource Management Element	**Policy 15.** The City of Huntington Park shall encourage the use of California native vegetation in the landscaping of larger developments. **Policy 16.** The City of Huntington Park shall strive to maintain parkway landscaping throughout the City. **Policy 18.** The City of Huntington Park shall upgrade existing park facilities to improve park use and appearance and shall utilize opportunities for joint use of public facilities for recreational purposes, such as schools, utility easements, and abandoned railroad rights-of-ways.
City of Maywood General Plan	
Circulation Element	**Policy 4.3.** Support efforts to link the bicycle path system to the Los Angeles River Bicycle Trail. Coordinate with organizations such as Northeast Trees to create regional bicycle path system.
Conservation Element	**Policy 1.1.** Require landscaping and vegetative cover for its own value and for its value as wildlife habitat. **<u>Land Use Element</u>** **Policy 7.2.** Promote housing and neighborhood beautification efforts. The City of Maywood General Plan Land Use Element is not available for review. **Policy 7.3.** Direct efforts at maintaining and upgrading commercial and industrial areas of the community which have experienced disinvestment. **Policy 7.5.** Establish attractive, identifiable City gateways. **Policy 9.1.** Protect, maintain, and upgrade existing parks and recreation facilities, eliminating evidence of vandalism, wear, and deterioration.

Plan/Element	Goals, Policies, or Objectives
Open Space Element	**Policy 1.2.** Improve the city image by planting and maintain street trees. **Goal 2:** Provide open space to meet the specific needs of the citizens of the City of Maywood
City of Vernon General Plan	
Resources Element	**Policy R-3.2:** Cooperate with regional efforts to upgrade the appearance and open space value of the Los Angeles River Channel.

Sources: City of Bell 2018; City of Bell Gardens 1995; City of Commerce 2008; City of Huntington Park 2017a, 2017b; City of Maywood 2008; City of Vernon 2013.

Frame 5

City of Los Angeles

The Citywide General Plan Framework, an Element of the City of Los Angeles General Plan

The Citywide General Plan Framework, an Element of the City of Los Angeles General Plan (Framework Element) (City of Los Angeles 1995) provides direction regarding the City of Los Angeles's vision for future development in the project vicinity and includes an Urban Form and Neighborhood Design chapter to guide the design of future development. Although the Framework Element does not directly address the design of individual neighborhoods or communities, it embodies general neighborhood design policies and implementation programs that guide local planning efforts.

The Urban Form and Neighborhood Design Chapter of the Framework Element establishes a goal of creating a livable city for existing and future residents with interconnected, diverse neighborhoods. "Urban form" refers to the general pattern of building heights and development intensity and the structural elements that define the city physically, such as natural features, transportation corridors, activity centers, and focal elements. "Neighborhood design" refers to the physical character of neighborhoods and communities within the city.

The Open Space and Conservation Chapter of the Framework Element calls for the use of open space to enhance community and neighborhood character. The policies of this chapter recognize that there are communities where open space and recreational resources are currently in short supply and therefore suggests that pedestrian-oriented streets might serve as important resources for serving the open space and recreational needs of residents. Goals and polices within the Framework Element related to aesthetics are listed in Table 3.1-6.

Conservation Element of the City of Los Angeles General Plan

The *Conservation Element of the City of Los Angeles General Plan*, adopted in September 2001, establishes objectives and policies for the protection of natural and scenic vistas as aesthetic resources.

Land Use Element

The City of Los Angeles maintains 35 community plans, one for each of its community plan areas. The community plans establish neighborhood-specific goals and implementation strategies to achieve the broad objectives laid out in the *City of Los Angeles General Plan*. Together, the 35 community plans compose the *City of Los Angeles General Plan* Land Use Element. Many of the local community plans contain goals and policies to address scenic resources in the City of Los Angeles

area. Goals and polices within the community plans related to aesthetics are listed in Table 3.1-6. The following community plans are applicable to the *2020 LA River Master Plan*:

- Canoga Park-Winnetka-Woodland Hills-West Hills
- Reseda-West Van Nuys
- Encino-Tarzana
- Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass
- Van Nuys - North Sherman Oaks
- North Hollywood - Valley Village
- Hollywood
- Silver Lake - Echo Park - Elysian Valley
- Northeast Los Angeles
- Central City
- Central City North
- Boyle Heights
- Southeast Los Angeles
- Wilmington – Harbor City

It should be noted that there are numerous policies and objectives in these plans that relate to parks, recreation, open space, and land use. These policies and objectives are listed in the individual resource chapters of this PEIR. Only policies relevant to design and aesthetics are included in this section. It should also be noted that several of the community plans are currently undergoing updates and only the policies and objectives listed in the published, publicly available documents are listed.

Table 3.1-6. Local Plans: Applicable Goals, Policies, and Objectives of the City of Los Angeles General Plan Related to Aesthetics within Frame 5

Element	Goal, Policy, or Objective
General Plan Framework Element	• **Objective 5.5:** Enhance the livability of all neighborhoods by upgrading the quality of development and improving the quality of the public realm. • **Objective 5.8:** Reinforce or encourage the establishment of a strong pedestrian orientation in designated neighborhood districts, community centers, and pedestrian-oriented subareas within regional centers, so that these districts and centers can serve as a focus of activity for the surrounding community and a focus for investment in the community. • **Policy 5.8.4:** Encourage that signage be designed to be integrated with the architectural character of the buildings and convey a visually attractive character. • **Objective 5.9:** Encourage proper design and effective use of the built environment to help increase personal safety at all times of the day.

Element	Goal, Policy, or Objective
	• **Policy 5.9.1:** Facilitate observation and natural surveillance through improved development standards which provide for common areas, adequate lighting, clear definition of outdoor spaces, attractive fencing, use of landscaping as a natural barrier, secure storage areas, good visual connections between residential, commercial, or public environments and grouping activity functions such as child care or recreation areas.
Conservation Element	• **Objective:** Protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations. • **Policy:** Continue to encourage and/or require property owners to develop their properties in a manner that will, to the greatest extent practical, retain significant existing land forms (e.g., ridge lines, bluffs, unique geologic features) and unique scenic features (historic, ocean, mountains, unique natural features) and/or make possible public view or other access to unique features or scenic views.
Land Use Element – Community Plans	
Canoga Park-Winnetka-Woodland Hills-West Hills (Adopted 1999. It is anticipated that the City of Los Angeles will begin a plan update process in 2021)	*Multiple Family Residential* The design of all buildings shall be of a quality and character that improves community appearance by avoiding excessive variety and monotonous repetition. This policy shall be accomplished through: • Requiring the use of articulations recesses surface perforations and porticoes to break up long, flat building facades. • Using complementary building facades. • Incorporating varying designs to provide definitions for each floor. • Integrating building fixtures, awnings, security gates, etc. into design of the building • Screening all rooftop equipment and building appurtenances from adjacent properties. • Require decorative, masonry walls to enclose trash **<u>Community Design and Landscaping Guidelines</u>** *Signage* • Establish a consistent design for all public signage, including fixture type, lettering, colors, symbols, and logos designed for specific areas or pathways. • Provide for distinctive signage which identifies principal entries to unique neighborhoods, historic structures, and public buildings and parks. • Ensure that public signage complements and does not detract from adjacent commercial and residential uses. • Provide for signage which uniquely identifies principal commercial areas. *Public Open Space and Plazas* Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following: • Consideration of the siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection. • Adjacent to pedestrian routes and other open spaces.

Element	Goal, Policy, or Objective
	• Appropriate plant and hardscape materials
Reseda – West Van Nuys	*Multiple Family Residential* The design of all buildings shall be of a quality and character that improves community appearances by avoiding excessive variety or monotonous repetition. Achievement of this can be accomplished through: • Requiring the use of articulations, recesses, surface perforations and/or porticoes to break up long, flat building facades. • Utilizing complementary building materials on building facades. • Incorporating varying design to provide definition for each floor. • Integrating building fixtures, awnings, or security gates, into the design of building(s). • Screening of all roof top equipment and building appurtenances from adjacent properties. • Requiring decorative, masonry walls to enclose trash. *Signage* • Establish a consistent design for all public signage, including fixture type, lettering, colors, symbols, and logos designed for specific areas or path-ways • Provide for distinctive signage which identifies principal entries to unique neighborhoods, historic structures, and public buildings and parks. • Ensure that public signage complements and does not detract from adjacent commercial and residential uses. • Provide for signage which uniquely identifies principal commercial areas. *Public Opens Space and Plazas* Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following: • Consideration of the siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection. • Adjacent to pedestrian routes and other open spaces. • Appropriate plant and hardscape materials
Encino-Tarzana	*Multiple Family Residential* The design of all buildings shall be of a quality and character that improves community appearance by avoiding excessive variety and monotonous repetition. This policy can be accomplished through: • Requiring the use of articulations recesses surface perforations and porticoes to break up long, flat building facades. • Utilizing of complementary building facades. • Incorporating varying designs to provide definitions for each floor. • Integrating building fixtures, awnings, security gates, etc. into design of the building. • Screening all rooftop equipment and building appurtenances from adjacent properties. • Require decorative, masonry walls to enclose trash. *Signage:*

Element	Goal, Policy, or Objective
	Establish a consistent design for all public signage, including fixture type, lettering, colors, symbols, and logos designed for specific areas or pathways. • Provide for distinctive signage which identifies principal entries to unique neighborhoods, historic structures, and public buildings and parks. • Ensure that public signage complements and does not detract from adjacent commercial and residential uses. • Provide for signage which uniquely identifies principal commercial areas. *Public Opens Space and Plazas* Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following: • Consideration of the siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection. • Adjacency to pedestrian routes and other open spaces. • Appropriate plant and hard scape materials.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass (currently being updated)	*Multiple Family Residential* The design of all buildings shall be of a quality and character that improves community appearance by avoiding excessive variety and monotonous repetition. This policy can be accomplished through: • Requiring the use of articulations recesses surface perforations and porticoes to break up long, flat building facades. • Utilizing of complementary building facades. • Incorporating varying designs to provide definitions for each floor. • Integrating building fixtures, awnings, security gates, etc. into the design of the building. • Screening all rooftop equipment and building appurtenances from adjacent properties. 6. Require decorative, masonry walls to enclose trash. *Signage:* • Establish a consistent design for all public sign age, including fixture type, lettering, colors, symbols, and logos designed for specific areas or pathways. • Provide for distinctive sign age which identifies principal entries to unique neighborhoods, historic structures, and public buildings and parks. • Ensure that public sign age complements and does not detract from adjacent commercial and residential uses. • Provide for sign age which uniquely identifies principal commercial areas. *Public Opens Space and Plazas* Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following: • Consideration of the siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection.

Element	Goal, Policy, or Objective
	• Adjacency to pedestrian routes and other open spaces. • Appropriate plant and hard scape materials.
Van Nuys - North Sherman Oaks (currently being updated)	*Multiple Family Residential* The design of all buildings shall be of a quality and character that improves community appearances by avoiding excessive variety or monotonous repetition. Achievement of this can be accomplished through: • Requiring the use or articulations, recesses, surface perforations and/or porticoes to break up long, flat building facades • Utilizing complementary building materials on building facades. • Incorporating varying design to provide definition for each floor. • Integrating building fixtures, awnings, or security gates, into the design of building(s). • Screening of all roof top equipment and building appurtenances from adjacent properties. • Requiring decorative masonry walls to enclose trash *Signage:* • Establish a consistent design for all public signage, including fixture type, lettering, colors, symbols, and logos designed for specific areas or pathways. • Provide for distinctive signage which identifies principal entries to unique neighborhoods, historic structures, and public buildings and parks. • Ensure that public signage complements and does not detract from adjacent commercial and residential uses. • Provide for signage which uniquely identifies principal commercial areas. *Public Opens Space and Plazas* • Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following: • Consideration of the siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection. • Adjacent to pedestrian routes and other open spaces. • Appropriate plant and hardscape materials.
North Hollywood - Valley Village (currently being updated)	No policies are applicable.
Hollywood (currently being updated)	No policies are applicable.
Silver Lake - Echo Park - Elysian Valley	*Public Opens Space and Plazas* Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following: • The siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection. • Adjacent to pedestrian routes and other open spaces.

Element	Goal, Policy, or Objective
	• Appropriate landscape materials.
Northeast Los Angeles	*Public Open Space, Greenways, and Plazas* Public open space standards should be established to guide the design of new public plazas, greenways, and open spaces to enhance their attractiveness and function. Priority should be given to the siting of public open space and greenways to maximize pedestrian accessibility and circulation, as well as personal safety. Siting should, therefore, include consideration of exposure to the elements, as well as adjacency to logical and established pedestrian routes and other open spaces. Consideration should be given to durability and maintenance requirements in the selection of plant and hardscape materials. *Multiple Family Building Design* The design of all buildings shall be of a quality and character that improves community appearance, avoiding both the extremes of excessive variety and monotonous repetition by: • Including articulation, recessing, surface perforations, and porticoes to break up long, flat, building facades. • Utilizing complementary building materials in building facades. • Incorporating design variation to define different levels. • Integrating building fixtures, such as awnings and security gates, into the design of buildings. • Screening all rooftop equipment and building appurtenances from adjacent properties. • Screening and enclosing trash containers completely.
Central City	*Pedestrian Linkages* *Objectives* • To provide an extensive, well-formed and well-maintained pedestrian network. • To link transit and pedestrian districts of historic Downtown Los Angeles. *Policies* • Create an extensive pedestrian network that helps merge the transportation and open space elements of the City. • Implementation of Angels Walk as it relates to the Central City Community Pan.
Central City North	*Multiple Family* The design of all buildings shall be of a quality and character that improves community appearance by avoiding excessive variety and monotonous repetition. Achievement of this can be accomplished through: a. Requiring the use of articulation, recess, or perforations of surfaces to break up long, flat building facades; b. Utilizing of complementary building materials in building facades; c. Integrating building fixtures, awnings, security gates, etc. into the design of a building; d. Screening all rooftop equipment and building appurtenances from adjacent properties. *Signage*

Element	Goal, Policy, or Objective
	• Establish a consistent design for all public signage, including fixture type, lettering, colors, symbols, and logos designed for specific areas or pathways. • Provide for distinctive signage which identifies principal entries to unique neighborhoods, historic structures and districts, and public buildings and parks. • Ensure that public signage complements, and does not detract from adjacent commercial and residential uses and that it enhances designated historic sites and districts. • Provide for signage which uniquely identifies the principal commercial areas of the plan area including but not limited to Chinatown. *Public Open Space and Plazas* • Establish public open space standards that will guide the design of new public plazas and open spaces; including the consideration of the siting of open space (to maximize pedestrian accessibility and circulation, solar exposure or protection), adjacency to pedestrian routes and other open spaces, and appropriate plant and hardscape materials
Boyle Heights (Adopted in 1998. A community plan update is in process)	No policies are applicable.
Southeast Los Angeles (updated 2017)	• **Policy LU3.4 Design for Safety.** Pursue urban design strategies, such as Crime Prevention Through Environmental Design (CPTED), that reduce street crime and violence without creating barriers that disconnect neighborhoods. • **Policy LU4.6 Universal Design.** New development should incorporate universal design for a range of users including the disabled. • **Policy LU1.2 Adequate Lighting and Street Maintenance.** Provide safe streets, sidewalks, routes to school, and bike facilities that serve residential neighborhoods by providing adequate lighting and well-kept paved surfaces. • **Policy LU1.3 Parks and Open Space.** Encourage the development of parks and open space as well as a network of pedestrian walkways for physical activity in all neighborhoods. • **Policy CF10.1 Retain Passive Open Space.** Encourage the retention of passive and visual open space resources which provide a balance to the urban development of the Plan Area. • **Policy CF10.2 Co-Location of Public Facilities and Open Space.** Integrate the use of open space with public facilities, such as flood control channels, utility easements and Department of Water and Power properties. • **Policy: CF12.2 River Walk.** Encourage the development of a vibrant "river walk" along the Compton Creek channel parallel to Central Avenue that provides a natural environment integrated with active commercial uses such as shops and restaurants and establishes a connection to the Los Angeles River. • **Policy: CF12.1 Street Tree Canopy.** Identify protecting and developing tree cover as a priority and encourage setting a target for

Element	Goal, Policy, or Objective
	street tree canopy cover in new development projects and/or in areas identified as tree-deficient. • **Policy LU19.3 Design Quality.** Enhance the design, architectural quality and livability of existing well-established neighborhoods. • **Policy: M2.1 Streetscapes.** Encourage and support streetscape improvements in neighborhood districts, commercial areas and transit-oriented development areas that foster the appeal of the street as a gathering place including street furniture, well-maintained street trees, publicly accessible courtyards, wide sidewalks, bicycle access and appropriate traffic control measures to reduce travel speeds. • **Policy M3.3 Pedestrian Amenities.** Maintain sidewalks, streets and rights-of-way in good condition, free of obstructions, and with adequate lighting, trees and parkways. Streets should accommodate pedestrians comfortably through adequate sidewalks and parkway landscaping that provides shade, and street lighting that provides for safety during the night. • **Policy M4.3 Bicycle Amenities.** Incorporate bicycle amenities, such as parking, lockers, changing rooms and showers, in public facilities, parks, commercial development, employment and transit centers and park-and-ride facilities, • **Policy CF8.2 Adequate Illumination and Security.** Parks should be adequately illuminated and secured for safe use in the evenings.
Wilmington – Harbor City (Adopted in 1999. A community plan update is in process). Note this community plan lies geographically in Frame 1	*Multiple Family* The design of all buildings shall be of a quality and character that improves community appearances by avoiding excessive variety or monotonous repetition. Achievement of this can be accomplished through: • Requiring the use of articulations, recesses, surface perforations and/or porticoes to break up long, flat building facades. • Complementary building materials on building facades. • Incorporating varying design to provide definition for each floor. • Integrating building fixtures, awnings, or security gates, into the design of building(s). • Screening of all roof top equipment and building appurtenances from adjacent properties. • Requiring decorative, masonry walls to enclose trash. *Signage* • Establish a consistent design for all public signage, including fixture type, lettering, colors, symbols, and logos designed for specific areas or path-ways. • Provide for distinctive signage which identifies principal entries to unique neighborhoods, historic structures, and public buildings and parks. • Ensure that public signage complements and does not detract from adjacent commercial and residential uses. • Provide for signage which uniquely identifies principal commercial areas. *Public Open Space and Plazas* Establish public open space standards that will guide the design of new public plazas and open spaces. These standards should include the following:

Element	Goal, Policy, or Objective
	• Consideration of the siting of open space to maximize pedestrian accessibility and circulation. • Solar exposure or protection. • Adjacent to pedestrian routes and other open spaces. • Appropriate plant and hardscape materials.

Sources: City of Los Angeles 1995, 1996, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 1999d, 2000, 2001, 2003, 2004, 2014, 2017.

Los Angeles Citywide Design Guidelines

The *Citywide Design Guidelines* (City of Los Angeles 2019) serve to implement the Framework Element's urban design principles and are intended to be used by City of Los Angeles Planning Department staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the Framework Element and community plans. By offering more direction for proceeding with the design of a project, the *Citywide Design Guidelines* illustrate options, solutions, and techniques to achieve the goal of excellence in new design.

The *Citywide Design Guidelines*, which were adopted by the City of Los Angeles Planning Commission in August 2019, establish ten guidelines to carry out the common design objectives that maintain neighborhood form and character while promoting quality design and creative infill development solutions. Both as an organizational tool and as a means of communicating critical topics that are of specific value to the City of Los Angeles, the guidelines are organized around one of three design approaches: Pedestrian-First Design, 360 Degree Design, and Climate-Adapted Design.

The *Citywide Design Guidelines* apply to all new development and substantial building alterations that seek a discretionary action for which the Los Angeles Department of City Planning has design authority. The guidelines apply to all areas but are particularly applicable to those areas within the City of Los Angeles that do not have adopted design guidelines. In cases where the *Citywide Design Guidelines* conflict with a provision in a community plan's Urban Design chapter, specific plan, overlays, or other local design guidelines, the community-specific requirement prevails. The document includes the following guidelines:

- Guideline 1: Promote a safe, comfortable and accessible pedestrian experience for all.
- Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.
- Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.
- Guideline 4: Organize and shape projects to recognize and respect surrounding context.
- Guideline 5: Express a clear and coherent architectural idea.
- Guideline 6: Provide amenities that support community building and provide an inviting, comfortable user experience.
- Guideline 7: Carefully arrange design elements and uses to protect site users.
- Guideline 8: Protect the site's natural resources and features.
- Guideline 9: Configure the site layout, building massing and orientation to lower energy demand and increase the comfort and well-being of users.
- Guideline 10: Enhance green features to increase opportunities to capture stormwater and promote habitat.

The City of Los Angeles Walkability Checklist

The City of Los Angeles's *Walkability Checklist Guidance for Entitlement Review* (Walkability Checklist) (City of Los Angeles 2008) is part of a proactive implementation program for the urban design principles contained in the Urban Form and Neighborhood Design Chapter of the Framework Element. City of Los Angeles Planning Department staff uses the Walkability Checklist in evaluating a project's entitlement applications and making findings of conformance with the policies and objectives of the general plan and the local community plan. The Walkability Checklist is also intended to be used by architects, engineers, and community members to create enhanced pedestrian movement, access, comfort, and safety, thereby contributing to improving the walkability of the City of Los Angeles.

The LA River Improvement Overlay (RIO)

The LA River Improvement Overlay (RIO) was developed out of the *1996 Los Angeles River Revitalization Master Plan* (City of Los Angeles 2007). It is a 32-mile zoning overlay that establishes an area in which new projects must comply with certain design standards related to three categories: watershed, urban design, and mobility. The RIO is intended to help the City of Los Angeles coordinate land use development along the river, enhance the unique qualities of the river, and better serve adjacent communities within the city's boundaries. Effectuated by Ordinance Nos. 183,144 and 183,145 in August 2014, the RIO District enables the City of Los Angeles to better coordinate land use development along the 32-mile corridor of the LA River that flows within the city's boundaries.

The RIO includes compulsory standards set forth for all development projects in the zone (established by ordinance in Los Angeles Municipal Code Section 13.17). In addition, the City of Los Angeles developed a preliminary set of LA River design guidelines to encourage best practice in design of projects for this zone. The LA River Design Guidebook (described below) incorporates and expands upon these preliminary guidelines for the LA River-adjacent areas of communities of Boyle Heights, the Arts District, Lincoln Heights, and Chinatown East.

The RIO Ordinance establishes the following standards for exterior site lighting.

1. All site and building-mounted lighting shall be designed such that it produces a maximum initial luminance value no greater than 0.20 horizontal and vertical foot candles at the site boundary, and no greater than 0.01 horizontal foot candles 15 feet beyond the site. No more than 5.0 percent of the total initial designed lumens shall be emitted at an angle of 90 degrees or higher from nadir (straight down).
2. All low pressure sodium, high pressure sodium, metal halide, fluorescent, quartz, incandescent greater than 60 watts, mercury vapor, and halogen fixtures shall be fully shielded in such a manner as to not exceed the limitations discussed under Item 1.

LA River Design Guidebook

Although not formally adopted, the purpose of the *LA River Design Guidebook* (City of Los Angeles 2017) is to highlight desirable, river-sensitive design characteristics for features that will be built, rehabilitated, or redeveloped on private property and in the public realm along and near the LA River. This guidebook aspires to inform the public of the design opportunities to enhance access, develop diverse recreation opportunities, and create a distinct river identity. The *LA River Design Guidebook* provides 72 design recommendations that help advance the Mayor of Los Angeles's goals of creating livable communities and revitalization of the LA River. The *LA River Design Guidebook* specifically addresses design guidelines for the communities of Boyle Heights, the Arts District,

Lincoln Heights, and Chinatown East. The *LA River Design Guidebook* complements the *2007 Los Angeles River Revitalization Master Plan* and builds upon the LA RIO District and LA River design guidelines associated with the RIO. The guiding principles include:

- Guiding Principle 1: Collectively build an LA River district identity that reflects the creativity of LA River communities and Angelenos.
- Guiding Principle 2: Strengthen the sense of connection between communities and the LA River, even when it cannot be directly touched or seen. Strengthen visual and physical connections where possible.
- Guiding Principle 3: Preserve, reinforce and celebrate the unique character, qualities, culture and authenticity of the surrounding neighborhoods. Draw on local talent.
- Guideline Principle 4: Improve the environmental health of the LA River and surrounding communities, enhance the LA River as a riparian corridor, restore ecosystem values, and improve water stewardship.
- Guideline Principle 5: Promote human health and well-being by encouraging more native landscaping, quiet spaces, scenic views, walkable streets, and public open space.
- Guideline Principle 6: Promote equity and affordability. Engage community members so they may fully benefit from the LA River's revitalization and from any new public and private investments.

The *LA River Design Guidebook* includes design guidance that addresses landscaping, public art, pedestrian and bicycle connections, architecture, and aesthetic recommendations for all projects, private and public, along the LA River. Special emphasis is to encourage native, historically significant vegetation, and locally grown plants that provide habitat as well as educational and vocational training opportunities. Other guidance encourages the creation of increased access points and public spaces for public viewing and enjoyment of the LA River and installation of public art and amenities. The *LA River Design Guidebook* also encourages the implementation of special and consistent lighting at gateway points to the LA River, providing safety for pedestrians and vehicles, but not exceeding light levels at the LA River to avoid harm to wildlife.

Cornfield Arroyo Seco Specific Plan

In 2012, the City of Los Angeles adopted the *Cornfield Arroyo Seco Specific Plan*, a set of zoning and urban design standards governing development and redevelopment around the future Los Angeles State Historic Park (formerly known as the Cornfields) and part of Lincoln Heights around the river's confluence. The *Cornfield Arroyo Seco Specific Plan* enables diverse land uses that will better serve the region through job growth, proximity to public transportation, and increased housing and commercial space. (Los Angeles Department of City Planning 2013.)

Los Angeles Municipal Code

Lighting is regulated by various chapters within the Los Angeles Municipal Code (City of Los Angeles 2020). Applicable regulations for the project site include the following:

- Chapter 1, Article 2, Sec12.21 A 5(k). All lights used to illuminate a parking area shall be designed, located and arranged so as to reflect the light away from any streets and adjacent premises.
- Chapter 1, Article 7, Sec17.08 C. Plans for street lighting shall be submitted to and approved by the Bureau of Street Lighting for subdivision maps.

Frame 6

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above under Frame 5.

City of Glendale

City of Glendale General Plan

The *City of Glendale General Plan* is intended to serve as a guide for development in the City of Glendale. Applicable goals and policies related to aesthetics are listed in Table 3.1-7.

Table 3.1-7. Local Plans: Applicable Goals, Policies, and Objectives of the City of Glendale General Plan Related to Aesthetics within Frame 6

Element	Goals, Policies, or Objectives
Recreation Element	**Objective 5:** Provide facilities that project positive examples of concern for people and the environment using design, energy use, management and accessibility now and far into the future. • **Policy 1:** The City shall establish community identity and image through the location and design of parks and recreation centers. • **Policy 2:** The City shall integrate the construction and planting of connecting parkways and medians through consistent landscaping techniques. **Objective 10:** The City shall continue local street enhancement and beautification programs. • **Policy 4:** The City shall, where feasible, construct or refit drainage channels to maximize use of natural water flow patterns and to blend in with natural settings.
Open Space and Conservation Element	**Goal 5:** Preserve prominent ridgelines and slopes in order to protect Glendale's visual resources. • **Objective 3:** Recognize visual resources as a key element in open space acquisition programs. **Goal 7:** Continue programs which enhance community design and protect environmental resource quality. • **Objective 1:** Extend landscape treatments along major arterials, into major activity centers, at major city/neighborhood access points and along parkways and medians to provide aesthetic continuity and solidify open space linkages. • **Objective 2:** Ensure that the design of community facilities within open space areas is harmonious and integrated with the natural environment. • **Objective 4:** Provide for comprehensive, non-obtrusive signage which identifies and links roads, bikeways, trails and parks, vista points, recreational facilities, historic and cultural sites and scenic drives. • **Objective 6:** Foster design objectives which ensure development that respects the character of existing neighborhoods and the natural setting. **Implementation Programs** • Prepare landscape guidelines in order to more effectively treat manufactured slopes and provide compatible transitions to natural terrain. • Continue the architectural review of structures through the design review process. • Continue the City's Urban Forestry and Streetscape programs to visually enhance Glendale's neighborhoods and to provide linkages to open space areas.

Element	Goals, Policies, or Objectives
	• Identify important bikeways, trails, parks, vista points, recreational facilities, historic and cultural sites and scenic roadways through appropriate signage and information programs.

Sources: City of Glendale 1993, 1996.

Comprehensive Design Guidelines

Adopted in 2011, the *Comprehensive Design Guidelines* (City of Glendale 2011) guide all new development within the City of Glendale. The guidelines are separated into four categories: single-family; hillside; commercial; and multi-family and mixed-use. Urban design principles are provided for each of the four categories of development. These principles are organized as Site Planning and Design, Mass and Scale, and Design and Detailing and provide relevant direction on building location, yards/usable open spaces, access and parking, landscaping and hardscaping, walls and fences, retaining walls, screening, scale and proportion, entryways, windows, materials, wall thickness, color, awnings, roof forms, architectural concept, solar design, garage locations and driveways, equipment/trash location and enclosure, privacy, and lighting.

The guidelines do not recommend any specific architectural style or styles but encourage a diversity of styles. Similarly, the guidelines do not prescribe specific means of achieving design intent, but rather provide examples of how it might be achieved. In addition, City of Glendale staff, the Design Review Board, or the Glendale City Council may find that a project need not comply with certain guidelines due to particular site conditions or if compliance with the guidelines would restrict the achievement of innovative design or community benefit.

Glendale Urban Art Program

The *Glendale Urban Art Program Guidelines* (City of Glendale 2010) establishes the requirements and procedures for providing public art in conjunction with new developments. The goals of the Glendale Urban Art Program are as follows:

> Goals: To enhance Glendale's public spaces, architecture, and visual environment with engaging, unique, and high quality public art.
>
> 1. To celebrate and foster civic pride in Glendale's diverse history, cultural traditions, and artistic expressions.
> 2. To encourage public dialogue and education about art and the various roles of artists.
> 3. To include art and artists in the design of Glendale's public spaces and environments.
> 4. To encourage collaboration between the community, artists, architects, and landscape architects in Glendale.
> 5. To provide opportunities for artists to advance their art forms.
> 6. To develop a collection of artworks with strong inherent aesthetic qualities.
> 7. To promote Glendale's tourist and economic potential as an arts destination.

Glendale Municipal Code

Glendale Municipal Code Chapter 30.33 (City of Glendale 2019) regulates the construction, alteration, repair, location, electrification, and maintenance of any sign or sign structure within Glendale (Ordinance No. 5399, Signs). Standards regulate sign size, height, quantity, materials,

surface, support structures, spacing, and lighting for the different types of signs defined in the ordinance.

Frame 7

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above under Frame 5.

City of Burbank

City of Burbank General Plan

The *Burbank2035 General Plan* (City of Burbank 2013) is intended to serve as a guide to city decision-makers on allocating resources and determining the future physical form and character of development in the City of Burbank. The *Burbank2035 General Plan* addresses aesthetics in the Land Use Element (Chapter 3) and Open Space and Conservation Element (Chapter 6). Applicable goals and policies related to aesthetics are listed in Table 3.1-8.

Table 3.1-8. Local Plans: Applicable Goals, Policies, and Objectives of the City of Burbank General Plan Related to Aesthetics within Frame 7

Element	Goals, Policies, or Objectives
Land Use Element	**Policy 3.2** Preserve unique neighborhoods and use specific plans to distinguish neighborhoods and districts by character and appearance and address physical and visual distinction, architecture, edge and entry treatment, landscape, streetscape, and other elements. **Policy 3.5** Ensure that architecture and site design are high quality, creative, complementary to Burbank's character, and compatible with surrounding development and public spaces **Policy 3.6** Carefully regulate signs to ensure that their size and location are attractive, are appropriate for the site, and appropriately balance visibility needs with community character and aesthetics. **Policy 3.11** Carefully consider the evolution of community character over time. Evaluate projects with regard to their impact on historic character, their role in shaping the desired future community character, and how future generations will view today's Burbank. **Policy 4.3** Use street trees, landscaping, street furniture, public art, and other aesthetic elements to enhance the appearance and identity of neighborhoods and public spaces. **Policy 4.4** Require public art as part of new development projects and public infrastructure. Incorporate public art within existing projects. **Policy 4.5** Require that pedestrian-oriented areas include amenities such as sidewalks of adequate width, benches, street trees and landscaping, decorative paving, public art, kiosks, and restrooms. **Policy 4.7** Encourage artists, craftspeople, architects, and landscape architects to play key roles in designing and improving public spaces. **Policy 4.11** Ensure that public infrastructure meets high-quality urban design and architecture standards. Remove, relocate, or improve the appearance of existing infrastructure elements that are unsightly or visually disruptive.

Element	Goals, Policies, or Objectives
	Policy 14.2 Minimize the presence of structures and other amenities in the Open Space land use designation. Structures shall be designed to complement the primary open space function of the land. **Policy 14.3** Design expansions or enhancements to existing park facilities to minimize effects on the surrounding neighborhood.
Open Space and Conservation Element	**Policy 3.3** Develop a clear and unified system of identification and directional signs for all park and recreation facilities. **Policy 7.3** Recognize visual resources as a key element in open space acquisition programs. **Policy 7.4** Balance both public good and private property rights when considering the restoration of viewsheds.

Sources: City of Burbank 2013a, 2013b.

Burbank Municipal Code

Article 10 (Sign and Advertising Structure Regulations)

The Burbank Municipal Code (City of Burbank 2020), by adopting the 2016 California Building Code and the CEC, implicitly includes the same limits to light trespass illuminance as the State of California regulations. The City of Burbank specifically regulates project site lighting, providing minimum quantitative standards of illumination for certain land uses, and qualitative guidance to limit light trespass and glare from that lighting. The City of Burbank also regulates signs that could be of the most concern with respect to creating glare or causing adverse visual effects for residents or drivers, by prohibiting:

A. Self-Illuminating and Electronic Signs. This includes signs, or portions thereof, where any light source, including but not limited to incandescent bulbs, neon tubes, or light emitting diodes constitute the sign text, image, and/or border. This type of sign includes, but is not limited to electronic message boards; television screens; plasma screens; digital screens; flat screens; light emitting diode screens; video boards; other types of electric and electronic display boards and screens; and holographic displays.

B. Projected Signs. This includes signs that are formed by projecting the sign copy, image, text, and/or message into the sky or onto a surface, including but not limited to the ground or the side of a building

C. Animated Signs. This includes signs, or portions thereof, that blink, flash, or emit a varying intensity of color or light

D. Moving, Revolving of Rotating Signs. This includes signs, or portions thereof, having visible moving, revolving, or rotating parts, or visible movement of any kind, or giving the illusion of movement

The City of Burbank provides qualitative guidance but does not specifically regulate the contribution that project sign lighting may make to light trespass. However, the potential for light trespass and glare into residential areas is limited by Section 10-1-1010: Sign Locations and Standards.

Unincorporated County

Applicable regulations for unincorporated County areas are described above.

Frame 8

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above under Frame 5.

Frame 9

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above under Frame 5.

3.1.3 Impact Analysis

3.1.3.1 Methods

This analysis qualitatively evaluates the impacts of the proposed Project on existing aesthetic resources as a result of the construction and operations of the proposed Project. The analysis determines if there is the potential for impacts on existing resources in the 18 jurisdictions in the study area during construction and operation. Data from jurisdictions' respective general plans, design guidelines, and municipal codes, as well as site visits to the LA River in March 2020, were used to evaluate impacts on scenic vistas and resources, visual quality, and light and glare. Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories, and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately.

3.1.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.1(a) Have a substantial adverse effect on a scenic vista.

3.1(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

3.1(c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.

3.1(d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

3.1.3.3 Impacts and Mitigation Measures

Impact 3.1(a): Would the proposed Project have a substantial adverse effect on a scenic vista?

Typical Projects

Common Elements

Construction

A scenic vista can be described as a designated expansive view of a highly valued landscape for the benefit of the public. Public vantage points, such as roads and trails, allow scenic views to be seen by many people. The type and quality of scenic vistas along and adjacent to the LA River vary by frame. Frame 1 includes expansive views of coastal areas and has Ocean Boulevard as a locally designated scenic route. Undeveloped hillsides, ridgelines that are primarily located in Frames 5, 6, and 7 offer panoramic scenic views, open space areas, and parks located throughout all the frames provide a scenic backdrop to the urban environment of the LA River. Notable open space areas include Elysian Park in Frame 6, Griffith Park in Frames 6 and 7, and the Sepulveda Basin in Frame 9. I-110 is designated as a State Scenic Highway, National Civil Engineering Landmark, and National Scenic Byway and is listed in the National Register of Historic Places. A portion of I-110 crosses over the LA River near Griffith Park and the Arroyo Seco Confluence near the border of Frames 5 and 6. Because specific locations of the Common Elements Typical Project have not been established at this point, the discussion remains at a qualitative level.

A substantial adverse effect on scenic vistas can occur when the visible scenic landscape itself is altered or when a new contrasting object is introduced that blocks or obstructs a scenic vista from a particular public vantage point. Construction of the Common Elements Typical Project would occur along the ROW between the top of levee and fenceline, and include an area of approximately 3 acres or up to 1 mile long; would last about 10 months; and would occur over six phases to minimize disruption to existing operations and the community. Construction activities would typically involve site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures, and other activities that generally contrast with the aesthetic character of an area. Construction equipment for the Common Elements Typical Project may include excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, and small cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise ordinances. No construction activities would occur outside of permitted hours. Staging areas for construction equipment would be located primarily in the ROW, which includes the river channel.

From certain angles and distances, construction activities, materials, and staging areas may be visible in informal scenic views that depict coastal areas, undeveloped hillsides, and open space areas and park areas by the public, including motorists or transit riders on routes crossing or following the river alignment. However, these views are limited to fleeting where primary viewer groups include motorists, commuters, and passengers. For viewer groups using the existing trails and parks along the LA River, views of coastal areas and hillsides would not necessarily be limited and would be of a longer duration, and a small portion of the wide-field view could include some construction equipment and activities.

Given most of the facilities that would be constructed or installed under the Common Elements Typical Project would be low profile or small in scale (e.g., picnic tables, charging stations, vending machines, benches, water fountains, bike racks, signage), the overall short duration and phasing (10 months), and limited extent (3 acres), disruption of views would be limited during construction. Additionally, the type of construction equipment (generally low-profile mobile equipment that would be moving) and placement of staging areas in the ROW would minimize the potential for the public view of a scenic vista to be substantially blocked or obstructed during construction. Any potential views of construction activities would be temporary, as construction equipment and materials would be installed at the beginning of each of the six phases of the construction period and removed upon completion of the project phase. Although the views of construction activities would be temporary, the location, design details, and specific construction phasing of the Common Elements Typical Project is not known; therefore, it is possible that construction activities, particularly those associated with the larger-scale amenities such as the Tier III Pavilions that could include a café, indoor showers, lockers, a public safety station, multi-purpose rooms, community kitchens, and management offices, could obstruct views of scenic resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

For construction of a project component lasting longer than 30 days, the implementing agency will require contractors to 1) install solid green or blue fabric perimeter fencing of a minimum height of 6 feet around construction areas to screen and provide security to pedestrians and other trail and park users and reduce views of construction staging areas, grading, and site disturbance, and 2) to conduct regular visual inspections of fencing to ensure fencing is in good working order and any visual breaks are repaired.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once constructed, the Common Elements Typical Project could be up to 3 acres in size or 1 mile long and could attract up to 500 visitors. The Common Elements Typical Project would be located along the ROW between the top of levee and fenceline and include facilities such as one-story-tall

pavilions, cafés, benches, hygiene facilities, restrooms, trash and recycling, drinking fountains, guard rails, gates, bike racks, signage, emergency call boxes, lighting, planting, fences and gates, stormwater best management practices, and art/performance space.

The *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) were developed as a framework to support the specific design and technical solutions for projects to be implemented under the proposed Project. The Design Guidelines are intended to provide flexibility for site-specific needs while reflecting neighboring communities' cultural identities and the diverse and shared identities of Los Angeles County. Projects constructed within the ROW are encouraged but not required to follow these Design Guidelines.

Adverse effects on scenic vistas from the larger-scale and taller elements of the 17 individual elements such as the Tier III pavilions could result if visual elements associated with the structures and related features such as cafés, multi-purpose rooms, management offices, and programming spaces are introduced and are located in a manner that may obstruct a scenic vista from existing public views. However, scenic views within the LA River are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. Where limited scenic vistas are available, views are of larger scenic visual elements and/or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encapsulate a large viewscape. Once constructed, the Common Elements Typical Project would include distinct structures that would only affect a small portion of the viewshed and would not result in substantial adverse effects on scenic vistas. Additionally, once constructed, the Common Elements Typical Project would likely contribute to enhanced viewing opportunities (e.g., shade pavilions, cafés, benches) for users to experience the vistas. Therefore, it is not anticipated that the Common Elements Typical Project would substantially block or obstruct scenic vistas such as views of the ocean, ridgelines, and open space areas.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to that of the Common Elements Typical Project above; however, it would last up to 20 months and could include construction of multi-use trails such as pedestrian, bike, and equestrian. Although this Typical Project would disturb a larger area (i.e., be up to 5 miles long) and involve more extensive construction equipment use (such as hydraulic impact hammers, forklifts, and truck-mounted cranes), it would not involve the construction of pavilions, cafés, or similar structures and construction would be phased to minimize disruption to existing operations and the community.

Similar to the Common Elements Typical Project, construction activities would be temporary and the placement of construction equipment and staging areas in the ROW would reduce the possibility that the view of a scenic vista is substantially blocked or obstructed. However, the location, design details, and specific construction phasing of the Multi-Use Trails and Access Gateways Typical Project is not known; therefore, it is possible that construction activities could obstruct views of scenic resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The Design Guidelines were developed as a framework to support the specific design and technical solutions for projects to be implemented under the proposed Project. Although not mandatory, the Design Guidelines are intended to provide flexibility for site-specific needs while reflecting neighboring communities' cultural identities and the diverse and shared identities of Los Angeles County. Projects constructed outside the ROW are encouraged but not required to follow these Design Guidelines.

Multi-Use Trails and Access Gateways Typical Project Design Guidelines would include a continuous path for multiple uses such as bike trails, equestrian trails with vegetated buffers, and easy-to-find and welcoming access gateways. In addition, scenic views within the LA River are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. Where limited scenic vistas are available, views are of larger scenic visual elements and/or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encapsulate a large viewscape. Once constructed, the Multi-Use Trails and Access Gateways Typical Project would affect a small portion of the viewshed, would be at the ground level, and would not result in a substantial adverse effect on scenic vistas. Additionally, once constructed, the Multi-Use Trails and Access Gateways Typical Project would likely contribute to enhanced viewing

opportunities for users to experience the scenic vistas. Therefore, it is not anticipated that this Typical Project would substantially block or obstruct scenic vistas such as views of the ocean, ridgelines, and open space areas.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. The larger projects would involve the use of cranes and jackhammers to break concrete. Staging areas for construction equipment would be located in the ROW or on appropriate vacant areas for in-channel or off-channel projects. Construction activities for KOP Categories 1 through 6 could include more complex amenities and thus generally require a longer duration of construction activities than for the Typical Projects with additional construction equipment. As the location, design details, and construction phasing of subsequent projects under KOP Categories 1 through 6 are not known, it is possible that construction activities could obstruct views of scenic resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Categories 1, 2, and 3

Components of KOP Categories 1, 2, and 3 would provide new and enhanced access to the LA River and opportunities for recreation and community engagement. Components of KOP Category 1 would include improving trails and access points including equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor. Design components under KOP Category 2 would include channel modifications such as terraced banks, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. KOP Category 3 design components could include bridges (pedestrian, bike, equestrian, habitat/wildlife, and multi-use), cantilevers, and platforms. While many of these improvements under KOP Categories 1, 2, and 3 would be at ground level, some could result in the introduction of taller visual elements that could potentially obscure scenic resources.

However, scenic vistas within the LA River are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. Where scenic vistas are available, views encompass larger scenic visual elements and/or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encapsulate a large viewscape viewed from multiple vantage points. Once constructed, above-ground structures related to KOP Categories 1, 2, and 3 such as water towers, barriers, and bridges, if located in an area encompassing a scenic vista, would affect only small portion of the viewshed that would not result in substantial adverse effects on a scenic vista or obscure a panoramic view.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Categories 4 and 5

The following design components could be constructed under KOP Category 4: pumps, diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors,

and wetlands. These would include largely at-grade and underground elements. KOP Category 5 would include both ecological and recreational uses. Floodplain reclamation in the LA River would include wetlands, naturalized banks, braided channels, fields, storage, and side channels. Examples of recreational uses include boardwalk platforms and a farmers' market. Examples of ecological uses include a naturalized bank and a wider channel for decreased flood risk.

Components under KOP Categories 4 and 5 would be largely at grade and, in some cases, underground and are not anticipated to include larger, vertical, above-ground elements that could potentially obscure a scenic vista. In addition, scenic vistas within the LA River are limited in nature. Where scenic vistas are available, views encompass expansive scenic visual elements and/or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encapsulate a large viewscape seen from multiple vantage points. Once constructed, any above-ground structures related to KOP Categories 4 and 5, if located in an area encompassing a scenic vista, would affect only small portion of the viewshed that would not result in substantial adverse effects on a scenic vistas or obscure a panoramic view.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Operations impacts from KOP Category 6 would include a broad range of civic amenities, flood management, and recreational improvements such as affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. It is possible that operation of KOP Category 6 activities could block views of scenic resources if new contrasting facilities are introduced that obstruct a scenic vista from existing public views, especially where a design component could be multiple stories high or involve large massing.

Scenic vistas within the study area are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. Where scenic vistas are available, views encompass larger scenic visual elements and/or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encapsulate a large viewscape viewed from multiple vantage points. However, once constructed, above-ground structures related to KOP Category 6, if located in an area encompassing a scenic vista, could result in substantial adverse effects on a scenic vista or obscure a panoramic view. Because the size, extent, and specific location of subsequent projects under the KOP Category 6 are not yet known, it is possible that KOP Category 6 could substantially block or obstruct scenic vistas such as views of the ocean, ridgelines, and open space areas.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AES-2: Minimize Obstruction of Scenic Vistas.

During project design, the implementing agency will minimize visual intrusions from public views of designated scenic vistas by following local jurisdictions' applicable policies and ordinances that protect views of designated scenic vistas by taking into consideration sightlines, scale and massing of structures, and materials used for construction, and other measures as needed.

To the extent practicable, the implementing agency will maintain the scenic vistas' visual quality and comply with the applicable jurisdiction's general plan and design guidelines to preserve scenic vistas and minimize visual intrusions.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the proposed Project's nine objectives. These would include the Typical Projects that would be implemented in specific spacing along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large projects (150+ acres/10+ miles in size).

Construction

Construction impacts would be the same as those of the *2020 LA River Master Plan* KOP categories. Some projects would cover more area than others, but the same general construction equipment and activities would be involved, e.g., the use of backhoes, trucks, hand-held power equipment, and generators. As noted, some projects would be larger than others and include a wide variety of project components. As the location, design details, and construction phasing of subsequent projects under the *2020 LA River Master Plan* are not known, it is possible that construction activities could obstruct views of scenic resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The *2020 LA River Master Plan* would improve visual quality across and along river, providing gateways, amenities, new structures, artwork, and additional recreational uses and trails. Although not mandatory, the Design Guidelines were developed as a framework to support the specific design and technical solutions for projects to be implemented under the *2020 LA River Master Plan* while presenting a unified, cohesive approach. Local jurisdictions are encouraged but not required to follow these Design Guidelines. Vistas within the LA River are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. Where scenic vistas are available, views encompass larger scenic visual elements and/or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encapsulate a large viewscape viewed from multiple vantage points. Once constructed, above-ground structures related to KOP Category 6, if located in an area encompassing a scenic vista, could result in a substantial adverse effect on scenic vistas or obscure a panoramic view. Because the size, extent, and specific location of subsequent projects under the *2020 LA River Master Plan* are not yet known, it is possible that they could substantially block or obstruct scenic vistas such as views of the ocean, ridgelines, and open space areas. Impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-2: Minimize Obstruction of Scenic Vistas.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.1(b): Would the proposed Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

This section discusses whether the proposed Project would substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. I-110 is designated as a State Scenic Highway, National Civil Engineering Landmark, and National Scenic Byway and is listed in the National Register of Historic Places. A portion of I-110 that is elevated over 30 feet crosses the LA River near Griffith Park and the Arroyo Seco Confluence near the border of Frames 5 and 6. No other scenic highways are immediately adjacent to the LA River for other frames and no impact would occur; therefore, the following discussion is focused on Frames 5 and 6.

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

No trees, rock outcroppings, or historic buildings are within the I-110 overcrossing. However, I-110 is designated as a State Scenic Highway and is listed in the National Register of Historic Places and crosses the LA River at an elevated bridge over 30 feet above grade. Construction activities and staging areas of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be located generally in the ROW and would be near, but would not touch or cross into, I-110. Therefore, the Typical Projects would not substantially damage the portion of I-110 that crosses over the LA River.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Implementation of the Common Elements Typical Project could include above-ground structures (e.g., pavilions, cafés) that could be near I-110. The Multi-Use Trails and Access Gateways Typical Project would be low in profile. No trees, rock outcroppings, or historic buildings are within the I-110 overcrossing. No new structures would be constructed on or cross I-110; therefore, the Typical Projects would not substantially damage a state scenic highway. As such, it is not anticipated that the Typical Projects would substantially damage scenic resources within a state scenic highway.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Construction

KOP Categories 1 through 6

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. Larger projects associated with KOP Categories 1 through 6 would involve the use of cranes and jackhammers to break concrete. Staging areas for construction equipment would be located in the ROW or on appropriate vacant areas for in-channel or off-channel projects.

Subsequent projects like affordable housing and museums under KOP Category 6 would likely entail construction greater than the other five KOP categories and would occur outside the ROW within the 2-mile study area. However, construction activities would not be located on or cross I-110. No trees, rock outcroppings, or historic buildings are within the I-110 overcrossing. Therefore, it is not anticipated that KOP Categories 1 through 6 would substantially damage scenic resources within a state scenic highway.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

KOP Categories 1 through 6

Components of KOP Category 1 would include improving trails and access points including equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor. Design components under KOP Category 2 would include channel modifications such as terraced banks, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. KOP Category 3 design components could include bridges (pedestrian, bike, equestrian, habitat/wildlife, and multi-use), cantilevers, and platforms.

KOP Category 4 would include pumps, diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors, and wetlands. These would include largely at-grade and underground elements. KOP Category 5 would include both ecological and recreational uses.

Operations impacts from KOP Category 6 components would include a broad range of civic amenities, flood management, and recreational improvements such as affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. These structures would be located off channel and outside the ROW.

As mentioned previously, no trees, rock outcroppings, or historic buildings are within the I-110 overcrossing. No new structures related to KOP Categories 1 through 6 would be constructed on or cross I-110; therefore, KOP Categories 1 through 6 would not substantially damage a state scenic highway. Consequently, it is not anticipated that KOP Categories 1 through 6 would substantially damage scenic resources within a state scenic highway.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. For the same reasons described above for the Typical Projects and the six KOP categories, construction activities would not be on or cross I-110. No trees, rock outcroppings, or historic buildings are within the I-110 overcrossing. Therefore, it is not anticipated that the construction activities associated with the overall implementation of the *2020 LA River Master Plan* would substantially damage scenic resources within a state scenic highway.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

For operation, while many of the improvements under the *2020 LA River Master Plan* would be within the ROW or near I-110, it is not anticipated that the construction activities associated with the overall implementation of the *2020 LA River Master Plan* would be on or cross I-110. No trees, rock outcroppings, or historic buildings are within the I-110 overcrossing. Therefore, it is not anticipated that the operations activities associated with the overall implementation of the *2020 LA River Master Plan* would substantially damage scenic resources within a state scenic highway.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.1(c): In non-urbanized areas, would the proposed Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would it conflict with applicable zoning and other regulations governing scenic quality?

The LA River is in a highly urbanized area. Beginning at the Pacific Ocean in Long Beach, Frames 1 through 5 consist of dense urban uses, including heavy and light industrial, commercial, and some residential in Frames 1, 2, and 3. Frame 6, encompassing the Glendale Narrows, includes Griffith Park on the south and numerous entertainment-related and industrial facilities on the north side of the river. Frames 7, 8, and 9 include suburban uses composed of residential, local and neighborhood commercial, and offices. Frame 7 includes Burbank, where land uses are predominantly residential, commercial, and entertainment-related (e.g., recording, production, and post-production studios). The greatest number of residential uses occur in Frames 8 and 9; the largest acreage of commercial and recreational uses is in Frame 9; Frame 6 has the next-largest amount of recreational uses. Many of the land uses that line the LA River are separated by fencing with the rear of buildings oriented toward the riverfront.

Policies relevant to urban design of the various jurisdictions along the river's extent are identified in Table 3.1-1 through Table 3.1-8. Specific land use policies identified generally pertain to ensuring compatible uses for all development, ensuring high-quality design and architectural elements, encouraging the enhancement of pedestrian and bicycle amenities, avoiding out-of-scale development, and protecting existing residential neighborhoods from encroachment by incompatible uses. These goals and policies also promote increased opportunities for open space and recreation.

As described above, the LA River passes through numerous different municipalities over its 51 miles. The *2020 LA River Master Plan* would upgrade the visual character of the LA River by providing new open spaces, parks, new trees and landscaping, and urban agricultural areas as well as restoration of riparian plant communities and habitat areas. Subsequent projects developed under the *2020 LA River Master Plan* would be designed to be accessible and include substantial new amenities such as seating, water fountains, and rest areas, as well as trails and amenities for pedestrians, bicyclists, and equestrians. Projects would include new wayfinding and environmental graphics, decorative paving and elements, public art such as murals and sculptures, and cultural amenities. These attributes would serve to upgrade the visual quality and experience of the LA River as a whole while providing a unifying design theme that would improve the disjointed and urban and low-quality visual environment that characterizes much of the LA River. Specific locations of subsequent projects have not been established at this point; therefore, the discussion remains at a program level. Table 3.1-9 provides a brief consistency analysis of the *2020 LA River Master Plan* with the policies of the *Los Angeles County General Plan*.

Table 3.1-9. Consistency with County General Plan Design Goals and Policies

Plan/ Element	Policies and Objectives	Consistent?
Los Angeles County General Plan		
Land Use Element	**Goal LU 3:** A development pattern that discourages sprawl, and protects and conserves areas with natural resources and SEAs. • **Policy LU 3.1**: Encourage the protection and conservation of areas with natural resources, and SEAs. • **Policy LU 3.2:** Discourage development in areas with high environmental resources and/or severe safety hazards. • **Policy LU 6.8:** Encourage land uses and developments that are compatible with the natural environment and landscape.	**Goal LU 3: Yes.** The *2020 LA River Master Plan* goals seek to protect and conserve areas with natural resources and significant ecological areas. A main goal of the *2020 LA River Master Plan* is to support healthy, connected ecosystems. Actions in the *2020 LA River Master Plan* that align with policies in the general plan include 3.1, increase habitat and ecosystem function along the river corridor; 3.2, increase plant species biodiversity and focus on the use of local native plants; and 3.3, create a connective network of habitat patches and corridors to facilitate wildlife movement and support a diverse ecological community. Strategies include prioritizing projects that create and improve habitat and ecosystem function. The Design Guidelines list considerations to ensure success in habitat and planting projects, including planting species appropriate to the planning frame and conditions of a specific project. As detailed in Chapter 2, *Project Description*, the Design Guidelines for ecology and planting are thus guided by the unique biodiversity of the region and characteristics of the river's distinct frames. Additionally, elements of the river's former ecology can be reintroduced where appropriate to reestablish many of the rare and riparian and upland ecosystems that have been lost to urbanization.

Plan/ Element	Policies and Objectives	Consistent?
		The Design Guidelines provide for the design and installation of planting along the LA River and provide guidance for planting setbacks and buffers, planting along levee and floodwalls, and channel modifications, among other aspects related to the creation of habitats and functioning ecosystems. Additionally, Action 2.5 of the *2020 LA River Master Plan* encourages compatibility of the river and adjacent land uses through buffering strategies and zoning review. Another goal of the *2020 LA River Master Plan* is to promote healthy, safe, and clean water. As detailed in the Design Guidelines, the proposed Project would incorporate low-impact development techniques within projects to increase infiltration and groundwater recharge. Features would include rain gardens, swales, infiltration strips, and infiltration trenches.
Land Use Element	**Goal LU 10:** Well-designed and healthy places that support a diversity of built environments. • **Policy LU 10.2:** Design development adjacent to natural features in a sensitive manner to complement the natural environment. • **Policy LU 10.3**: Consider the built environment of the surrounding area and location in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament. • **Policy LU 10.5:** Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction. • **Policy LU 10.8:** Promote public art and cultural amenities that support community values and enhance community context. • **Policy LU 10.10:** Promote architecturally distinctive buildings and focal points at prominent locations, such as major	**Goal LU 10: Yes.** As the *2020 LA River Master Plan* proposes to expand multi-use trails and increase accessibility for communities along the corridor, it supports the goal of developing healthy places. As discussed above for Goal LU 3, projects would incorporate design features to ensure that development complements the natural environment. The *2020 LA River Master Plan* allows for a consistent approach throughout the study area but with frame-specific identity within the greater whole. Ecology, habitat, and art reflect the physiography and culture of an individual frame of the river. Other elements, such as signage, access points, and lighting, were developed to ensure a consistent approach to connectivity, wayfinding, and equitable access. In all cases, the adjacent communities are considered for improvements along the river corridor to have the appropriate scale and feel for the neighborhood. The Design Guidelines state that the architecture of projects should meet the highest standards of design excellence. The Design Guidelines describe parameters (Americans with Disabilities Act [ADA] font and size, contrast, language, universal design, Native American place names, and

Plan/ Element	Policies and Objectives	Consistent?
	commercial intersections and near transit stations or open spaces.	references) for different types of graphics, such as informational, regulatory, confirmation, directional, mile markers, pavement markings, interpretive signs and displays, and large-scale icon graphics. Sign designs have a simple aesthetic while allowing for community expression and art at gateways and other special moments. Furthermore, environmental graphics can be integrated with architecture, art, and design rather than just consisting of standalone signs. A goal of the *2020 LA River Master Plan* is to embrace and enhance opportunities for arts and culture. Actions listed in the Design Guidelines provide direction on how to integrate artists, cultural organizations, and community members in planning processes and project development along the river. The *2020 LA River Master Plan* also seeks to galvanize and activate the LA River cultural identity through arts and culture, and streamline permitting processes for artwork along the river. Additionally, actions include identifying and activating cultural assets along the LA River Corridor to enhance existing cultural assets of communities.
Mobility Element	• **Policy M 2.1**: Provide transportation corridors/networks that accommodate pedestrians, equestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban, suburban, and rural communities whenever appropriate and feasible.	**Policy M 2.1: Yes.** The Design Guidelines include design concepts for multi-use trails and access gateways that would promote pedestrian-, bicycle-, and equestrian-friendly activities. The *2020 LA River Master Plan* allows for a consistent approach throughout the study area but with frame-specific identity within the greater whole. Ecology, habitat, and art reflect the physiography and culture of an individual frame of the river and will be evaluated during planning stages for individual projects.
Mobility Element	• **Policy M 2.4**: Ensure a comfortable walking environment for pedestrians by implementing the following, whenever appropriate and feasible: o Designs that limit dead-end streets and dead-end sidewalks. o Adequate lighting on pedestrian paths, particularly	**Policy M 2.4: Yes.** Goals of the *2020 LA River Master Plan* include providing equitable, inclusive, and safe parks, open space, and trails and enhancing opportunities for equitable access to the river corridor. The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across Los Angeles County for

Plan/ Element	Policies and Objectives	Consistent?
	around building entrances and exits, and transit stops. o Designs for curb ramps, which are pedestrian friendly and compliant with the American Disability Act (ADA) o Perpendicular curb ramps at locations where it is feasible. o Pedestrian walking speed based on the latest standard for signal timing. Slower speeds should be used when appropriate (i.e., near senior housing, rehabilitation centers, etc.) o Approved devices to extend the pedestrian clearance times at signalized intersections. o Accessible Pedestrian Signals (APS) at signalized intersections. o Pedestrian crossings at signalized intersections without double or triple left or right turn lanes. o Pedestrian signal heads, countdown pedestrian heads, pedestrian phasing and leading o Pedestrian intervals at signalized intersections. o Exclusive pedestrian phases (pedestrian scrambles) where turning volume conflicts with very high pedestrian volumes. o Advance stop lines at signalized intersections. o Pedestrian Hybrid Beacons. o Medians or crossing islands to divide long crossings. o High visibility crosswalks. o Pedestrian signage. o Advanced yield lines for uncontrolled crosswalks. o Rectangular Rapid Flashing Beacon or other similar approved technology at locations of high pedestrian traffic.	cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely possible. When feasible with the availability of ample ROW space, dedicated passageways for each user group would be given with buffers in between the trails. The Design Guidelines state that, to the extent practicable, pedestrian trails should meet ADA standards. Gateways would be required to implement ADA accessibility. Access gateways like the river gateway would include signage directing usage of the multi-use trails and would call attention to the river through clear visual markers. As discussed above for Goal LU 10, the Design Guidelines include requirements for signage along the river corridor. Trails would be as wide as feasible, depending on available ROW, and would accommodate as many user types as safely possible. Where there is not enough space to accommodate all uses, the first priority remains to create a connected LA River Trail. As discussed above for Goal LU 3, one of the goals of the *2020 LA River Master Plan* is to provide a continuous native tree and plant corridor along the river. Projects would implement landscaping buffers utilizing native plant palettes. Trees would be incorporated in landscaping as appropriate, depending on specific conditions within each frame and project site. Additionally, as discussed above for Goal LU 3, the Design Guidelines detail recommendations for buffers and other landscaping. Buffers and landscaping would utilize native plants and blend natural features with built features. The *2020 LA River Master Plan* includes a series of smaller common elements that include site furnishings, amenities, and facilities. These include consistent lighting, drinking fountains, places to sit along the river, river pavilions, and cafés that are intended to contribute to habitability of the river environs; promote safety, accessibility, and legibility; and build a cohesive identity of the river corridor. River pavilions would include an area for sitting, drinking fountains, waste disposal, and an emergency

Plan/ Element	Policies and Objectives	Consistent?
	○ Safe and convenient crossing locations at transit stations and transit stops located at safe intersections. • **Policy M 2.6**: Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible. • **Policy M 2.7**: Require sidewalks, trails and bikeways to accommodate the existing and projected volume of pedestrian, equestrian and bicycle activity, considering both the paved width and the unobstructed width available for walking. • **Policy M 2.8:** Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations. • **Policy M 2.9**: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features. • **Policy M 2.10**: Encourage the provision of amenities, such as benches, shelters, secure bicycle storage, and street furniture, and comfortable, safe waiting areas near transit stops. • **Policy M 2.11**: In urban and suburban areas, promote the continuity of streets and sidewalks through design features, such as limiting mid-block curb cuts, encouraging access through side streets or alleys, and promoting shorter block lengths.	call box. Additional features may include restrooms, bike racks, picnic tables, charging stations, vending machines, barbecues, indoor and outdoor showers, cafés, lockers, public safety stations, bike rental and repair, equipment rental, multi-purpose rooms, community kitchens, and management offices. The *2020 LA River Master Plan* seeks to improve access along the urbanized river corridor. The LA River Trail is currently not complete and, in many places, only one side of the river is accessible. Increased connectivity of the LA River Trail would promote the continuity of sidewalks throughout the study area.
Conservation and Natural Resources Element	**Goal C/NR 13**: Protected visual and scenic resources. • **Policy 13.3**: Reduce light trespass, light pollution and other threats to scenic resources.	**Goal C/NR 13**: **Yes.** Action 2.8 of the *2020 LA River Master Plan* states that adequate and consistent lighting should be provided along the LA River Trail that complies with guidelines to reduce light pollution and minimize impacts on wildlife

Plan/ Element	Policies and Objectives	Consistent?
	• **Policy 13.4**: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.	and habitat areas. The Design Guidelines require lighting to meet criteria that include using Dark Sky–compliant fixtures and avoiding light intrusion into ecologically sensitive areas. Additionally, projects would be required to complete lighting studies prior to construction to determine appropriate light levels, fixture types, and fixture heights. Required lighting standards are discussed in detail under Impact 3.1(d), below. As discussed above for Goal LU 3, Goal LU 10, and Policy M 2.4, projects would incorporate design features such as buffers and other landscaping to ensure that development is consistent with and complements the natural environment.

Source: Los Angeles County 2015.

As described above in Table 3.1-9, the *2020 LA River Master Plan* would be largely consistent with the goals and policies of the Los Angeles County general plan. While each of the 18 jurisdictions along the study area contain discrete adopted zoning and design guidelines, in general the proposed Project would be consistent with regulations that pertain to ensuring compatible uses for all development, ensuring high-quality design and architectural elements, encouraging the enhancement of pedestrian and bicycle amenities, avoiding out-of-scale development, and protecting existing residential neighborhoods from encroachment by incompatible uses. Additional detail is provided below.

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction activities and staging areas of the Common Elements Typical Project would be located generally in the ROW. Construction of the Common Elements Typical Project could include taller construction equipment or materials. The Multi-Use Trails and Access Gateways Typical Project would be larger than Common Elements Typical Project, up to 5 miles in length. Similar to the Common Elements Typical Project, construction of the Multi-Use Trails and Access Gateways Typical Project would occur within the ROW.

The Common Elements and Multi-Use Trails and Access Gateways Typical Projects would occur within the existing ROW between the top of levee and fenceline. The addition of Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be consistent with existing recreational land uses within the ROW, which include the land side between top of levee and fenceline such as trails and parks. The Design Guidelines for fences, guardrails and walls, structure architecture, signage, and landscaping would help visually integrate the new use with existing adjacent uses. However, temporary construction of Common Elements and Multi-Use Trails and Access Gateways Typical Projects could introduce new visual elements in the forms of construction

equipment, staging areas, and other visual elements that could be incompatible with the surrounding visual environment, and impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project would follow the Design Guidelines, as applicable, which identify connective elements such as trail dimensions, path materiality, lighting, artwork, and signage. The Design Guidelines include standards for visual quality and safety, architectural design, signage, and landscaping. Operation of the Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project would improve the visual quality of the project site. Additionally, once constructed, the Common Elements Typical Project would likely contribute to enhanced viewing opportunities for users to experience the vistas. Therefore, it is not anticipated that the Common Elements Typical Project would result in conflicts with regulations governing scenic quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Table 3.1-10 and Table 3.1-11 summarize the consistency of the Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project, respectively, with the six overarching themes of the 17 jurisdictions' general plans.

Table 3.1-10. Consistency of the Common Elements Typical Project with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**Yes**. The recreational uses of the Common Elements Typical Project would be compatible with adjacent land uses, including residential neighborhoods.
Minimization of out-of-scale development	**Yes.** The structures of the Common Elements Typical Project (e.g., café, restroom facilities) would not exceed one story.
Enhanced pedestrian access	**Yes.** The Common Elements Typical Project would provide additional access and recreational uses that would benefit the surrounding communities.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** The Common Elements Typical Project would be constructed and operated entirely within the ROW.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** The Common Elements Typical Project would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Neutral.** The Common Elements Typical Project would include trails but would not be inconsistent with this goal.

Table 3.1-11. Consistency of the Multi-Use Trails and Access Gateways Typical Project with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**Yes.** The recreational uses of the Multi-Use Trails and Access Gateways Typical Project would be compatible with adjacent land use, including residential neighborhoods.
Minimization of out-of-scale development	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would be at ground level.
Enhanced pedestrian access	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would provide additional recreational uses that would benefit the surrounding communities.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would be constructed and operated entirely within the ROW.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. The Multi-

Goal/Policy	Consistent?
	Use Trails and Access Gateways Typical Project would include trails and connection points/access gateways to the LA River.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

Construction activities for KOP Categories 1 through 6 would be similar to those discussed for the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, above. Similar construction equipment and activities would occur, mainly differentiated by size of the site. Larger projects such as bridges would likely involve the use of larger cranes and other equipment. As the specific locations of these project components are not known, it is possible that construction activities could be visible and could conflict with zoning or other design standards governing scenic quality.

The Design Guidelines for fences, guardrails and walls, structure architecture, signage, and landscaping would help visually integrate the new use with existing adjacent uses. However, temporary construction of KOP categories could introduce new visual elements in the forms of construction equipment, staging areas, and other visual elements that could be incompatible with the surrounding visual environment, and impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Although these KOP categories could likely be substantially larger than the Common Elements Typical Project, once constructed, many of the elements under such KOP Categories as 1, 2, 3, 5, and 6 would contribute to enhanced viewing opportunities for users to experience the vistas. In particular, KOP Category 1 would include construction of pathways serving multiple purposes and include pedestrian trails, bike trails, equestrian trails, access gateways, and a series of amenities for public use, such as shade structures and play fields as well as ecological uses such as habitat corridors.

While not required for all projects, many of the KOP categories would follow the Design Guidelines, which identify connective elements such as trail dimensions, path materiality, lighting, artwork, and signage. The Design Guidelines include standards for visual quality and safety, architectural design, signage, and landscaping.

In general, operation of the many of the KOP categories would improve the visual quality of the project sites by creating new pathways/trails, incorporating new landscaping, improving habitat areas, and creating new pavilions and museums. Where KOP design components are more infrastructure related such as KOP Category 4, which involves channel improvements, these uses would not be inconsistent with the overall existing visual landscape of the LA River, which includes a concrete bed surrounded by hardscape materials, interspersed with portions of the LA River containing a "soft bottom" that is surrounded by largely recreational, industrial, and infrastructure-related uses.

Therefore, it is not anticipated that the KOP categories would result in conflicts with regulations governing scenic quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Table 3.1-12 through Table 3.1-17 summarize the consistency of KOP Categories 1 through 6, respectively, with the six overarching themes of the 17 jurisdictions' general plans.

Table 3.1-12. Consistency of KOP Category 1 with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**No.** It is possible that equestrian facilities or towers could be sited adjacent to residential neighborhoods, which could result in incompatibilities.
Minimization of out-of-scale development	**No.** There is the potential that certain structures under KOP Category 1 would be out of scale with adjacent development.

Goal/Policy	Consistent?
Enhanced pedestrian access	**Yes.** KOP Category 1 would provide additional recreational uses that would benefit the surrounding communities.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** KOP Category 1 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** KOP Category 1 would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. KOP Category 1 would include trails and connection points/access gateways to the LA River.

Table 3.1-13. Consistency of KOP Category 2 with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**No.** It is possible that flood management facilities or intensive recreational uses like amphitheaters could be sited adjacent to residential neighborhoods, which could result in incompatibilities.
Minimization of out-of-scale development	**No.** There is the potential that certain flood management structures under KOP Category 2 would be out of scale with adjacent development.
Enhanced pedestrian access	**Yes.** KOP Category 2 would provide additional recreational uses that would benefit the surrounding communities in addition to improved flood management.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** KOP Category 2 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** KOP Category 2 would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Neutral.** KOP Category 2 would not include trail connections but would not be inconsistent with this goal.

Table 3.1-14. Consistency of KOP Category 3 with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**Yes.** Recreational components under KOP Category 3 would be compatible with adjacent land uses.
Minimization of out-of-scale development	**No.** There is the potential that certain water tower structures under KOP Category 2 would be out of scale with adjacent development.

Goal/Policy	Consistent?
Enhanced pedestrian access	**Yes.** KOP Category 3 would provide additional recreational uses that would benefit the surrounding communities in addition to improved flood management.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** KOP Category 3 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** KOP Category 3 would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. KOP Category 3 would include connection points/access gateways to the LA River.

Table 3.1-15. Consistency of KOP Category 4 with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**Yes.** KOP Category 4 would occur adjacent to the existing channel and would consist of ground-level or underground tunnel or naturalized channel.
Minimization of out-of-scale development	**Yes.** KOP Category 4 would occur adjacent to the existing channel and would consist of ground-level or underground tunnel or naturalized channel. Development would not be out of scale with adjacent land uses.
Enhanced pedestrian access	**Neutral.** While KOP Category 4 would not provide many additional recreational uses that would benefit the surrounding communities in addition to improved flood management, water quality, and some habitat features, it would not be inconsistent with this overarching goal.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** KOP Category 4 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	**Neutral.** While KOP Category 4 would not provide many additional recreational uses that would benefit the surrounding communities in addition to improved flood management, water quality, and some habitat features, it would not be inconsistent with this overarching goal.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Neutral.** While KOP Category 4 would not include trails or other additional recreational uses that would benefit the surrounding communities in addition to improved flood management, water quality, and some habitat features, it would not be inconsistent with this overarching goal.

Table 3.1-16. Consistency of KOP Category 5 with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**Yes.** The proposed recreational uses would be compatible with adjacent land uses.
Minimization of out-of-scale development	**Yes.** The structures would be low in scale and would not result in out-of-scale development.
Enhanced pedestrian access	**Yes.** KOP Category 5 would provide additional recreational uses that would benefit the surrounding communities.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Yes.** KOP Category 5 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** KOP Category 5 would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. KOP Category 5 would include connection points/access gateways to the LA River.

Table 3.1-17. Consistency of KOP Category 6 with Land Use/Design Goals and Policies

Goal/Policy	Consistent?
Visual compatibility with adjacent land uses	**Potentially No.** The proposed recreational uses would be compatible with adjacent land uses. However, other uses that could occur under KOP Category 6, such as museums, could be incompatible with applicable land use policies depending on the site location.
Minimization of out-of-scale development	**Potentially No.** The scale of structures under KOP Category 6 is unknown. Therefore, KOP Category 6 could result in out-of-scale development.
Enhanced pedestrian access	**Yes.** KOP Category 6 would provide additional recreational uses, affordable housing, and potentially museums and other infrastructure improvements that would benefit the surrounding communities. Off-channel land assets combined with ROW improvements can further ensure projects are multi-benefit, addressing multiple needs.
Protection of existing residential neighborhoods from encroachment of incompatible uses	**Potentially No.** As it is unknown the extent and location of projects under KOP Category 6, such projects could encroach on existing residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** KOP Category 6 could include fields and parks that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points.

Overall 2020 LA River Master Plan Implementation

Construction

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives.

As the specific locations of these project components are not known, it is possible that construction activities could be visible and could conflict with zoning or other design standards governing scenic quality. The Design Guidelines would help visually integrate the new use with existing adjacent uses. However, temporary construction of *2020 LA River Master Plan* projects could introduce new visual elements in the forms of construction equipment, staging areas, and other visual elements that could be incompatible with the surrounding visual environment, and impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AES-1: Install Construction Fencing for Screening and Security for Construction Lasting Longer than 30 Days.

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Apply the following mitigation measure, which is described in Section 3.15, *Recreation*.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses during Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the proposed Project are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large project (150+ acres/10+ miles in size). The *2020 LA River Master Plan* would improve visual quality across and along the river, providing gateways, amenities, new structures, artwork, and additional recreational uses and trails. These projects would result in increased scenic quality and are not anticipated to conflict with zoning or design regulations governing scenic quality. Many subsequent projects would follow the Design Guidelines, which identify connective

elements such as trail dimensions, path materiality, lighting, artwork, and signage. The Design Guidelines include standards for visual quality and safety, architectural design, signage, and landscaping. In addition, as described under the sections for Typical Projects and the six KOP categories, subsequent projects would be largely consistent with the applicable jurisdictions' general plan land use/design goals and policies. Therefore, it is not anticipated that the overall *2020 LA River Master Plan* implementation would result in conflicts with regulations governing scenic quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.1(d): Would the proposed Project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The LA River is in a highly urbanized area. Lighting along the LA River is from the surrounding surface streets, bridges, and spill-over lighting from development, parks, and sports fields. Direct lighting on the LA River Bike Path is intermittent and direct pole-mounted lighting mostly occurs near Griffith Park, within the City of Burbank and the West San Fernando Valley. Nighttime lighting often fluctuates due to motor vehicle headlights. Existing glare in the surrounding environment is not substantial and is typical of a highly urbanized area, with sunlight reflected off reflective materials utilized in surrounding buildings and from vehicle windows and other surfaces. The LA River itself does not contain highly reflective material, as it consists of a primarily of a concrete bed surrounding by hardscape materials. Portions of the LA River include a "soft bottom" that contains heavy silt and vegetation.

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction activities and staging areas of both Typical Projects would be located generally in the ROW. Construction of Common Elements Typical Project could include taller construction equipment or materials. The Multi-Use Trails and Access Gateways Typical Project would be larger than the Common Elements Typical Project, up to 5 miles in length.

The Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be located within the existing ROW between the top of levee and fenceline. The Common Elements and Multi-Use Trails and Access Gateways Typical Projects are proposed in a setting in which there are numerous existing sources of light and glare, including Los Angeles County Trail safety lighting, nearby rail and freeway activity, and nearby residential, industrial, and commercial buildings on adjacent streets. In addition, there is also little potential for construction activities to produce

substantial glare. The net contribution of project construction activities when considered in addition to existing sources of light and glare would not be major, and impacts associated with additional illumination would be temporary in nature. The Typical Projects would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

Construction activities for Typical Projects are generally expected to occur during daylight hours in 8-hour days, consistent with County and city regulations governing construction. Therefore, construction activities for the Typical Projects are unlikely to substantially alter ambient illumination light levels or result in significant spill light impacts on surrounding land uses.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

The Common Elements Typical Project would include pavilions, cafés, access stairs, ramps, site furnishings such as benches, hygiene facilities, restrooms, trash and recycling, drinking fountains, guard rails, gates, bike racks, signage, emergency call boxes, lighting, planting, fences and gates, stormwater best management practices, and art/performance space. The Multi-Use Trails and Access Gateways Typical Project would include the installation of river gateways as well as amenities such as pavilions, cafés, and arts-related space.

Chapter 6 of the Design Guidelines includes requirements for lighting along the LA River:

- Aesthetics:
    - Select fixtures that have a modern, urban aesthetic free of extraneous decorative elements.
    - Acorn light fixtures and light masts are prohibited.
    - Avoid light bollards where possible.
    - Integrate lighting into architecture where possible rather than having standalone fixtures.
    - Finish for luminaries and pole must be available in a neutral solid metallic gray color matching RAL 9007 or comparable equal.
- Light Quality and Locations:
    - Complete lighting study to determine appropriate light levels, fixture types, and fixture heights.
    - Increase lighting at over/underpasses, intersections, and trailheads for safety.
    - Use light-emitting diode (LED) or more efficient light source.

  - Use Dark Sky–compliant/BUG rated (backlight, uplight, glare) fixtures. Fixtures should meet these requirements without adding additional shielding.
  - Provide fixtures that have IES files for illumination measured in lumens (bulb strength depending on pole height) and footcandles (light falling on a surface determined by lighting designer).
  - Avoid light intrusion into ecologically sensitive areas.
  - Ensure lighting is wildlife friendly (color temperature between 3000K and 4000K).
  - Ensure color rendering of at least 80 CRI (Color Rendering Index).
  - Engineer poles and footings to withstand all project loads including, but not limited to, wind loads.
  - Luminaire housing to be IP66 suitable for damp locations.
- Installation, Assembly and Manufacture:
  - Require UL-listed products.
  - Require manufacturers with established history of light fixture production.
  - Snap together assembly or comparable system for ease of installation.
  - Use fixtures that can host other uses including emergency call boxes, banners, and signs.
  - Use products supported with complete engineering drawings and patents.
- Emergency Use and Maintenance:
  - Provide fixtures and controls capable of dimming lighting when occupancy loads are low (example: dimmable driver and occupancy sensor).
  - Use solar-powered light fixtures along the river wherever possible.
  - Use fixtures made with recycled content where possible
  - Ensure fixtures have LED cartridges that are easily replaced.

Nevertheless, the Common Elements and Multi-Use Trails and Access Gateways Typical Projects could potentially introduce new sources of light and glare on surrounding light-sensitive land uses, such as residential development, that may adversely affect day or nighttime views in the area. Impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AES-3a: Design Exterior Lighting to Minimize Nighttime Illumination Spillover.

Exterior lighting will be designed to shield and direct illumination to the subsequent project sites and minimize light spillover to any adjacent residential uses.

Mitigation Measure AES-3b: Design Exterior Structures to Minimize Glare.

The exterior of the proposed buildings/structures will be constructed of materials such as high-performance, tinted, non-mirrored glass; painted metal panels; and pre-cast concrete or fabricated wall surfaces.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

Construction

KOP Categories 1 through 6

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. Larger projects associated with KOP Categories 1 through 6 would involve the use of cranes and jackhammers to break concrete. Staging areas for construction equipment would be located in the ROW or on appropriate vacant areas for in-channel or off-channel projects.

Under KOP Category 6, off-channel land asset projects would likely entail greater levels of construction than the other five KOP categories and would occur outside the ROW. Projects under KOP Category 6 could be considerably larger than projects under the other KOP categories and could occur within established neighborhoods. All of the KOP categories are proposed in settings in which there are numerous existing sources of light and glare. There is also little potential for construction activities to produce substantial glare. The net contribution of project construction activities when considered in addition to existing sources of light and glare would not be major, and impacts associated with additional illumination would be temporary in nature. The proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Construction activities for KOP categories are expected to occur during daylight hours, consistent with County and city regulations governing construction, and are therefore unlikely to substantially alter ambient illumination light levels or result in significant spill light impacts on surrounding land uses.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

KOP Categories 1 through 6

KOP category components could potentially introduce new sources of light and glare on surrounding light-sensitive land uses, such as residential development, that may adversely affect day or nighttime views in the area. KOP categories would follow the Design Guidelines. As described above, the Design Guidelines include lighting standards to minimize lighting and glare impacts that could adversely affect day or nighttime views in the area. Nevertheless, KOP category components could potentially introduce new sources of light and glare on surrounding light-sensitive land uses, such as residential development, that may adversely affect day or nighttime views in the area. Impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AES-3a: Design Exterior Lighting to Minimize Nighttime Illumination Spillover.

Mitigation Measure AES-3b: Design Exterior Structures to Minimize Glare.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. All of the KOP categories are proposed in settings in which there are numerous existing sources of light and glare. There is also little potential for construction activities to produce substantial glare. The net contribution of project construction activities when considered in addition to existing sources of light and glare would not be major, and impacts associated with additional illumination would be temporary in nature. Construction activities for Typical Projects are expected to occur during daylight hours, consistent with County and city regulations governing construction, and are therefore unlikely to substantially alter ambient illumination light levels or result in significant spill light impacts on surrounding land uses. Construction activities for 107 projects would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

All of the projects envisioned in the *2020 LA River Master Plan* could potentially introduce new sources of light and glare on surrounding light-sensitive land uses, such as residential development, that may adversely affect day or nighttime views in the area. *2020 LA River Master Plan* projects would follow the Design Guidelines. As described above, the Design Guidelines include lighting standards to minimize lighting and glare impacts that could adversely affect day or nighttime views in the area. Nevertheless, *2020 LA River Master Plan* project components could potentially introduce new sources of light and glare on surrounding light-sensitive land uses, such as residential development, that may adversely affect day or nighttime views in the area. Impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AES-3a: Design Exterior Lighting to Minimize Nighttime Illumination Spillover.

Mitigation Measure AES-3b: Design Exterior Structures to Minimize Glare.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on aesthetics is approximately 3 miles from the outer boundaries of the LA River channel. The geographic context was established because it represents the approximate envelope from which the Project would be visible and potential cumulative visual impacts could occur. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on aesthetics if it would have impacts that are individually limited but if, in combination with other projects within the cumulative geographic context, it would have a substantial adverse effect on a scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock

outcroppings, and historic buildings within a state scenic highway; or in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, the proposed Project would have the potential to result in a cumulatively considerable impact if it would conflict with applicable zoning and other regulations governing scenic quality, or create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Cumulative Condition

Past and present development in the County has resulted in localized obstruction of scenic vistas and focal views, impacts on scenic highways and corridors, and degradation of visual quality as open space has been converted to urban uses. However, visual improvements have also occurred, such as more infill on underused or vacant sites within the urban fabric; new, attractive development that replaces degraded buildings; and roadway and transit improvements that enhance the streetscapes in communities. Implementation of development, infrastructure, and other projects in the County has the potential to degrade the visual character or quality of the County where open space is the baseline condition; this, when considered in combination with other development within the Southern California Association of Governments (SCAG) region and nearby areas, constitutes a cumulative condition with respect to the visual character of the region. The anticipated new growth and development would change the character of the region over time, potentially damage scenic resources, and introduce new sources of nighttime light and glare, thereby contributing to the cumulative condition of the SCAG region (SCAG 2020). With regard to light and glare, the PEIR for the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)concluded that even with implementation of mitigation, impacts of growth in the region would result in significant and unavoidable impacts by introducing new sources of light and glare. Past and present development has contributed to substantial light and glare effects in the urbanized portions of the region, and reasonably foreseeable development would continue to add new sources of light and glare. Individual jurisdictions' general plans also include goals and policies to reduce light and glare. However, given that the greater Los Angeles region is densely developed and highly urbanized, there is a cumulative condition in the region with respect to light and glare.

Over time, development would result in residential, commercial, and industrial growth, leading to potential outward expansion of development and certainly densification of development in existing areas. This growth could adversely affect scenic vistas and specific scenic resources, alter visual character and quality in some neighborhoods and communities, change the overall landscape of the cities and communities, and result in new sources of light and glare. As such, there is a cumulative condition with respect to aesthetics and visual quality in the project study area.

Contribution of the Project to Cumulative Impacts

The *2020 LA River Master Plan* would not affect scenic highways or contribute to a cumulative loss of scenic vistas or focal views. Temporary construction impacts from the project could affect the visual quality and character of the local neighborhoods where the construction would occur. However, these effects would be short-term for the majority of the projects, and mitigation would reduce temporary construction impacts of the Project to a less-than-significant level. Mitigation measures (Mitigation Measures AES-1, LU-1, and REC-1) would reduce construction impacts on visual quality or quality of public views of the site and its surroundings to a less-than-significant level in urbanized areas.

Scenic views within the LA River are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. Where limited scenic vistas are available, views of are of larger scenic visual elements or panoramic views of the Pacific Ocean, ridgelines, hillsides, or large open park and greenspace areas that encompass a large viewscape. Once constructed, projects under the *2020 LA River Master Plan* would only encompass a small portion of the LA River viewshed and would contribute to enhanced viewing opportunities for users to experience the vistas. The *2020 LA River Master Plan* would be subject to local design guidelines as well as local jurisdictions' general plans. In addition, the *2020 LA River Master Plan* is consistent with most, if not all, goals and policies identified in the applicable jurisdictions' general plans. The *2020 LA River Master Plan* would improve the visual quality of the study area. Mitigation Measure AES-2 would minimize any obstruction of scenic vistas. Therefore, the Project would not make a cumulatively considerable contribution to the cumulative impact.

The *2020 LA River Master Plan* is proposed in a setting in which there are numerous existing sources of light and glare, including LA River Trail safety lighting, nearby rail and freeway activity, and nearby residential, industrial, and commercial buildings on adjacent streets. The proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area during construction. During operation, recreational field lighting and other structure lighting would introduce new sources of light and glare. However, all lighting fixtures would be shielded to avoid spill light onto adjacent neighborhoods, and non-glare surfaces would be maximized per local general plan policies and standards. Therefore, the proposed Project would not make a cumulatively considerable contribution to a cumulative impact with regard to light and glare.

Section 3.2
Air Quality

3.2.1 Introduction

This section describes the regulatory and environmental setting for air quality, discusses local and regional air quality impacts that would result from the *2020 LA River Master Plan* and its elements, determines if there are significant impacts, and provides mitigation measures that would avoid or reduce these impacts to less-than-significant levels, where feasible. The project area (51 miles long and 2 miles wide on each side of the LA River) is the study area for air quality. Please refer to Section 3.7, *Greenhouse Gas Emissions*, for a discussion of greenhouse gas (GHG) emissions.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.2.2 Setting

The federal Clean Air Act (CAA) and its subsequent amendments form the basis for the nation's air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the CAA. A key element of the CAA is the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The CAA delegates enforcement of the NAAQS to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations and ensuring the NAAQS and California Ambient Air Quality Standards (CAAQS) are met. CARB, in turn, delegates regulatory authority for stationary sources and other air quality management responsibilities to local air agencies. The South Coast Air Quality Management District (SCAQMD) is the local air agency within the project area, which is in the South Coast Air Basin (Basin). The following sections provide more detailed information on federal, State, and local air quality regulations that apply to the Project.

3.2.2.1 Geographic

Description of Relevant Air Pollutants

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law. These regulated air pollutants, which are known as *criteria air pollutants*, are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and most particulate matter (PM) (PM 10 microns or less in diameter [PM_{10}] and 2.5 microns or less in diameter [$PM_{2.5}$]), lead [Pb], and fugitive dust, are primary air pollutants. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria air pollutants. VOCs and NO_X are criteria pollutant precursors that form secondary pollutants through chemical and photochemical reactions in the atmosphere. NO_X reacts with other chemicals to form PM and ozone (O_3). Ozone and nitrogen dioxide (NO_2) are the principal secondary pollutants and are criteria air pollutants. The following descriptions of each criteria air pollutant and its health effects are based on information provided by SCAQMD (2017).

Ozone (O_3)

Ozone is a photochemical oxidant that is formed when VOC and NO_X (both by-products of the internal combustion engine) react with sunlight.

- **VOCs**. VOCs are compounds made up primarily of hydrogen and carbon atoms (hydrocarbons). Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOC are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols.
- **NO_X**. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown, irritating gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in ozone formation, NO_X also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Ground-level ozone, the main pollutant in smog, poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (EPA 2019). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms in the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent reduction in forced airway volume in the most

responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., people who suffer from asthma) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (EPA 2016).

In addition to its deleterious human health effects, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. Ozone can also act as a corrosive and oxidant, resulting in property damage, such as the degradation of rubber products and other materials.

Carbon Monoxide (CO)

CO, a colorless, odorless, relatively inert gas, is a trace constituent in the unpolluted troposphere produced by natural processes and human activities. In remote areas far from human habitation, CO occurs in the atmosphere at an average background concentration of 0.04 part per million (ppm), primarily as a result of natural processes, such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise and electrocardiograph changes indicative of worsening oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin. Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include those with diseases involving heart and blood vessels, fetuses, and people with chronic hypoxemia (oxygen deficiency) as seen in high altitudes. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. Ambient CO has no ecological or environmental effects (CARB 2020a).

Sulfur Dioxide (SO_2)

SO_2 is a colorless gas with a sharp odor. It reacts in air to form sulfuric acid, which contributes to acid precipitation, and sulfates, which are components of PM. Main sources of SO_2 include coal and oil used in power plants and industries. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics, the vast majority of whom are sensitive to the effects of SO_2. In asthmatics, increase in resistance to airflow, as well as reduction in breathing capacity leading to severe breathing difficulties, is observed after acute higher exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses, even after exposure to higher concentrations of SO_2.

Particulate Matter (PM_{10} and $PM_{2.5}$)

PM consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of particulates are now generally considered: inhalable coarse particles 10 microns or less in diameter, or PM_{10}, and inhalable fine particles 2.5 microns or less in diameter, or $PM_{2.5}$. Particulate discharge into the atmosphere results primarily from

industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (SCAQMD 2017). Depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (EPA 2018a).

Lead (Pb)

Pb in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of Pb emitted into the air, but due to the phasing out of leaded gasoline, there has been a dramatic reduction in atmospheric Pb over the past three decades. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can also cause anemia, lethargy, seizures, and death; there is no evidence to suggest that Pb has direct effects on the respiratory system.

Toxic Air Contaminants

Toxic air contaminants (TAC) are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. TACs are also defined as air pollutants that may increase a person's risk of developing cancer and/or other serious health effects not automatically create a health hazard. TACs are emitted by a variety of industrial processes, including petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust; TACs may exist as PM_{10} and $PM_{2.5}$ or as vapors (gases). To date, CARB has identified 21 TACs and adopted EPA's list of hazardous air pollutants as TACs. In August 1998, CARB identified diesel particulate matter (DPM) emissions as a TAC (CARB 1998). In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan was to reduce DPM emissions and the associated health risk by 75 percent by 2010 and by 85 percent by 2020 (CARB 2000).

TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. According to the 2013 *California Almanac of Emissions and Air Quality,* the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being DPM, which differs from other TACs in that it is a complex mixture of hundreds of substances, rather than a single substance (CARB 2013). DPM is composed of two phases, gas and particle, and both phases contribute to health risks. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic

hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine PM is of the greatest health concern and may be composed of elemental carbon with adsorbed compounds, such as organic compounds, SO_2, nitrates, metals, and other trace elements. DPM is emitted from a broad range of diesel engines: the on-road diesel engines of trucks, buses, and cars and the off-road diesel engines that include locomotives, marine vessels, and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and presence of an emission control system.

Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat, and lungs, and has some neurological effects, such as lightheadedness. Acute exposure may also elicit a cough or nausea, as well as exacerbate asthma. Chronic exposure to DPM in experimental animal inhalation studies has shown a range of dose-dependent lung inflammation and cellular changes in the lung and immunological effects. Based upon human and laboratory studies, there is considerable evidence that DPM is a likely carcinogen. Human epidemiological studies have demonstrated an association between DPM exposure and increased lung cancer rates in occupational settings.

Regional Setting

The project area is within the Basin, an area covering approximately 6,745 square miles and bounded by the Pacific Ocean to the west and south and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Basin, which is a coastal plain with connecting broad valleys and low hills.

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (i.e., weather and topography) as well as human-made influences (i.e., development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Basin, making it an area of high pollution potential.

The greatest air pollution impacts in the Basin occur from June through September and are generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. These conditions frequently reduce pollutant dispersion, thereby causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season, and time of day; ozone concentrations, for example, tend to be lower along the coast, higher in the near-inland valleys, and lower in the far-inland areas of the Basin and adjacent desert.

SCAQMD completed ambient air monitoring, and its evaluation studies in the Basin are compiled in the regularly updated Multiple Air Toxics Exposure Study (MATES), the most

recent of which is the MATES IV study; the final draft was released to the public in May 2015. The MATES IV study estimated that the average carcinogenic risk throughout the Basin attributed to TACs is approximately 1,023 in 1 million. Approximately 80 percent of all risk is attributed to DPM emissions, but the MATES IV study showed a 70 percent reduction in DPM compared to MATES III (SCAQMD 2015a). MATES V is currently being conducted and will include a fixed site monitoring program with 10 stations, an updated emissions inventory of TACs, and a modeling effort to characterize cancer risk across the Basin.

Local Climate

Data from three climate monitoring stations, Long Beach (COOP 045082), Los Angeles Downtown (COOP 045115), and Woodland Hills Pierce College (COOP 041484), across the project area were used to characterize the Project's varied climate conditions. These three climate monitoring stations are at the southern (Frame 1), central (Frame 5), and northern (Frame 9) portions of the project area, respectively.

At the Long Beach climate monitoring station (Frame 1) between 1906 and 1969, the average summer (August) high and low temperatures were 80.7 degrees Fahrenheit (°F) and 62.1°F, respectively. The average winter (January) high and low temperatures were 65.2°F and 44.8°F, respectively. Rainfall varies widely from year to year, with an annual average of 12.72 inches with an average of 35 days with measurable rainfall (greater than or equal to 0.01 inch) (WRCC 2020a).

At the Los Angeles Downtown University of Southern California campus (Frame 5) between 1877 and 2016, the average summer (August) high and low temperatures were 83.1°F and 63.8°F, respectively. The average winter (January) high and low temperatures were 66.4°F and 48.3°F, respectively. Rainfall varies widely from year to year with an annual average of 14.77 inches with an average of 36 days with measurable rainfall (greater than or equal to 0.01 inch) (WRCC 2020b).

At Woodland Hills Pierce College (Frame 9) between 1949 and 2011, the average summer (August) high and low temperatures were 95.4°F and 57.3°F, respectively. The average winter (January) high and low temperatures were 67.9°F and 39.3°F, respectively. Rainfall varies widely from year to year with an annual average of 16.86 inches with an average of 34 days with measurable rainfall (greater than or equal to 0.01 inch) (WRCC 2020c).

The closest wind monitoring station, approximately 2 miles east of the project area (Frame 2), is the Long Beach Airport wind monitoring station. Wind patterns in the project vicinity arise primarily from the northwest with seasonal and diurnal variations resulting during Santa Ana wind events and winter storms. Average wind speeds at the Long Beach Airport average 6.3 miles per hour (WRCC 2020d).

Local Air Quality

There are several monitoring stations within the project area that monitor air quality within the County. As the project area spans across nine frames, monitoring data from three monitoring stations across the project area over the last 3 years were reviewed. These three monitoring stations are at the southern (Frame 1), central (Frame 5), and northern (Frame 9) portions of the project area. Table 3.2-1 presents monitoring data from Long Beach

(Webster Street, Frame 1), Los Angeles (1630 Main Street, Frame 5), and Reseda (18330 Gault Street, Frame 9). $PM_{2.5}$ monitoring data were unavailable at the Long Beach monitoring location; therefore, monitoring data from the next closest monitoring station at 3648 North Long Beach Boulevard (Frame 2) were reviewed and presented. PM_{10} monitoring data were unavailable at the Reseda monitoring location and there was no alternative monitoring station in an adjacent frame. The monitoring station nearest Frame 9 that collects PM_{10} data is the Los Angeles station (Frame 5).

Table 3.2-1. Ambient Air Quality Data in Los Angeles County (2016–2018)

Pollutant Standards	Long Beach – Webster Street (Frame 1) and North Long Beach Boulevard (Frame 2)			Los Angeles – North Main Street (Frame 5)			Reseda – Gault Street (Frame 9)[h]		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Ozone (O_3)									
Maximum 1-hour concentration (ppm)	0.079	0.082	0.074	0.103	0.116	0.098	0.122	0.140	0.120
Maximum 8-hour concentration (ppm)	0.059	0.068	0.063	0.078	0.086	0.074	0.098	0.114	0.101
Number of days standard exceeded[a]									
CAAQS 1-hour (>0.09 ppm)	0	0	0	2	6	2	9	26	14
CAAQS 8-hour (>0.070 ppm)	0	0	0	4	16	4	23	67	50
NAAQS 8-hour (>0.070 ppm)	0	0	0	4	14	4	23	64	49
Carbon Monoxide (CO)									
Maximum 8-hour concentration (ppm)	2.2	2.6	2.1	1.3	1.8	1.6	1.9	2.5	2.1
Maximum 1-hour concentration (ppm)	3.3	3.9	4.7	1.8	2.0	1.9	2.4	3.0	3.4
Number of days standard exceeded[a]									
NAAQS 8-hour (≥9 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0	0	0	0	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0	0	0	0	0	0	0
Nitrogen Dioxide (NO_2)									
State maximum 1-hour concentration (ppb)	75	89	85	64	80	70	55	62	57
State second-highest 1-hour concentration (ppb)	73	88	82	63	80	69	54	62	55
Annual average concentration (ppb)	18	18	17	20	20	18	13	13	12
Number of days standard exceeded[a]									
CAAQS 1-hour (180 ppb)	0	0	0	0	0	0	0	0	0
Particulate Matter (PM_{10})									
National[b] maximum 24-hour concentration (µg/m^3)	75.0	79.0	84.0	64.0	64.6	68.2	-	-	-
National[b] second-highest 24-hour concentration (µg/m^3)	58.0	73.0	67.0	57.0	47.8	66.1	-	-	-

Pollutant Standards	Long Beach – Webster Street (Frame 1) and North Long Beach Boulevard (Frame 2)			Los Angeles – North Main Street (Frame 5)			Reseda – Gault Street (Frame 9)[h]		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
State[c] maximum 24-hour concentration (µg/m³)	75.3	79.0	83.0	74.6	96.2	81.2	-	-	-
State[c] second-highest 24-hour concentration (µg/m³)	58.5	73.0	67.0	67.6	76.5	76.2	-	-	-
National annual average concentration (µg/m³)	31.9	33.5	32.7	25.8	25.7	30.2	-	-	-
State annual average concentration (µg/m³)[d]	31	31	33	*	*	34	-	-	-
Number of days standard exceeded[a,e]									
NAAQS 24-hour (>150 µg/m³)	0	0	0	0	0	0	-	-	-
CAAQS 24-hour (>50 µg/m³)	8	10	4	21	40	31	-	-	-
Particulate Matter ($PM_{2.5}$)									
National[f] maximum 24-hour concentration (µg/m³)	29.3	55.3	79.6	44.3	54.9	61.4	30.0	35.2	38.9
National[f] second-highest 24-hour concentration (µg/m³)	28.9	54.7	46.4	39.8	49.2	43.8	26.4	31.2	31.0
State[g] maximum 24-hour concentration (µg/m³)	-	-	-	49.4	61.7	65.3	41.5	61.3	63.7
State[g] second-highest 24-hour concentration (µg/m³)	-	-	-	49.1	54.9	48.7	37.4	57.5	42.1
National annual average concentration (µg/m³)	10.3	10.9	11.5	11.7	12.0	12.8	9.1	9.7	*
State annual average concentration (µg/m³)	-	-	-	12.0	16.3	16.0	16.9	16.8	15.8
Measured number of days standard exceeded[a]									
NAAQS 24-hour (>35 µg/m³)	0	-	-	2	6	6	0	0	*

Source: EPA 2018b, CARB 2020b.

Notes:

ppb = parts per billion; µg/m³ = micrograms per cubic meter; * = insufficient data available to determine the value; - = data not available.

[a] An exceedance is not necessarily related to a violation of the standard

[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

[c] State statistics are based on approved local samplers and local conditions data.

[d] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[e] Measurements usually are collected every 6 days.

[f] National statistics are based on samplers using federal reference or equivalent methods.

[g] State statistics are based on local approved samplers.

[h] The monitoring station nearest Frame 9 that collects PM_{10} data is the Los Angeles station (Frame 5).

The monitoring data show the following trends for pollutant concentrations:

- The 1-hour ozone State standard as well as the 8-hour ozone State and federal standards were exceeded in each of the most recent years at the Los Angeles and Long Beach monitoring stations for which data are available.
- The 24-hour PM_{10} State standard was exceeded in each of the most recent years at the Los Angeles and Long Beach monitoring stations for which data are available.
- The 24-hour $PM_{2.5}$ federal standard was exceeded in each of the most recent years at the Los Angeles monitoring station for which data are available.
- No exceedances of the 1-hour NO_2, 1-hour CO, 8-hour CO, PM_{10} federal, or $PM_{2.5}$ State standards occurred during the most recent 3-year period.

As discussed above, the CAAQS and NAAQS define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and PM ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

Local Health Risk

SCAQMD's inhalation cancer risk data (MATES IV) express the potential cancer risk for a given substance as the incremental number of potential cancer cases that could be developed per million people, assuming that the population is exposed to the substance at a constant annual average concentration over a presumed 70-year lifetime. According to MATES IV, the project area is within multiple cancer risk zones ranging from a risk estimate of 401 to 1,000 additional cancers per 1 million individuals in the northern portion of the project area (Frames 7, 8, and 9) to a risk greater than 1,200 in 1 million (Frames 1 through 6) (SCAQMD 2020). For comparison, the average cancer risk in the Basin is 1,023 in 1 million.

Sensitive Receptors and Locations

SCAQMD defines sensitive receptor locations as residential, commercial, and industrial land use areas, as well as other locations where sensitive populations may be located, such as residences, schools, hospitals, convalescent homes, daycare centers, and other locations where children, chronically ill individuals, or other sensitive persons could be exposed (SCAQMD 2012).

The project area (Frames 1 through 9) includes primarily urbanized areas (i.e., Cities of Bell, Bell Gardens, Burbank, Carson, Commerce, Compton, Cudahy, Downey, Glendale, Huntington Park, Long Beach, Los Angeles, Lynwood, Maywood, Paramount, South Gate, and Vernon, and unincorporated County areas) where residences, schools, hospitals, and daycare centers could be near or immediately adjacent to project activities (within 1,000 feet).

3.2.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of air quality in this PEIR.

Federal

Clean Air Act and National Ambient Air Quality Standards

The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, known as NAAQS, for six criteria air pollutants and specifies future dates for achieving compliance. The CAA also mandates that the states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The SIPs must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. **Table** 3.2-2 shows the NAAQS currently in effect for each criteria pollutant, as well as the CAAQS (discussed further below).

Table 3.2-2. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards[a]	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None[b]	None[b]
	8–hour	0.070 ppm	0.070 ppm	0.070 ppm
Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual mean	20 µg/m^3	None	None
Fine Particulate Matter ($PM_{2.5}$)	24-hour	None	35 µg/m^3	35 µg/m^3
	Annual mean	12 µg/m^3	12.0 µg/m^3	15 µg/m^3
Carbon Monoxide	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
Nitrogen Dioxide	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
Sulfur Dioxide[c]	Annual mean	None	0.030 ppm	None
	24-hour	0.04 ppm	0.014 ppm	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Lead	30-day Average	1.5 µg/m^3	None	None
	Calendar quarter	None	1.5 µg/m^3	1.5 µg/m^3
	3-month average	None	0.15 µg/m^3	0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	None	None
Visibility-reducing Particles	8-hour	-[d]	None	None
Hydrogen Sulfide	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Source: CARB 2016.

[a] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

[b] The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.

[c] The annual and 24-hour NAAQS for SO_2 only apply for 1 year after designation of the new 1-hour standard to those areas that were previously in nonattainment for 24-hour and annual NAAQS.
[d] CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more due to particles when relative humidity is less than 70%.
$\mu g/m^3$ = micrograms per cubic meter

Non-road Diesel Rule

EPA has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and locomotives. New equipment used within the project area, including heavy-duty trucks and off-road construction equipment, are required to comply with these emission standards.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks. The National Highway Traffic Safety Administrative (NHTSA) sets the Corporate Average Fuel Economy standards, which are regularly updated to require additional improvements in fuel economy. The standards were last updated in October 2012 to apply to new passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2017 through 2025, and are equivalent to 54.5 miles per gallon.

However, on August 2, 2018, NHTSA and EPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). On September 19, 2019, EPA and NHTSA issued a final action on the One National Program Rule, which is considered Part 1 of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables EPA/NHTSA to provide nationwide uniform fuel economy and GHG vehicle standards, specifically by (1) clarifying that federal law preempts State and local tailpipe GHG standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set State-specific standards.

EPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019 (84 Fed. Reg. 51310). California, 22 other states, the District of Columbia, and two cities filed suit against the proposed One National Program Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). On October 28, 2019, the Union of Concerned Scientists, Environmental Defense Fund, and other groups filed a protective petition for review after the federal government sought to transfer the suit to the D.C. Circuit (*Union of Concerned Scientists v. National Highway Traffic Safety Administration*). Opening briefs for the petition are currently scheduled to be completed on November 23, 2020. The lawsuit filed by California and others is stayed pending resolution of the petition.

EPA and NHTSA published final rules to amend and establish national CO_2 and fuel economy standards on April 30, 2020 (Part 2 of the SAFE Vehicles Rule) (85 Fed. Reg. 24174). The revised rule changes the national fuel economy standards for light-duty vehicles from 50.4 miles per gallon to 40.5 miles per gallon in future years. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending legal deliberations.

State

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the State legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the State to endeavor to meet the CAAQS by the earliest practical date. Unlike the CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. The CAAQS and NAAQS are shown in **Table** 3.2-2. Table 3.2-3 provides the Los Angeles County portion of the Basin's attainment status with respect to NAAQS and CAAQS.

Table 3.2-3. Federal and State Attainment Status for the Los Angeles County Portion of the South Coast Air Basin

Criteria Pollutant	Federal Designation	State Designation
O_3 (8-hour)	Nonattainment (extreme)	Nonattainment
CO	Attainment	Attainment
PM_{10}	Maintenance (serious)	Nonattainment
$PM_{2.5}$	Nonattainment (moderate)	Nonattainment
NO_2	Maintenance	Attainment
SO_2	Attainment	Attainment
Lead	Nonattainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Visibility-Reducing Particles	(No federal standard)	Unclassified

Source: EPA 2020; CARB 2020c.

CARB and local air districts bear responsibility for meeting the CAAQS, which are to be achieved through district-level air quality management plans (AQMPs) incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established State air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Statewide Truck and Bus Regulation

Originally adopted in 2005, the on-road truck and bus regulation requires heavy trucks to be retrofitted with PM filters. The regulation applies to privately and federally owned diesel-fueled

trucks with a gross vehicle weight rating greater than 14,000 pounds. Compliance with the regulation can be reached through one of two paths: (1) vehicle retrofits according to engine year or (2) phase-in schedule. Compliance paths ensure that by January 2023, nearly all trucks and buses will have 2010 model year engines or newer.

State Tailpipe Emission Standards

Like EPA at the federal level, CARB has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and harbor craft operating in California. New equipment used during construction of project activities would be required to comply with the standards.

Carl Moyer Memorial Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the State to reduce air pollution emissions from heavy-duty engines. Locally, the air districts administer the program. The program is available for on-road projects that include public agency and utility vehicles, among other vehicle types.

Toxic Air Contaminant Regulations

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("Hot Spots" Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxics. The "Hot Spots" Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

CARB has identified DPM as a TAC and has approved a comprehensive diesel risk reduction plan (CARB 2000) to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce DPM emissions and the associated health risk by 75 percent by 2010 and by 85 percent by 2020. The plan identifies 14 measures that CARB will implement to reduce DPM. The Project would be required to comply with any applicable diesel control measures from the diesel risk reduction plan.

Regional

South Coast Air Quality Management District

The project area lies within the Los Angeles County portion of the Basin, which is under the jurisdiction of SCAQMD. SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County, Los Angeles County (except for the Antelope Valley), the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Basin is a sub-region of SCAQMD's jurisdiction. Although air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. These plans require, among other emissions-reducing activities, control technology for existing sources, control programs for

area sources and indirect sources, an SCAQMD permitting system that allows no net increase in emissions from any new or modified (i.e., previously permitted) emissions sources, and transportation control measures. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the federal air quality standards for healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in GHG emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour ozone standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP includes both stationary- and mobile-source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date (SCAQMD 2017).

SCAQMD published the *CEQA Air Quality Handbook* in November 1993 to help local governments analyze and mitigate project-specific air quality impacts. This handbook provides standards, methodologies, and procedures for conducting air quality analyses as part of CEQA documents prepared within SCAQMD's jurisdiction. In addition, SCAQMD has several supplemental documents, including *Air Quality Significant Thresholds* (2019), *Final Localized Significance Threshold Methodology* (2003, revised 2008), and *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds* (2008). These documents provide guidance for evaluating localized effects from mass emissions. Both were used in the preparation of this analysis (SCAQMD 2008a, 2008b, 2019).

The Project is also required to comply with all applicable SCAQMD rules and regulations pertaining to construction activities, including, but not limited to, the following:

- **SCAQMD Rule 402—Nuisance:** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause, or have a natural tendency to cause, injury or damage to business or property. Odors are regulated under this rule.
- **SCAQMD Rule 403—Fugitive Dust:** This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the property line of the emission's source. During construction, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earthmoving and grading activities. These measures would include site pre-watering and re-watering as necessary to maintain sufficient soil moisture content. Additional requirements apply to construction projects on properties with 50 or more acres of disturbed surface area or any earthmoving operation with a daily earthmoving or throughput volume of 5,000 cubic yards or more three times during the most recent 365-day period. These requirements include submittal of a dust control plan, maintenance of dust control records, and designation of an SCAQMD-certified dust control supervisor.
- **SCAQMD Rule 1108—Cutback Asphalt:** This rule specifies VOC content limits for cutback asphalt.
- **SCAQMD Rule 1113—Architectural Coatings:** This rule specifies VOC content limits for architectural coatings.

- **SCAQMD Rule 1403—Asbestos Emissions from Demolition/Renovation Activities:** This rule specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of asbestos-containing material (ACM). This rule is generally designed to protect uses surrounding demolition or renovation activity from exposure to asbestos emissions.
- **SCAQMD Rule 1470—Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** This rule specifies requirements for stationary diesel engines, including emergency standby generators. It requires owners or operators of emergency standby generators to keep monthly logs of usage, limits maintenance and testing to 20 hours per year, and requires emission rates to not exceed 0.40 gram per brake-horsepower hour.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties. SCAG addresses regional issues related to transportation, the economy, community development, and the environment and is the federally designated metropolitan planning organization for a majority of the region and the largest metropolitan planning organization in the nation. As required by federal and State law, SCAG develops plans pertaining to transportation, growth management, hazardous waste management, housing, and air quality. SCAG data are used in the preparation of air quality forecasts and the conformity analysis included in the AQMP.

Los Angeles County General Plan

Adopted in 2016, the *Los Angeles County General Plan*'s (Los Angeles County 2016) Air Quality Element summarizes air quality issues and outlines goals and policies that will improve air quality in unincorporated County areas. This includes protection from exposure to harmful air pollutants and reduction of air pollution and mobile-source emissions through coordinated transportation and air quality planning. Relevant policies are as follows:

- **Policy AQ 1.1:** Minimize health risks to people from industrial toxic or hazardous air pollutant emission with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2:** Encourage the use of low or no volatile organic compound emitting materials.
- **Policy AQ 1.3:** Reduce particulate inorganic and biological emission from construction, grading, excavation, and demolition to the maximum extent feasible.
- **Policy AQ 2.1:** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
- **Policy AQ 2.3:** Support the conservation of natural resources and vegetation to reduce and mitigate air pollution impacts.

Los Angeles County Sustainability Plan

In July 2019, the County adopted the *OurCounty Los Angeles Countywide Sustainability Plan* (OurCounty Sustainability Plan) (Los Angeles County 2019). OurCounty Sustainability Plan includes 12 primary goals that have a total of 37 strategies, with a total of 159 actions. The plan identifies

lead County entities and partners for each goal. The plan is intended to help guide decision-making in unincorporated County areas and provide a model for decision-making in the 88 incorporated cities in the County. As a strategic plan, the OurCounty Sustainability Plan does not supersede land use plans that have been adopted by the Regional Planning Commission and Board of Supervisors, including the County's general plan and various community, neighborhood, and area plans. The following strategy and action are relevant to the proposed Project:

- **Strategy 1A:** Minimize the exposure of vulnerable populations to pollution and reduce health disparities.
    - **Action 1:** Limit siting of new sensitive uses, such as playgrounds, daycare centers, schools, residences, or medical facilities, at least 500 feet from freeways.

Local

Frame 1

City of Long Beach

City of Long Beach General Plan

Adopted in 1996, the Air Quality Element of the *City of Long Beach General Plan* aims to establish policy that will guide future land use and transportation decisions in the City of Long Beach, implement regional air quality plans, heighten awareness of air quality efforts and impacts in the community, and promote greater collaboration among all levels of governments to solve air quality problems (City of Long Beach 1996). Relevant policies are as follows:

- **Policy 2.1.1:** Reduce vehicle trips.
- **Policy 2.1.2:** Reduce vehicle miles traveled.
- **Policy 2.4.1:** Promote non-motorized transportation.
- **Policy 5.1:** Regulate land use and promote development in a manner that will support established transit services and reduce the need for the automobile
- **Policy 6.1:** Further reduce particulate emission from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.

City of Los Angeles

City of Los Angeles General Plan

Adopted in 1992, the Air Quality Element of the *City of Los Angeles General Plan* (City of Los Angeles 1992) includes goals to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites. Relevant policies are as follows:

- **Policy 1.3.1:** Minimize particulate emission from construction sites.
- **Policy 1.3.2:** Minimize particulate emissions from unpaved roads and parking lots which are associated with vehicle traffic.

In addition, the Air Quality Element includes goals that would support reduction of emissions. They include less reliance on single-occupant vehicles; efficient management of transportation facilities and system infrastructure; reduction of vehicle traffic during peak periods; addressing the relationship between land use, transportation, and air quality; and energy efficiency.

The *City of Los Angeles Sustainable City pLAn* also addresses criteria pollutant emissions. The plan is made up of short-term (by 2017) and longer-term (by 2025 and 2035) targets in 14 categories that will advance the City of Los Angeles's environment, economy, and equity. These topic areas include local water, local solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, prosperity and green jobs, preparedness and resiliency, air quality, environmental justice, urban ecosystem, livable neighborhoods, and leadership by example (City of Los Angeles 2015).

Frame 2

City of Carson

City of Carson General Plan

The *Carson General Plan* Air Quality Element (City of Carson 2004) contains policies that aim to improve air quality by reducing total air emissions, educating the public on pollution control measures, minimizing dust generation, and encouraging the use of best available technology. Relevant policies are as follows:

- **Policy AQ-1.1:** Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize particulate emissions from paved and unpaved surfaces during construction.
- **Policy AQ-1.2:** Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.
- **Policy AQ-2.2:** Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.
- **Policy AQ-2.3:** Cooperate and participate in regional air quality management plans, programs and enforcement measures.
- **Policy AQ-2.4:** Continue to work to relieve congestion on major arterials and thereby reduce emissions.
- **Policy AQ-2.5:** Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.
- **Policy AQ-2.6:** Encourage in-fill development near activity centers and along transportation routes.
- **Policy AQ-2.7:** Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.
- **Policy AQ-3.1:** Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric, fuel cell or other non-polluting fuels for Carson Circuit buses and other City vehicles.

City of Compton

City of Compton General Plan

The *Draft Compton General Plan 2030*'s Air Quality Element identifies the City of Compton's goals from 2010 through 2030 for improving air quality. Local initiatives include environmentally sensitive land use planning, transportation planning, trip reduction strategies, and control of localized emissions sources (City of Compton 2011). Relevant policies are as follows:

- **Air Quality Element Policy 1.3:** The City of Compton will ensure that new large-scale developments incorporate features that facilitate alternate forms of transportation.
- **Air Quality Element Policy 4.3:** The City of Compton will support recycling programs which reduce emissions associated with manufacturing and waste disposal.
- **Air Quality Element Policy 5.1:** The City of Compton will support the use of low polluting construction materials and coatings.
- **Air Quality Element Policy 5.2:** The City of Compton will provide, to the maximum extent feasible, for the separation of sensitive receptors, such as schools and hospitals, from sources of toxic emissions.
- **Air Quality Element Policy 5.4:** The City of Compton will standardize air quality review procedures for all new developments.
- **Air Quality Element Policy 5.5:** The City of Compton will reduce the exposure of sensitive receptors to dust and odors to the extent feasible.

City of Long Beach

Applicable regulations for the City of Long Beach are described above in Frame 1.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 3

City of Compton

Applicable regulations for Compton are described above in Frame 2.

City of Cudahy

City of Cudahy General Plan

The *Cudahy 2040 General Plan* (City of Cudahy 2018) incorporates land use and mobility strategies into the Air Quality Element. Relevant policies are as follows:

- **Policy OSCE-1.15:** Improve air quality in Cudahy by limiting the types of land uses permitted that produce particulate matter. Encourage uses and practices that make mobility more efficient, reducing the necessity of, and pollution caused by, motor vehicles.
- **Policy AQE 1.2:** Avoid siting new housing or sensitive receptor uses near existing land uses known to emit harmful contaminants.
- **Policy AQE 1.3:** Encourage the development and/or implementation of new technologies addressing or mitigating pollutant emissions at transportation facilities and industrial use locations.
- **Policy AQE 1.4:** Require the development of any sensitive receptor project includes design features and equipment as necessary, to mitigate any significant negative air quality impact on project occupants from the existing environment.
- **Policy AQE 1.5:** Pursue more active/effective enforcement of existing air quality regulations applicable to air polluters in Cudahy

- **Policy AQE 5.1:** Require projects generating potentially significant levels of air pollutants to incorporate the most effective air quality mitigation into project design as necessary to fully mitigate any negative impacts.

City of Downey

City of Downey General Plan

The *Downey Vision 2025 General Plan*'s Conservation Element (City of Downey 2005) contains policies related to air quality that aim to pursue every available means and opportunities to reduce air particulate and pollutants within the City of Downey and the region and to improve air quality through land use decisions. Relevant policies are as follows:

- **Program 4.5.1.4:** Encourage alternative modes of travel, such as walking and cycling, to vehicle use and alternative modes of employment, such as telecommuting and home-based businesses, to reduce emissions associated with vehicle use.
- **Program 4.5.1.5:** Promote the use of alternative fuel vehicles, including clean diesel, compressed natural gas, hydrogen, that result in reduced emissions, including in instances involving City operations.
- **Program 4.5.1.7:** Pursue means to prohibit unnecessary operation of engines.
- **Program 4.5.2.1:** Discourage the placement of air sensitive uses close proximity to areas with concentrations of pollutants, such as congested traffic intersections.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* was adopted in 2003 and includes an Air Quality section, which details how the City of Lynwood would improve air quality in conformance with State and federal standards. Implementation measures are primarily aimed at sustainable land use and transportation development and include actions such as establishing local shuttle services and providing alternative modes of transportation (City of Lynwood 2003). Relevant implementation measures are as follows:

1.0: Where possible the City will incorporate the following mitigation measures into residential projects:

- Establish shuttle service from neighborhoods to commercial centers
- Construct bus turnouts, passenger benches and shelters
- Provide shuttles to the major transportation centers
- Synchronize traffic signals
- Construct, contribute and dedicate land for the provision of bicycle trails linking users to commuting routes
- Energy conservation measures

City of Paramount

City of Paramount General Plan

Adopted in 2007, the *Paramount General Plan* primarily focuses on the need to continue cooperation with agencies charged with improving air quality in the region and ensure that development mitigates potential air quality impacts (City of Paramount 2007). None of the policies in the *Paramount General Plan* directly address air quality.

City of South Gate

City of South Gate General Plan

A guiding principle of the *South Gate General Plan 2035* (City of South Gate 2009) is to reduce air pollution to improve public health. Relevant air quality policies are as follows:

- **HC 2.1 Policy 1:** The City should make land use and urban design decisions that promote physical activity, promote access to nutritious foods, and reduce air pollution.
- **HC 7.1 Policy 1:** Strategies in the Community Design Element that reduce driving rates and improve air quality through land use and urban design will be implemented by the City and other responsible parties. These strategies include transit-oriented development, compact development, an appropriate mix of land uses, a jobs/housing balance, transit-oriented development, and walkable streets.
- **HC 7.2 Policy 1:** The City will implement strategies in the Mobility Element that improve air quality through transportation. These include multi-modal transit, reduction of VMT through transportation demand management and improved bicycle and pedestrian facilities
- **HC 7.5 Policy 1:** City will ensure that construction activities follow existing SCAQMD rules and regulations.
- **HC 7.5 Policy 2:** All construction equipment for public and private projects will also comply with CARB's vehicle standards. For projects that may exceed daily construction emissions established by SCAQMD, Best Available Control Measures will be incorporated to reduce construction emissions to below daily emission standards established by SCAQMD.
- **HC 7.5 Policy 3:** Project proponents will be required to prepare and implement a Construction Management Plan which will include Best Available Control Measures among others. Appropriate control measures will be determined on a project by project basis, and should be specific to the pollutant for which the daily threshold is exceeded.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 4

City of Bell

City of Bell General Plan

The Resource Management Element of the *City of Bell 2030 General Plan* includes policies that aim to promote the conservation and preservation of important natural resources, including air quality. Provisions primarily include cooperation with regional air quality agencies in the undertaking of any air quality studies and implementing of common regional resource management goals, plans, and programs (City of Bell 2018). None of the policies in the *City of Bell 2030 General Plan* directly address air quality.

City of Bell Gardens

City of Bell Gardens General Plan

Adopted in 1995, the *City of Bell Gardens General Plan 2010* describes existing air quality conditions in the City of Bell Gardens and describes the applicable AQMP and air district regulations. Local actions that would be required or recommended by the AQMP include trip reduction plans,

promotion of alternative modes of transportation, and sustainable development standards (City of Bell Gardens 1995). None of the policies in the *City of Bell Gardens General Plan 2010* directly address air quality.

City of Commerce

City of Commerce General Plan

Adopted in 2008, the Air Quality Element of the *City of Commerce 2020 General Plan* addresses air quality for the City of Commerce. The City of Commerce aims to reduce emissions from stationary and point sources within the city, implement existing regulations concerning emissions from mobile sources, and promote programs and strategies that will be effective in reducing mobile emissions (City of Commerce 2008). Relevant policies are as follows:

- **Air Quality Policy 1.2:** The city of Commerce will encourage the applicants for sensitive land uses (e.g., residences, schools, daycare centers, playgrounds and medical facilities) to incorporate design features (e.g., pollution prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) in the planning process to minimize the potential impacts of air pollution on sensitive receptors.
- **Air Quality Policy 1.3:** The city of Commerce will promote and support mixed-use land patterns that allow the integration of retail, office, institutional and residential uses. Consult with the air quality management district when siting new facilities with dust, odors or TAC emissions to avoid siting those facilities near sensitive receptors and avoid siting sensitive receptors near sources of air pollution.
- **Air Quality Policy 1.4:** The city of Commerce will facilitate communication among residents, businesses and the AQMD to quickly resolve air pollution nuisance complaints. Distribute information to advise residents on how to register a complaint with the SCAQMD.
- **Air Quality Policy 1.5:** The city of Commerce will require that owners of new developments that have the potential to emit air pollutants that would impact sensitive receptors to notify residents and businesses adjacent to the proposed site prior to starting construction.
- **Air Quality Policy 1.6:** The city of Commerce will consider all feasible alternatives to minimize emissions from diesel equipment (e.g., trucks, construction equipment, and generators).
- **Air Quality Policy 2.6:** The city of Commerce will design safe and efficient vehicle access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.
- **Air Quality Policy 2.12:** The city of Commerce will identify and develop non-motorized transportation corridors (e.g., bicycling and pedestrian trails and lanes).
- **Air Quality Policy 3.2:** The city of Commerce will support the development of alternative fuel infrastructure that is publicly accessible.
- **Air Quality Policy 5.1:** The city of Commerce will ensure that all future public facilities and improvements do not have a significant adverse air quality impact on the community and that any such impacts must be mitigated to the fullest extent possible.
- **Air Quality Policy 5.2:** The city of Commerce will oppose the over-concentration of polluting public facilities and improvements.

City of Huntington Park

City of Huntington Park General Plan

The draft *City of Huntington Park 2030 General Plan*'s Resource Management Element includes policies that aim to address air pollution in the City of Huntington Park. Policies include endorsing

regional and local air quality transportation plans and encouraging improvements of existing and development of new transportation systems that reduce vehicle trips and air pollution (City of Huntington Park 2017). Relevant policies are as follows:

- **Resource Management Element Policy 3:** The City of Huntington Park shall encourage the improvement of existing, and the development of new, shuttle, and transit systems to reduce vehicular trips and air pollution.
- **Resource Management Element Policy 4:** The City of Huntington Park shall encourage the use of energy conservation devices in project design and construction to increase energy efficiency and decrease pollution emissions from energy production and use.

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan*'s Conservation Element identified the need to cooperate regionally on improving the environment and air quality in the region. Policies are primarily focused on resource management (City of Maywood 2008). Relevant policies are as follows:

- **Policy 1.2:** Require the lowest pollutant emissions from the city's own vehicle pool and equipment used for government purposes.
- **Policy 3.1:** Development and enforce local criteria of air and water quality so that the city may reduce its share of these regional problems

City of Vernon

City of Vernon General Plan

Amended in 2014, the *City of Vernon General Plan* includes policies that would contribute to the continued gradual improvement of air quality in the air basin. Policies are primarily geared at coordinating with the local air district and metropolitan planning organization and reducing emissions associated with vehicle uses (City of Vernon 2015). Relevant policies are as follows:

- **Policy R-2.2:** Encourage and facilitate the use of public transportation to reduce emissions associated with automobile use.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 5

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 6

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Glendale

City of Glendale General Plan

Published in 1994, the City of Glendale's Air Quality Element of its general plan identifies ways in which the City of Glendale can reduce its emissions of air pollutants, including through various policies and programs, to comply with the region's AQMP. The overall goal of the Air Quality Element is to assist other government agencies in the attainment of healthful air for the City of Glendale, including those sensitive to air pollution (City of Glendale 1994). Relevant objectives are as follows:

- **Objective 1.a:** Reduce Glendale's contribution to regional emissions in a manner both efficient and equitable to residents and businesses, since emissions generated within Glendale affect regional air quality.
- **Objective 4.b:** Promote the use of public transportation and non-polluting transportation in standards for new construction.
- **Objective 4.e:** Coordinate non-automobile transportation systems with surrounding jurisdictions

Frame 7

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Burbank

City of Burbank General Plan

The *Burbank2035 General Plan*'s Air Quality and Climate Change Element contains policies that aim to reduce air pollution, protect people and places from TACs, and reduce odors (City of Burbank 2013). Relevant policies to the Project are as follows:

- **Policy 1.1:** Coordinate air quality planning efforts with local, regional, state, and federal agencies, and evaluate the air quality effects of proposed plans and development projects.
- **Policy 1.2:** Seek to attain or exceed the more stringent of federal or state ambient air quality standards for each criteria air pollutant.
- **Policy 1.3:** Continue to participate in the Cities for Climate Protection Program, SCAQMD's Flag Program, SCAQMD's Transportation Programs (i.e., Rule 2202, Employee Rideshare Program), and applicable state and federal air quality and climate change programs.
- **Policy 1.4:** Cooperate with the EPA, CARB, and SCAQMD to measure air quality at emission sources (including transportation corridors), and enforce the provisions of the Clean Air Act, as well as state and regional policies and established standards for air quality.
- **Policy 1.5:** Require projects that generate potentially significant levels of air pollutants, such as landfill operations or large construction projects, to incorporate best available air quality and greenhouse gas mitigation in project design.
- **Policy 1.6:** Require measures to control air pollutant emissions at construction sites and during soil- disturbing or dust-generating activities (i.e., tilling, landscaping) for projects requiring such activities.
- **Policy 1.7:** Require reduced idling, trip reduction, and efficiency routing of transportation for City departments, where appropriate.

- **Policy 1.8:** Continue to acquire alternative fuel vehicles like hybrid, natural gas, electric, or hydrogen-powered vehicles when adding to the City's vehicle fleet.
- **Policy 1.9:** Encourage the use of zero-emission vehicles, low-emission vehicles, bicycles, and other non-motorized vehicles, and car-sharing programs. Consider requiring sufficient and convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.
- **Policy 1.10:** Give preference to qualified contractors using reduced-emission equipment for City construction projects and contracts for services, as well as businesses that practice sustainable operations.
- **Policy 1.11:** Offer incentives for all City employees to use means other than a single-occupant vehicle for their daily work commute. Require large employers, defined with the City's Transportation Demand Management program to offer similar incentives to reduce employee vehicle trips.
- **Policy 2.2:** Separate sensitive uses such as residences, schools, parks, and day care facilities from sources of air pollution and toxic chemicals.

  Provide proper site planning and design features to buffer and protect when physical separation of these uses is not feasible.
- **Policy 2.4:** Reduce the effects of air pollution, poor ambient air quality, and urban heat island effect with increased tree planting in public and private spaces
- **Policy 2.5:** Require the use of recommendations from CARB's Land Use Handbook to guide decisions regarding location of sensitive land uses.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 8

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 9

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

3.2.3 Impact Analysis

This section describes the impact analysis related to air quality for the two Typical Projects, six kit of parts (KOP) categories, and the overall *2020 LA River Master Plan* implementation. It describes the methods used to determine impacts of the proposed Project and lists the thresholds used to conclude whether an impact would be significant. Measures to avoid or reduce significant impacts accompany each impact discussion, where necessary. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together

where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.2.3.1 Methods for Estimating Emissions

Construction of the *2020 LA River Master Plan* would generate emissions of criteria pollutants and TACs (i.e., DPM) associated with mobile and stationary construction equipment combustion exhaust, fugitive dust (PM_{10} and $PM_{2.5}$) from soil transfer and vehicles traveling on unpaved roads, fugitive off-gassing (VOC) from architectural coatings, and employee and haul truck vehicle combustion exhaust. Operation of the *2020 LA River Master Plan* would result in the generation of criteria pollutant and TAC emissions associated with motor vehicle travel to and from the site, natural gas combustion for space and water heating, area sources associated with consumer products (e.g., cleaning supplies, kitchen aerosols, cosmetics, toiletries), architectural coatings, any stationary sources, and landscaping.

Emissions associated with the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. The two Typical Projects, the Common Elements and the Multi-Use Trails and Access Gateways, are analyzed in greater detail than the other elements based on the design components for which Public Works could make reasonable and informed construction and operations assumptions. The methodology for quantifying construction- and operations-related emissions from the two Typical Projects is presented below.

Quantifying Construction Mass Emissions from the Typical Projects

Mass daily emissions associated with the construction activities have been estimated for the Typical Projects using the most recent version of California Emissions Estimator Model (CalEEMod) (version 2016.3.2) developed by the California Air Pollution Control Officers Association. Given that the specific construction schedule for each element of the Typical Projects is unknown at this point, CalEEMod modeling defaults regarding construction phase types and phase lengths were used to provide a conservative analysis. Public Works developed conservative assumptions related to construction start date, construction duration, construction equipment, soil transfer volume, demolition material volume, haul truck trip distances, number of employees, grading area, and paving area. Public Works has assumed that the earliest the Typical Projects would begin construction is 2021, but actual construction dates would be determined later dependent upon the implementing agency, community needs, policy decisions, and availability of funding. Typical Projects developed in future years would result in less emissions due to expected improvements in engine technologies and increasingly strict regulations governing off-road equipment and vehicles. Therefore, the use of 2021 as the construction year results in a conservative estimate of emissions. The Typical Projects are discussed in more detail in Section 2.5.3, *Project Phasing, Construction, Operations/Maintenance Scenarios*. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

Regarding localized effects, SCAQMD's localized significance threshold (LST) methodology was developed to aid in the analysis of construction associated with land use development projects. SCAQMD's LST methodology focuses on emissions from construction equipment (i.e., loaders, backhoes, forklifts), stationary sources (i.e., natural gas furnaces, emergency generators) and onsite vehicles (i.e., water trucks, dump trucks) operating on site and within the project boundary. The LST methodology and lookup tables are not designed to evaluate impacts from mobile sources traveling

over roadways outside of the project boundary. To account for localized emissions from haul trucks, it was assumed that 10 percent of total offsite mobile emissions would occur at the project site. The inclusion of such emissions likely overstates impacts, as all but a small amount of on-road haul truck use would occur away from the site.

For purposes of analysis, fugitive dust emissions assume compliance with SCAQMD Rule 403, which would reduce fugitive dust emissions by 61 percent by requiring watering three times per day. The exact dust-control methods used for construction will be specified in a dust-control plan that would be submitted to SCAQMD per Rule 403 prior to construction. The Typical Project emissions are presented at the daily time scale and compared with the thresholds discussed in Section 3.2.3.2, below.

Quantifying Operational Mass Emissions from the Typical Projects

Criteria pollutant and TAC emissions associated with the Typical Projects were estimated using the most recent version of CalEEMod (version 2016.3.2). The energy consumption and area source activity rates were based on CalEEMod defaults. The default motor vehicle trip values were adjusted to include activity associated with maintenance work.[1] The Typical Projects have been assumed to begin operation in 2021, but actual construction dates would be determined later depending on the implementing agency, community needs, policy decisions, and availability of funding.

Emissions are presented at the daily time scale and compared with the thresholds discussed in Section 3.2.3.2, *Criteria for Determining Significance*, in this PEIR. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

Regarding localized effects, the LST analysis focuses on criteria pollutant emissions from equipment, vehicle trips, area sources, and stationary sources that would operate on site. Like the construction analysis, to account for the localized emissions from haul trucks, it was assumed that 10 percent of total offsite mobile emissions would occur at the project site. The inclusion of such emissions likely overstates impacts, as all but a small amount of on-road haul truck use would occur away from the site.

For purposes of analysis, the gasoline-powered vehicle emissions outputted by CalEEMod were adjusted to assume implementation of the SAFE Vehicles Rule Part 1, based on CARB guidance (CARB 2019). SAFE Vehicles Rule Part 1 will reduce passenger vehicle fuel efficiency standards in future years, thereby increasing passenger vehicle emissions of criteria pollutants (CARB 2019).

[1] Sources of emissions during maintenance activities could include intermittent vehicle trips from maintenance workers and any area-source landscaping equipment used for maintenance of vegetation. CalEEMod by default quantifies emissions associated with landscaping but does not explicitly do so for maintenance worker vehicle trips. Maintenance would occur at a low frequency and low intensity. The maintenance worker vehicle trips were added to the CalEEMod default vehicle trip values. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

3.2.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.2(a) Conflict with or obstruct implementation of the applicable air quality plan.

3.2(b) Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area with respect to the applicable federal or State ambient air quality standard.

3.2(c) Expose sensitive receptors to substantial pollutant concentrations.

3.2(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G, Section III, of the State CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make determinations regarding air quality impacts. Given SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies established by SCAQMD are relied upon to make determinations regarding air quality impacts, where applicable.

Criteria Pollutants

The significance thresholds and analysis methodologies outlined in SCAQMD's *CEQA Air Quality Handbook* (SCAQMD 1993), *Final Localized Significance Threshold Methodology* (SCAQMD 2008a), and *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds* (SCAQMD 2008b) guidance documents were used in evaluating project impacts. Specifically, the SCAQMD construction and operational regional mass emissions thresholds identified in Table 3.2-4, below, were used for the regional assessment of criteria pollutants herein.

With respect to localized emissions, SCAQMD has developed LSTs and mass rate look-up tables to help public agencies analyze the project-related effects of pollutants on nearby receptors. The LSTs are based on (1) the size or total area of the emissions source, (2) the distance to nearby sensitive receptor locations, and (3) the ambient air quality in each source receptor area (SRA) where the emissions sources are located.

1. **Size.** The LST categories for size (acres) are less than or equal to 1 acre, 2 acres, and greater than or equal to 5 acres. For the Typical Projects, the Common Elements Typical Project (Tier III pavilion) would be approximately 3 acres and the Multi-Use Trails and Access Gateways Typical Project would be approximately 24 acres (based on a 5-mile length and 40-foot width). Accordingly, the highest LST category for a size of greater than or equal to 5 acres was used for both of the Typical Projects.
2. **Distance.** The LST categories for distance (meters) to nearby sensitive receptor locations range from less than or equal to 25 meters, 50 meters, 100 meters, or 200 meters, to greater than or equal to 500 meters. The Typical Projects could be sited between the top of levee and the fenceline at any location in the study area. Accordingly, it was conservatively assumed that a sensitive receptor could be within 25 meters of the Typical Projects for any of the nine planning frames.

3. **SRA.** The LST SRA for a project is based on the city or community within which the project is located. The nine planning frames of the study area consist of several SRAs: 1, 2, 4, 5, 7, 11, and 12 (SCAQMD 2009). To create a worst-case scenario using a 5-acre project distanced 25 meters from the nearest sensitive receptor, the Typical Projects were conservatively compared with the lowest, and therefore strictest, criteria pollutant LST from these SRAs. If the LSTs would not be exceeded by the Typical Projects under the worst-case scenario SRA, then the LSTs would not be exceeded by the Typical Projects in any of the SRAs that occur in the nine planning frames. The worst-case LSTs used to assess the impacts of the Typical Projects are presented in Table 3.2-4 below.

Table 3.2-4. SCAQMD Significance Thresholds (pounds per day)

Threshold per Activity	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$	Pb[a]
Localized Significance Thresholds[b]							
Construction	N/A	98	630	N/A	13	6	N/A
Operation	N/A	98	630	N/A	3	2	N/A
Regional Significance Thresholds							
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source: SCAQMD 2009, 2019.

[a] The Project would result in no Pb emissions during construction or operations due to the prohibition of Pb in fuels. As such, Pb emissions are not evaluated herein.

[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (6 Cal. 5th 502), hereafter referred to as the Friant Ranch Decision. The case reviewed the long-term regional air quality analysis contained in the EIR for the proposed Friant Ranch development project, a 942-acre master-planned development in unincorporated Fresno County within the San Joaquin Valley Air Basin, which is currently in nonattainment for the ozone and $PM_{2.5}$ NAAQS and CAAQS. The court found that the air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The court's decision clarifies that environmental documents must connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

As discussed in Section 3.2.2, *Setting*, of this PEIR, all criteria pollutants that would be generated by the proposed Project are associated with some form of health risk (e.g., asthma). Criteria air pollutants can be classified as either regional or localized pollutants: regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source, and localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and Pb are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (VOCs and NO_X), CO, and PM (including DPM).

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the proposed Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (VOCs and NO_X) contribute to the formation of ground-borne ozone on a regional scale, where emissions of VOC and NO_X generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to an individual project.

Moreover, exposure to regional air pollution does not guarantee that an individual will experience an adverse health effect—as discussed above, there are large individual differences in the intensity of symptomatic responses to air pollutant. These differences are influenced, in part, by the underlying health condition of an individual, which cannot be known.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. While there are models capable of quantifying ozone and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment cannot be estimated with a high degree of accuracy for relatively small projects (relative to the regional air basin).

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the State, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD, both of which provided *amici curiae* briefs for the Friant Ranch legal proceedings. In its brief, SJVAPCD acknowledged that while health risk assessments (HRAs) for localized TACs, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task." SJVAPCD further noted that emissions solely from the Friant Ranch project (which equate to less than 0.1 percent of the total NO_X and VOC in the Valley) are not likely to yield valid information, and that any such information should not be "accurate when applied at the local level" (SJVAPCD 2015). SCAQMD presented similar information in its brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels"[2] (SCAQMD 2015b).

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS, both of which are informed by a wide range of scientific evidence that

[2] For example, SCAQMD's analysis of its 2012 Air Quality Attainment Plan showed that modeled NO_X and ROG reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 parts per billion. Analysis of SCAQMD's Rule 1315 showed that emissions of NO_X and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absences (SCAQMD 2015b).

demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and to not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by a project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and PM pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

Localized Project-Generated Criteria Pollutants (PM and CO) and Air Toxics (DPM)

Localized pollutants generated by a project are deposited and potentially affect population near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. Models and thresholds are readily available to quantify these potential health effects and evaluate their significance. Locally adopted thresholds and analysis procedures for the localized pollutants of concern associated with the proposed Project (DPM, CO, asbestos)[3] are identified below.

Toxic Air Contaminants

The California Supreme Court has held that lead agencies are not required to analyze the impacts of the environment on a project's future users or residents, unless the project exacerbates existing environmental hazards (see *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.41h 369*) or when the legislature has indicated by specific California Public Resources Code sections (21096, 21151.8, 21155.1, 21159.21, 21159.22, 21159.23, and 21159.24) that specifically defined environmental hazards associated with airport noise and safety, school projects, certain kinds of infill housing, and transit priority projects must be addressed. Certain land use types proposed under the Project may introduce emission sources (e.g., generators, delivery trucks) that would exacerbate existing environmental TAC hazards. The Project could introduce new sensitive receptors to the project study area, including residences, that may be exposed to the exacerbated existing TAC hazard. Accordingly, this analysis considers both potential effects of project development on existing receptors, as well as effects of the environment on project receptors.

Regarding sensitive receptors' exposure to substantial pollutant concentrations, SCAQMD (2019) states that a project would have a significant impact from TACs if:

- TACs increase the non-cancer health risk due to short-term (i.e., acute) or long-term (i.e., chronic) exposures. The screening risk assessment for those TACs must estimate the acute and/or chronic Hazard Index, as applicable. Onsite stationary sources emit carcinogenic contaminants or TACs that individually or cumulatively exceed the maximum incremental cancer risk of 10 in 1 million (1.0×10^{-5}) or an acute or chronic Hazard Index of 1.0.

[3] Although SO_2, NO_2, and Pb may also concentrate locally, the proposed Project would not represent a significant source of these pollutants at the local level. Accordingly, they are not discussed or evaluated further.

Carbon Monoxide Hot Spots

A CO *hot spot* is a localized concentration of CO that is above the State or national 1-hour or 8-hour ambient air standards for the pollutant. To determine the potential for localized CO impacts occurring from the addition of project-associated traffic volumes at intersections, SCAQMD's suggested criteria recommend performing a localized CO impact analysis for intersections that change from level of service (LOS) C to D as a result of a project and for all intersections rated LOS D or worse where the project increases the volume-to-capacity (V/C) ratio by 2 percent or more.

As part of SCAQMD's 2003 AQMP, which is the most recent AQMP that addresses CO concentrations, a detailed CO hot spots analysis was conducted at four heavily congested intersections in the Basin that were likely to experience the highest CO concentrations.

- Long Beach Boulevard and Imperial Highway: proximity to the Lynwood monitoring station, which consistently records the highest 8-hour CO concentrations in the Basin each year
- Wilshire Boulevard and Veteran Avenue: the most congested intersection in the County, with an average daily traffic volume of 100,000 vehicles
- Highland Avenue and Sunset Boulevard: one of the most congested intersections in the City of Los Angeles
- Century Boulevard and La Cienega Boulevard: one of the most congested intersections in the City of Los Angeles

The CO hot spots analysis in the 2003 AQMP did not predict a violation of CO standards at the four intersections. Based on the CO modeling for attainment demonstration, the 2003 AQMP disclosed a worst-case 8-hour background CO concentration of 7.8 ppm. As shown earlier in Table 3.2-1, the maximum recorded background CO concentration in the project area in the past 3 years is 2.6 ppm for the 8-hour averaging period. This value is considerably less than the 8-hour average maximum background concentration of 7.8 ppm observed during the 2003 AQMP attainment demonstration.

Asbestos

There are no quantitative thresholds related to receptor exposure to asbestos. However, SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of ACM. This rule is generally designed to protect the health and safety of the public in proximity to demolition or renovation activity from exposure to asbestos emissions. Rule 1403 requires surveys of any facility being demolished or renovated for the presence of ACM. Rule 1403 also establishes notification procedures, handling operations, warning label requirements, and removal procedures, including complying with the limitations of the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in Code of Federal Regulations, Title 40, Part 61.

Cumulative Impacts

Potential cumulative air quality impacts would result when other projects' pollutant emissions combine with emissions associated with the *2020 LA River Master Plan* to degrade air quality conditions below acceptable levels. This could occur on a local level (e.g., increased vehicle emissions at congested intersections or concurrent construction activities at sensitive receptor locations) or a regional level (e.g., potential ozone impacts from multiple past, present, and

reasonably foreseeable projects within the Basin). Given that both localized and regional pollution is regulated at the air basin level, the Basin is the resource study area for the purposes of air quality.

The Basin experiences chronic exceedances of the NAAQS and CAAQS and is currently in nonattainment status for various criteria pollutants (see Table 3.2-3). These nonattainment conditions within the region are considered cumulatively significant. SCAQMD thresholds have been established to ensure attainment of the NAAQS and CAAQS; therefore, an exceedance of SCAQMD threshold levels must be considered a significant cumulative impact and an adverse cumulative consequence.

3.2.3.3 Impacts and Mitigation

Impact 3.2(a): Would the proposed Project conflict with or obstruct implementation of the applicable air quality plan?

SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Basin is in nonattainment status. SCAQMD's most recent plan to achieve air quality standards is the 2016 AQMP, adopted by the SCAQMD Governing Board on March 3, 2017. The AQMP outlines a comprehensive control strategy to meet the requirement for expeditious progress toward attainment of the NAAQS for 2006 24-hour $PM_{2.5}$ and 2012 annual $PM_{2.5}$ through all feasible control measures. The 2016 AQMP also includes specific measures for implementing the ozone strategy from previous AQMPs and attaining the 8-hour ozone standard by 2031 (SCAQMD 2017). These strategies are based, in part, on regional growth (i.e., changes in population, housing, and employment) projections prepared by the region's cities and counties and incorporated by SCAG. As such, projects that propose development that is consistent with anticipated regional growth are considered to be consistent with the AQMP. Furthermore, projects must comply with applicable SCAQMD rules and regulations.

Typical Projects

Common Elements

Construction

As discussed in Section 3.13, *Population and Housing*, it is not anticipated that construction of the Common Elements Typical Project would result in substantial unplanned population growth in the County. Therefore, pursuant to SCAQMD guidelines, because the Common Elements Typical Project would be consistent with the anticipated regional growth, it is considered consistent with the region's AQMP. As such, project-related construction emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Furthermore, the Common Elements Typical Project would comply with the applicable SCAQMD Rules 402, 403, 1108, 1113, and 1403 (further described in Section 3.2.2.2, *Regulatory*). Therefore, construction of the Common Elements Typical Project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

As discussed in Section 3.13, *Population and Housing*, it is not anticipated that operation of the Common Elements Typical Project would result in substantial unplanned population growth in the County. Therefore, pursuant to SCAQMD guidelines, because the Common Elements Typical Project would be consistent with the anticipated regional growth, it is considered consistent with the region's AQMP. As such, project-related operation emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Therefore, operation of the Common Elements Typical Project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

The impact discussion above for the Common Elements Typical Project would similarly apply to the Multi-Use Trails and Access Gateway Typical Project because construction of the Multi-Use Trails and Access Gateways Typical Project is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

The impact discussion above for the Common Elements Typical Project would similarly apply to the Multi-Use Trails and Access Gateways Typical Project because operation of the Multi-Use Trails and Access Gateways Typical Project is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Because the impacts for KOP Categories 1 through 5 are the same, these impact analyses are grouped together. The impact for KOP Category 6 is analyzed separately.

KOP Categories 1 through 5

Construction

The impact discussion above for the Common Elements Typical Project would similarly apply to KOP Categories 1 through 5 because construction of these KOP categories is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

The impact discussion above for the Common Elements Typical Project would similarly apply to KOP Categories 1 through 5 because operation of these KOP categories is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

The impact discussion above for the Common Elements Typical Project would similarly apply to KOP Category 6 because construction of this KOP category is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Implementation of KOP Category 6 is unique compared to the Typical Projects and KOP Categories 1 through 5 in that operations could include affordable housing. However, as discussed in Section 3.13, *Population and Housing*, the population growth from the increase in residences under KOP Category 6 is not anticipated to result in substantial unplanned population growth in the County. Therefore, pursuant to SCAQMD guidelines, because this KOP category would be consistent with the anticipated regional growth, it would be considered consistent with the region's AQMP. As such, associated emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Furthermore, KOP Category 6 would comply with the applicable SCAQMD Rules 402, 403, 1108, 1113, 1403, and 1470 (further described in Section 3.2.2.2, *Regulatory*). Therefore, operation of KOP Category 6 would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan's* nine objectives. These would include the two Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan.*

Construction

Similar to the impact discussion above for the KOP categories, because construction of the *2020 LA River Master Plan* is not anticipated to result in substantial unplanned population growth in the County, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Similar to the impact discussion above for the KOP categories, because operation of the overall *2020 LA River Master Plan* is not anticipated to result in substantial unplanned population growth in the County, the impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.2(b): Would the proposed Project result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area with respect to the applicable federal or State ambient air quality standard?

The significance of this impact is determined based on SCAQMD's regional and localized thresholds (see Table 3.2-4). The regional thresholds are applicable to projects within the Basin. As all of the nine planning frames are within the Basin, the analysis of the regional impacts applies equally to projects in all nine frames. For purposes of estimating, the proposed Project is conservatively compared with the lowest, and therefore strictest, criteria pollutant LST from the SRAs within the nine planning frames of the project study area, using a 5-acre project distanced 25 meters from the nearest sensitive receptor (see Section 3.2.3.2, *Criteria for Determining Significance*, for discussion of how this LST was chosen). If the LSTs would not be exceeded by the proposed Project under the worst-case scenario SRA, then the LSTs would not be exceeded by the proposed Project in any of the SRAs that occur in the nine planning frames. Therefore, the analysis of the localized emissions applies equally to projects in all nine frames.

Typical Projects

Common Elements

Construction

Regional Impacts

Construction of the Common Elements Typical Project would generate air pollutant emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating activities would release VOCs from off-gassing. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403.

As shown in Table 3.2-5 below, maximum daily project-related criteria and precursor pollutant emissions associated with the Common Elements Typical Project would not exceed any SCAQMD regional construction-period thresholds.

Table 3.2-5. Common Elements Typical Project Daily Construction-Period Regional Mass Emissions (pounds per day)

Construction Phase	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	1	20	9	<1	3	1
Site Preparation	1	8	10	<1	1	<1
Grading	3	40	20	<1	2	1
Building Construction	1	14	8	<1	1	1
Paving	1	8	10	<1	1	<1
Architectural Coatings	3	<1	1	<1	<1	<1
Maximum Daily Regional Emissions	3	40	20	<1	3	1

Construction Phase	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from construction activities at the site and in the immediate vicinity of the Common Elements Typical Project area sensitive receptors. Onsite construction equipment emissions are considered, as well as 10 percent of offsite emissions to account for haul truck emissions on and around the project site. Table 3.2-6 shows the onsite emissions estimates for each of the modeled phases of the Common Elements Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-6. Common Elements Typical Project Daily Construction Period Localized Onsite Emissions (pounds per day)

Construction Phase	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	11	6	3	1
Site Preparation	8	9	<1	<1
Grading	30	17	1	1
Building Construction	12	6	1	<1
Paving	8	9	<1	<1
Architectural Coatings	<1	<1	<1	<1
Maximum Daily Onsite Emissions[a]	30	17	3	1
SCAQMD Localized Significance Threshold[b]	98	630	13	6
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Regional Emissions

Operation of the Common Elements Typical Project would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions associated with landscaping.

Operation-related emissions are shown in Table 3.2-7, below. Maximum daily project-related criteria and precursor pollutant emissions associated with the Common Elements Typical Project would not exceed any SCAQMD regional operation-period thresholds.

Table 3.2-7. Common Elements Typical Project Daily Operation Regional Mass Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<1	<1	<1	<1	<1	<1
Energy	<1	1	<1	<1	<1	<1
Mobile	8	37	84	<1	23	6
Total Daily Regional Emissions	8	37	84	<1	23	6
SCAQMD Regional Operation Threshold	55	55	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from operations activities that would occur at the site and in the immediate vicinity of project area sensitive receptors. Onsite area and energy emissions are considered, as well as 10 percent of offsite emissions to account for vehicle trip emissions on and around the project site. Table 3.2-8 shows the onsite emissions estimates for each of the modeled phases of the Common Elements Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-8. Common Elements Typical Project Daily Operation Period Localized Onsite Emissions (pounds per day)

Source	NOX	CO	PM_{10}	$PM_{2.5}$
Area	<0.1	<0.1	<0.1	<0.1
Energy	0.6	0.5	<0.1	<0.1
Mobile	3.7	8.4	2.3	0.6
Total Daily Onsite Emissions[a]	4.2	8.9	2.3	0.7
SCAQMD Localized Significance Threshold[b]	98	630	3	2
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Regional Emissions

Construction of the Multi-Use Trails and Access Gateways Typical Project would generate air pollutant emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating operations would release VOCs from off-gassing. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403.

Construction-related emissions are shown in Table 3.2-9, below. Maximum daily project-related criteria and precursor pollutant emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any SCAQMD regional construction-period thresholds.

Table 3.2-9. Multi-Use Trails and Access Gateways Typical Project Daily Construction-Period Regional Mass Emissions (pounds per day)

Construction Phase	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	2	26	16	<1	3	1
Site Preparation	1	9	6	<1	<1	<1
Grading	3	59	21	<1	4	2
Building Construction	1	23	10	<1	1	1
Paving	1	21	9	<1	1	1
Architectural Coatings	2	6	7	<1	<1	<1
Maximum Daily Regional Emissions	3	59	21	<1	4	2
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from construction activities that would occur at the site and in the immediate vicinity of project area sensitive receptors. Onsite construction equipment emissions are

considered, as well as 10 percent of offsite emissions to account for haul truck emissions on and around the project site. Table 3.2-10 shows the onsite emissions estimates for each of the modeled phases of the Multi-Use Trails and Access Gateways Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-10. Multi-Use Trails and Access Gateways Typical Project Daily Construction Period Localized Onsite Emissions (pounds per day)

Construction Phase	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	18	14	3	1
Site Preparation	9	6	<1	<1
Grading	14	9	1	1
Building Construction	8	5	<1	<1
Paving	7	5	<1	<1
Architectural Coatings	6	7	<1	<1
Maximum Daily Onsite Emissions[a]	18	14	3	1
SCAQMD Localized Significance Threshold[b]	98	630	13	6
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Regional Emissions

Operation of the Multi-Use Trails and Access Gateways Typical Project would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions associated with landscaping.

Operation-related emissions are shown in Table 3.2-11, below. Maximum daily project-related criteria and precursor pollutant emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any SCAQMD regional operation-period thresholds.

Table 3.2-11. Multi-Use Trails and Access Gateways Typical Project Daily Operation Regional Mass Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	1	5	11	<1	3	1
Total Daily Regional Emissions	1	5	11	<1	3	1
SCAQMD Regional Operation Threshold	55	55	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from operations activities that would occur at the site and in the immediate vicinity of project area sensitive receptors. Onsite area and energy emissions are considered, as well as 10 percent of offsite emissions to account for vehicle trip emissions on and around the project site. Table 3.2-12 shows the onsite emissions estimates for each of the modeled phases of the Multi-Use Trails and Access Gateways Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-12. Multi-Use Trails and Access Gateways Typical Project Daily Operation Period Localized Onsite Emissions (pounds per day)

Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	<0.1	<0.1	<0.1
Mobile	0.5	1.1	0.3	<0.1
Total Daily Onsite Emissions[a]	0.5	1.1	0.3	<0.1
SCAQMD Localized Significance Threshold[b]	98	630	3	2
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

As discussed above, the wide-ranging functions, characteristics, and complexity of the KOP categories and their respective design components—along with the lack of specific sites or detailed design information—make it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for these elements of the *2020 LA River Master Plan*. The specific location (in-channel/off-channel, frame, etc.), configuration, and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing agency, community needs, policy decisions, and availability of funding. Accordingly, the six KOP categories are qualitatively analyzed at a high level for this impact.

Because the impacts for the six KOP categories are the same, the impact analyses are grouped together.

KOP Categories 1 through 6

Projects under the KOP categories would likely be substantially larger than the Typical Projects. Because details about the KOP categories are unknown, emissions associated with construction and operations activities have not been quantified.

Construction

Implementation of the KOP categories would result in the generation of air pollutant emissions from heavy-duty construction equipment, construction worker vehicle trips, material deliveries, trips by heavy-duty haul trucks, earthwork activities, and other construction activities. Such emissions could exceed construction thresholds for regional and localized pollutant emissions depending on the schedules, equipment used, and material movement required.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

In the event that construction of an individual KOP category would result in emissions that exceed regional or localized standards, implementation of the following mitigation measures would be required for that KOP category.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

In the event that construction-period emissions exceed regional or localized emissions standards in effect at the time that subsequent project details are known, implementing agencies will implement the following or more effective measures to achieve emissions reductions:

- For exceedances of PM or NO_X regional or localized significance thresholds, the implementing agency (or its contractors) will:
    - **Require at Least Tier 4 Final Engines on Construction Equipment.** All off-road equipment greater than 50 horsepower and operating for more than 20 total hours over the entire duration of construction activities will operate on at least an EPA-approved Tier 4 Final or newer engine.
    - **Require Best Available Control Technology on Construction Equipment.** All construction off-road equipment must be outfitted with Best Available Control Technology devices including, but not limited to, CARB-certified Level 3 Diesel Particulate Filters.
    - **Require Use of Diesel Trucks with 2010-Compliant Model Year Engines.** Diesel trucks that have 2010 model year or newer engines, but no less than the average fleet mix for the current calendar year as set forth in CARB's EMFAC database, must be used. In the event that 2010 model year or newer diesel trucks cannot be obtained, a rationale explaining why and showing that a good-faith effort to locate such engines was conducted must be documented.
    - **Require Low-VOC Coatings during Construction.** To reduce construction-related fugitive VOC emissions beyond the requirements of SCAQMD Rule 1113, low-VOC coatings that have a VOC content of 25 grams per liter or less will be used during construction. Evidence must be submitted to SCAQMD detailing the use of low-VOC coatings prior to the start of construction.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions.*

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Although Mitigation Measures GHG-2 and AQ-1 would control construction-period emissions under the KOP categories, it cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Operations

Operation of the KOP categories would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, landscaping, and other sources. Emissions could exceed operational thresholds for regional and localized pollutant emissions depending on project details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

The implementing agency will verify if operations air pollutant emissions exceed regional or localized VOC emissions standards in effect at the time that subsequent project details are

known. In the event that operations emissions under subsequent projects exceed regional or localized VOC emissions standards, the implementing agency will implement the following to achieve VOC emissions reductions during operations.

- Use low-VOC coatings (VOC content less than or equal to 25 grams per liter) for periodic painting and facility upkeep.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

As discussed in Section 3.16, *Transportation*, multiple design components of KOP Categories 1 through 6 were determined to have the potential to generate a significant vehicle miles traveled (VMT) impact. If, as part of Mitigation Measure TRA-1a, the subsequent project cannot be screened out using the County's VMT impact criteria and the VMT is determined to exceed the threshold based on applicable guidelines and project type, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing transportation demand management (TDM) strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT, this mitigation measure would also reduce criteria air pollutant emissions from vehicles associated with operations.

These mitigation measures can be implemented in any combination to further reduce the emissions.

Significance after Required Mitigation

Although Mitigation Measures GHG-1a, AQ-2, and TRA-1b would control operation period emissions under the KOP categories, it cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

The impact discussion above for the six KOP categories would similarly apply to the overall *2020 LA River Master Plan*.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

On a project-by-project basis, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

On a project-by-project basis, apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

It cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Operations

The impact discussion above for the six KOP categories would similarly apply to the overall *2020 LA River Master Plan*.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

On a project-by-project basis, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

On a project-by-project basis, apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

On a project-by-project basis, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

It cannot be stated with certainty that emissions from the overall *2020 LA River Master Plan* would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Impact 3.2(c): Would the proposed Project expose sensitive receptors to substantial pollutant concentrations?

Similar to Impact 3.2(b), the significance of this impact is determined, in part, based on SCAQMD's regional and localized thresholds (see Table 3.2-4). The analysis of the regional and localized impacts would apply equally to projects in all nine frames. The significance determination for the other elements of Impact 3.2(c) (i.e., health risks, CO hot spots, asbestos) are also not based on frame-specific information. As such, this analysis would apply equally to projects in all nine planning frames.

Typical Projects

The primary pollutants of concern to human health generated by the *2020 LA River Master Plan* construction are criteria pollutants and TACs. Both pollutants and their potential impacts on receptors are analyzed below.

Common Elements

Construction

Criteria Pollutants

As shown in Table 3.2-5, above, the estimated regional construction emissions associated with the Common Elements Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-6, above, estimated localized construction emissions associated with the Common Elements Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. The LSTs represent emission levels that would cause or contribute to a violation of any short-term NAAQS or CAAQS for a particular area, and because the Common Elements Typical Project would not exceed these LSTs, the Common Elements Typical Project would not cause or contribute to a violation of any health-protective standard. Accordingly, an analysis correlating the relatively minor emissions generated by construction of the Common Elements Typical Project with specific levels of health impacts would not yield reliable or accurate results and has therefore not been conducted. Furthermore, it should be noted that the NAAQS and CAAQS are health-protective standards and define the maximum amount of ambient pollution that can be present without harming public health. SCAQMD's LSTs represent the level of pollutant emissions from onsite sources from a project that would not exceed the most stringent applicable federal or State ambient air quality standards. As such, projects with emissions below the applicable LSTs will not be in violation of the NAAQS or CAAQS, and, by extension, EPA and CARB health-protective standards. As shown in Table 3.2-6, the maximum daily emissions from construction would not exceed the applicable LSTs. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Common Elements Typical Project would not be expected to contribute a significant level of air pollution during construction such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk.

Asbestos

Demolition of existing structures results in particulates that may disperse ACM to adjacent sensitive receptor locations. ACM were commonly used as fireproofing and insulating agents prior to the 1970s. The U.S. Consumer Product Safety Commission banned use of most ACM in 1977 due to its link to mesothelioma. Structures constructed prior to 1977 that would be demolished by the development supported by the Common Elements Typical Project may have used ACM and could expose receptors to asbestos, which may become airborne with other particulates during demolition. However, demolition activities during construction would comply with SCAQMD Rule 1403, which specifies work practices to limit asbestos emissions from building demolition to protect surrounding uses from exposure to asbestos emissions. Furthermore, all demolition activities would be subject to EPA's asbestos NESHAP if asbestos is present at the existing facilities. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of ACM. Asbestos emissions would be controlled according to SCAQMD and EPA regulations.

Toxic Air Contaminants

Construction of the Common Elements Typical Project would generate onsite DPM emissions from diesel-powered construction equipment and vehicles that could expose adjacent receptors to significant health risks. Without specific details on the locations of building footprints, a quantitative evaluation of potential health risk impacts is not possible. Depending on the proximity of an individual development of the Common Elements Typical Project, there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Construction of the Common Elements Typical Project would not be expected to contribute a substantial level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. Asbestos emissions would be controlled according to SCAQMD and EPA regulations. Without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

For subsequent projects that (1) exceed the SCAQMD LSTs and (2) are within 1,000 feet of existing sensitive receptors, as defined by SCAQMD (e.g., residences, daycares), the implementing agency will prepare a site-specific construction and operational HRA. The HRA must identify whether the health risk exposures for adjacent receptors will be less than the SCAQMD project-level thresholds. If the HRA demonstrates that the health risk exposures for adjacent receptors will be less than SCAQMD project-level thresholds, then additional mitigation will be unnecessary. However, if the HRA demonstrates that health risks will exceed SCAQMD project-level thresholds, additional on- and offsite mitigation will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable. Mitigation Measures AQ-1 and GHG-2 will be required.

On a project-by-project basis, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Because it cannot be concluded what the result of the subsequent project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operation

Criteria Pollutants

As shown in Table 3.2-7, above, the estimated regional operations emissions associated with the Common Elements Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-8, above, estimated localized construction emissions associated with operations of the Common Elements Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. The LSTs represent emission levels that would cause or contribute to a violation of any short-term NAAQS or CAAQS for a particular area, and because the Common Elements Typical Project would not exceed these LSTs, the Common Elements Typical Project would not cause or contribute to a violation of any health-protective standard. Accordingly, an analysis correlating the relatively minor emissions generated by operation of the Common Elements Typical Project with specific levels of health impacts would not yield reliable or accurate results and has therefore not been conducted. Furthermore, it should be noted that the NAAQS and CAAQS are health-protective standards and define the maximum amount of ambient pollution that can be present without harming public health. SCAQMD's LSTs represent the level of pollutant emissions from onsite sources from a project that would not exceed the most stringent applicable federal or State ambient air quality standards. As such, projects with emissions below the applicable LSTs will not be in violation of the NAAQS or CAAQS, and, by extension, EPA and CARB health-protective standards. As shown in Table 3.2-8, the maximum daily emissions from operations would not exceed the applicable LSTs. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Common Elements Typical Project would not be expected to contribute a significant level of air pollution during operations such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk.

CO Hot Spots

It should be noted that ambient concentrations of CO have declined considerably in California because of existing controls and programs aimed at reducing air pollutant emissions. Most areas of the State, including the region in which the Common Elements Typical Project is located, meet the State and federal CO standards.

To determine the potential for localized CO impacts occurring from the addition of project-associated traffic volumes at intersections, SCAQMD's suggested criteria recommend performing a localized CO impact analysis for intersections that change from LOS C to D as a result of a project and for all intersections rated LOS D or worse where a project increases the V/C ratio by 2 percent or more. It is also common practice to compare the highest daily traffic volumes that would occur among the study intersections analyzed for a project with the highest traffic volumes at the busiest intersection evaluated in the 2003 AQMP to evaluate the potential for a project to result in any localized CO impacts.

The specific location and design details of the Common Elements Typical Project are currently unknown. As such, it is not possible to analyze the effect of project-generated traffic on LOS for unknown intersections or daily traffic volume for unknown roadways in the project area. However, it is unlikely that 1-hour or 8-hour CO concentrations generated along project vicinity roadways would not exceed CAAQS for CO.

Based on ambient air monitoring data collected by SCAQMD, the Basin has continually met State and federal ambient air quality standards for CO since 2003. As such, the Basin was reclassified to attainment/maintenance status from serious nonattainment, effective June 11, 2007. While the Final 2016 AQMP is the most recent AQMP, no additional regional or hot-spot CO modeling has been conducted to demonstrate attainment of the 8-hour average CO standard since the analysis provided in the 2003 AQMP.

As shown earlier in Table 3.2-1, the maximum recorded background CO concentration in the project area in the past 3 years is 2.6 ppm for the 8-hour averaging period. This value is considerably less than the 8-hour average maximum background concentration of 7.8 ppm observed during the 2003 AQMP attainment demonstration.

Due to this considerable reduction in ambient background CO concentrations, and the low trip-generation nature of operations of the Common Elements Typical Project, it is not anticipated that the Common Elements Typical Project would cause local CO concentrations to exceed 1-hour or 8-hour CO standards.

Toxic Air Contaminants

The Common Elements Typical Project would not introduce new sensitive land uses (e.g., residences, schools, hospitals, convalescent homes, daycare centers) that may have sensitive receptors exposed to any existing TAC hazard exacerbated by the Common Elements Typical Project. Accordingly, no analysis of the potential effect of the environment on Common Elements Typical Project receptors is required. This analysis considers the effect of the Common Elements Typical Project development on existing receptors.

Operation of the Common Elements Typical Project is not anticipated to generate a substantial amount of onsite DPM emissions from diesel-powered maintenance equipment or diesel-powered trucks that could expose adjacent receptors to significant health risks. Furthermore, no diesel-powered stationary sources (e.g., generators, boilers) are anticipated to be constructed. However, without specific details on the locations of building footprints, a quantitative evaluation of potential health risk impacts is not possible. Depending on the proximity of an individual development of the Common Elements Typical Project, there may be instances where DPM emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Operation of the Common Elements Typical Project would not be expected to contribute a substantial level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. It not anticipated that the Common Elements Typical Project would exceed the most stringent 1-hour CO standard and no detailed CO hot spots analysis would be required. No analysis of the potential effect of the environment on Common Elements Typical Project's receptors is required given that the Common Elements Typical Project would not introduce new sensitive land uses to the project study area. However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-2: Implement Operations Emissions-Reduction Strategies.

Mitigation Measure AQ-3: Require Future Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Multi-Use Trails and Access Gateways

Construction

Impacts from construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above.

As shown in Table 3.2-9, above, the estimated regional construction emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-10, above, estimated localized construction emissions associated with construction of the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Multi-Use Trails and Access Gateways Typical Project would not be expected to contribute a significant level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. However, without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Mitigation Measure AQ-3: Require Future Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operations

Impacts from operation of the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above.

As shown in Table 3.2-11, above, the estimated regional operation emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-12, above, estimated localized operation emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Multi-Use Trails and Access Gateways Typical Project would not be expected to contribute a significant level of air pollution during operations such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk.

It is not anticipated that the Multi-Use Trails and Access Gateways Typical Project would exceed the most stringent 1-hour CO standard and no detailed CO hot spots analysis would be required. The Multi-Use Trails and Access Gateways Typical Project is not expected to result in high additional traffic volumes at the roadways within the project vicinity. The main objective of the Multi-Use Trails and Access Gateways Typical Project is to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians.

However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions during operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

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The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

Because the impacts for KOP Categories 1 through 5 are the same, these impact analyses are grouped together. The impact for KOP Category 6 is analyzed separately.

KOP Categories 1 through 5

The specific location and design details for the KOP Categories 1 through 5 are currently unknown. Projects under the KOP categories would likely be substantially larger than the Typical Projects. Because details about the KOP categories are unknown, emissions associated with construction and operations activities have not been quantified.

Impacts from the KOP categories would be similar to those of the Typical Projects described above. The difference in construction and operations impacts is discussed below.

Construction

As discussed above for Impact 3.2(b), implementation of the KOP categories would result in the generation of air pollutant emissions during construction activities. Because the specific location (in-channel/off-channel, frame, etc.), configuration, and design details about KOP Categories 1 through 5 are unknown, emissions associated with construction activities under the KOP categories have not been quantified. Unlike under the Typical Projects, such emissions could exceed construction

thresholds and expose sensitive receptors to substantial pollutant concentrations, depending on the schedules, equipment used, and material movement required. These emissions, if left unmitigated, could contribute to ground-level ozone formation in the Basin, which at certain concentrations, can contribute to short- and long-term human health effects. Certain individuals residing in areas that do not meet the CAAQS or NAAQS, including the Basin, could be exposed to pollutant concentrations that cause or aggregate acute and/or chronic health conditions (e.g., asthma, lost work days, premature mortality). As previously discussed, the magnitude and locations of any potential changes in ambient air quality, and related health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure). Similar limitations exist for precisely modeling project-level health consequences of directly emitted DPM. However, it is known that public health will continue to be affected in the Basin so long as the region does not attain the CAAQS or NAAQS.

Impact Determination

In the event that KOP Categories 1 through 5 construction activities result in emissions that exceed regional or localized standards at the time plans for the development are further developed, a potentially significant impact would occur. In addition, without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, KOP Categories 1 through 5 would potentially expose sensitive receptors to substantial pollutant concentrations during construction resulting in a potentially significant impact.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific construction HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation would be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operations

As discussed above for Impact 3.2(b), the implementation of the KOP categories would result in the generation of air pollutant emissions during operations activities. Because the specific location (in-channel/off-channel, frame, etc.), configuration, and design details about KOP Categories 1 through 5 are unknown, emissions associated with operations activities under the KOP Categories have not been quantified. Unlike under the Typical Projects, such emissions could exceed operation thresholds and expose sensitive receptors to substantial pollutant concentrations, depending on the operational sources of emissions (e.g., diesel-fueled equipment, trucks, and stationary sources). These emissions, if left unmitigated, could contribute to ground-level ozone formation in the Basin, which, at certain concentrations, can contribute to short- and long-term human health effects. Certain individuals residing in areas that do not meet the CAAQS or NAAQS, including the Basin, could be exposed to pollutant concentrations that cause or aggregate acute and/or chronic health conditions (e.g., asthma, lost work days, premature mortality). As previously discussed, the magnitude and locations of any potential changes in ambient air quality, and related health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure). Similar limitations exist for precisely modeling project-level health consequences of directly emitted DPM. However, it is known that public health will continue to be affected in the Basin so long as the region does not attain the CAAQS or NAAQS.

Impact Determination

In the event that KOP Categories 1 through 5 operations activities result in emissions that exceed regional or localized standards at the time plans for the development are further developed, a potentially significant impact would occur. In addition, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, KOP Categories 1 through 5 would potentially expose sensitive receptors to substantial pollutant concentrations during operations, resulting in a potentially significant impact.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific operational HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation would be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

KOP Category 6

The following design components could be constructed under KOP Category 6: affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Examples of recreational uses include a playground, a recreational field, and arts and culture facilities. Examples of ecological uses include orchards, composting centers, community gardens, and ponds.

Impacts from KOP Category 6 would be similar to those of the other KOP categories described above. The difference in impacts is described below.

Construction

Construction impacts would be substantially similar to those identified for KOP Categories 1 through 5.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific construction HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation would be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operations

KOP Category 6 could introduce a new sensitive land use (residences) that may have sensitive receptors that would be exposed to any existing TAC hazards exacerbated by design components (e.g., water treatment plant) of KOP Category 6. Accordingly, an analysis of the potential effect of the environment on KOP Category 6 receptors is required. Without details on the specific locations (in-channel/off-channel, frame, etc.), configuration, and design of the design components developed under KOP Category 6, a quantitative evaluation of potential health risk impacts on the onsite sensitive receptors is not possible. Depending on the proximity of individual projects to existing TAC hazards, there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

The impact discussion above for KOP Categories 1 through 5 would similarly apply to KOP Category 6. Also, KOP Category 6 would result in additional impacts from the potential siting of sensitive receptors in close proximity to existing TAC hazards. Therefore, KOP Category 6 would potentially expose sensitive receptors to substantial pollutant concentrations during operations, resulting in a potentially significant impact.

Mitigation Measures

Mitigation Measure AQ-4: Require Subsequent Projects with Sensitive Receptors within 1,000 Feet of Existing Toxic Air Contaminant Hazards to Perform a Health Risk Assessment.

For subsequent projects with sensitive receptors (e.g., affordable housing) within 1,000 feet of existing TAC hazards (e.g., heavily traveled roadways, stationary sources), the implementing agency will prepare a site-specific construction and operational HRA. If the HRA demonstrates that the health risk exposures for onsite receptors will be less than SCAQMD project-level thresholds, then additional mitigation would be unnecessary. However, if the HRA demonstrates that health risks will exceed SCAQMD project-level thresholds, additional feasible onsite mitigation (e.g., air filters with a higher Minimum Efficiency Reporting Value rating) will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific operational HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance After Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

Construction of the *2020 LA River Master Plan* would result in criteria pollutant and TAC emissions. Because details about the *2020 LA River Master Plan* construction scenario are unknown, emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the associated exposure of sensitive receptors to substantial pollutant concentrations resulting in health risks could result in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Although mitigation would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible, it cannot be stated that health risks from construction activities would be reduced to a level that would be below SCAQMD thresholds. Impacts would be significant and unavoidable.

Operations

Operation of the *2020 LA River Master Plan* would result in criteria pollutant and TAC emissions. Because details about the *2020 LA River Master Plan* operation scenario are unknown, emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the associated exposure of sensitive receptors to substantial pollutant concentrations resulting in health risks could result in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-4: Require Subsequent Projects with Sensitive Receptors within 1,000 Feet of Existing Toxic Air Contaminant Hazards to Perform a Health Risk Assessment.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

Although mitigation would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible, it cannot be stated that health risks from operations activities would be reduced to a level that would be below SCAQMD thresholds. Impacts would be significant and unavoidable.

Impact 3.2(d): Would the proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The significance of this impact is largely determined based on SCAQMD's list of land uses associated with odor complaints. The land uses list is applicable to projects within the Basin. As all of the nine planning frames are within the Basin, the analysis of the odor impacts would apply equally to projects in all nine frames.

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction and Operations

According to the SCAQMD's *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities. The Common Elements and Multi-Use Trails and Access Gateways Typical Projects include none of these land uses.

Project construction would involve the use of mobile sources of air quality emissions including off-road construction equipment and on-road mobile sources resulting from worker trips, both of which may emit objectionable odors due to the combustion of diesel fuel, as well as during asphalt paving. However, asphalt paving would occur for a limited time period (less than 2 weeks), and the locations of equipment usage and paving activities would be distributed over the 3-acre site at any one time.

Project construction activities would also remove vegetation and excavate soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions.

Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. Given the limited duration and location of asphalt paving and equipment usage, mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would not create a significant level of objectionable odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

Because the impacts for KOP Categories 2 through 6 are the same, these impact analyses are grouped together. The impact for KOP Category 1 is analyzed separately.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP 1: Trails and Access Gateways* heading.

In addition to the design components specified in the Multi-Use Trails and Access Gateways Typical Project, the following design components could be constructed under KOP Category 1: equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor.

Construction

Construction of KOP Category 1 could involve the use of mobile sources of air quality emissions, including off-road construction equipment and on-road vehicle trips, both of which may emit objectionable odors due to the combustion of diesel fuel. In addition, any asphalt paving would off-gas potentially objectionable odors. However, construction activities would be temporary, and the locations of any equipment usage and paving activities would be distributed over the project site at any one time.

Construction of KOP Category 1 could also result in the removal of vegetation and excavation of soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions.

Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. Given the limited duration and location of asphalt paving and equipment usage, mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, construction of KOP Category 1 would not create a significant level of objectionable odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

KOP Category 1 includes none of the land uses identified in SCAQMD's *CEQA Air Quality Handbook* as typically associated with odor complaints. However, the equestrian facilities design component, similar to SCAQMD's identified agricultural uses, composting areas, and dairies, has the potential to generate nuisance odors during operations due to manure and soiled bedding generated and stockpiled on site. Good housekeeping and best management practices can eliminate nuisance concerns. Manure that is properly handled or composted provides environmental benefits and can be used as a valuable soil amendment. Improper handling and storage of manure, along with odor migration, may lead to offsite nuisance violations.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AQ-5: Implement Equestrian Manure Management.

Equestrian activities may generate odors due to improper handling of manure and soiled bedding. The implementing agency will comply with the following measures:

- The facility, including animal stalls and warmup and training areas, will be cleaned at least once per day, including the removal of manure and soiled bedding.
- Manure and soiled bedding will either be incorporated into composting by the end of the day or temporarily stockpiled prior to incorporation into the composting system.
- Stockpiled material in containment vessels will be covered with a lid or tarp. Containment vessels will be located at the farthest feasible distance from nearby residents and/or sensitive receptors.

This mitigation measure will be implemented on a project-by-project basis, only where the design elements of KOP Category 1 include an equestrian facility.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Categories 2 through 6

Construction and Operations

As described in Chapter 2, *Project Description*, KOP Categories 2 through 6 and their design components could provide a range of recreation and ecological uses, some of which, according to SCAQMD's *CEQA Air Quality Handbook,* are typically associated with odor complaints. KOP Categories 2 and 3 would have no land uses associated with odor complaints, while KOP Categories 4 and 6 would. KOP Categories 4, 5, and 6 would have design components including water treatment facilities, which is a land use associated with odor complaints. KOP Category 6 would also include urban agriculture/composting, a land use associated with odor complaints. However, the community gardens envisioned under the *2020 LA River Master Plan* would not operate at the scale or intensity of commercial farming operations that are typically associated with odor complaints. Furthermore, it is important to note that SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. As such, proposed project improvements would be designed to meet Rule 402 standards. Consequently, mandatory compliance with SCAQMD Rule 402, and the ability for the public to report complaints to SCAQMD, would ensure that KOP Categories 2 through 6 would not result in emissions leading to significant odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

Construction

Construction of *2020 LA River Master Plan* elements could involve the use of mobile sources of air quality emissions including off-road construction equipment and on-road mobile sources resulting from worker trips, both of which may emit objectionable odors due to the combustion of diesel fuel, as well as during any asphalt paving. These activities would likely occur for a limited time period, and the locations of equipment usage and paving activities would be distributed over the construction area at any one time.

Construction of *2020 LA River Master Plan* elements would also involve construction activities that could remove vegetation and excavate soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions.

Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. Given the mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, construction would not create a significant level of objectionable odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

According to SCAQMD's *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities. The Typical Projects and KOP Categories 2 and 3 do not include any of these land uses. Wetlands are included as part of the design components of KOP Categories 4, 5, and 6, and water treatment plants are included as part of the design components of KOP Categories 4 and 6. Mandatory compliance with SCAQMD Rule 402 and ability for the public to report complaints to SCAQMD would ensure that such project improvements would not create a significant level of objectionable odors. Lastly, urban agriculture/composting is included as part of the design components of KOP Category 6. However, while agriculture/composting is identified by SCAQMD as a source of potential odor complaints, the community gardens envisioned under the *2020 LA River Master Plan* would not operate at the scale or intensity of commercial farming operations that are typically associated with odor complaints.

As part of the design component of KOP Category 1, equestrian facilities, similar to agricultural uses, composting areas, or dairies, have the potential to generate nuisance odors due to manure and soiled bedding generated and stockpiled on site.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-5: Implement Equestrian Manure Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Cumulative Impacts

The geographic context for an analysis of cumulative air quality impacts would be the Basin, which is the area governed by the 2016 AQMP that applies to all development within the Basin. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on air quality if, in combination with other projects within the Basin, it would conflict with or obstruct implementation of the SCAQMD AQMP; generate air pollutant emissions during construction or operational activities of sufficient quantity to exceed the Air Quality Significance Thresholds established by the SCAQMD; or expose sensitive receptors to substantial TAC concentrations.

Cumulative Condition

The cumulative plans and programs within the Basin would result in the production of significant regional or localized emissions. The regional growth that would occur over the project implementation period would increase both mobile and stationary emission sources and contribute to an adverse cumulative air quality impact. According to the *Los Angeles County General Plan*, the Basin is designated nonattainment for ozone, PM_{10}, $PM_{2.5}$, and lead (Los Angeles County only) under the CAAQS and NAAQS, and nonattainment for NO_2 under the CAAQS. Construction of cumulative projects will further degrade the regional air quality.

Furthermore, the implementation of development projects included in the *Los Angeles County General Plan*, as well as the 17 jurisdictions' general plans, when taken into consideration with other development and infrastructure projects within the SCAG region and surrounding areas, would have the potential to result in a significant cumulative impact related to violating an air quality standard or contributing substantially to an existing or projected air quality violation in the short-term from construction emissions. Similarly, while the applicable general plans include strategies to improve public health, cumulative development would result in a significant cumulative impact by exposing sensitive receptors to substantial pollutant concentrations that would harm public health outcomes due to placing sensitive receptors within 500 feet of freeways and high-volume roadways.

Already-imposed mitigation measures from certified EIRs prepared for cumulative projects, as well as existing regulatory programs and plan policies and strategies, will assist in mitigating these cumulative impacts. However, even with implementation of mitigation measures and existing regulatory programs, construction and operational emissions from major development projects would still exceed SCAQMD significance thresholds (SCAQMD 2019). Therefore, emissions associated with projected growth and development would be considered a significant cumulative impact on air quality.

The Los Angeles County portion of the SCAB is in nonattainment for the 8-hour state standards for ozone, and it is in nonattainment (extreme) for the 8-hour national standard. The Basin is in nonattainment for federal standards for $PM_{2.5}$ and lead, and for state standards for $PM_{2.5}$ and PM_{10}. The County is in attainment for all other criteria pollutants. The 2016 AQMP acknowledges that the most significant air quality challenge in the Basin is the reduction of nitrogen oxide (NO_X) emissions sufficient to meet the upcoming ozone standard deadlines.

SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Basin is in nonattainment status. SCAQMD's most recent plan to achieve air quality standards is the 2016 AQMP, adopted by the SCAQMD Governing Board on March 3, 2017. The AQMP outlines a comprehensive control strategy to meet the requirement for expeditious progress toward attainment of the 2006 24-hour $PM_{2.5}$ NAAQS through all feasible control measures. The 2016 AQMP also includes specific measures for implementing the ozone strategy from previous AQMPs and attaining the 8-hour ozone standard by 2031. These strategies are based, in part, on regional growth (i.e., changes in population, housing, and employment) projections prepared by the region's cities and counties and incorporated by SCAG. As such, projects that propose development that is consistent with anticipated regional growth are considered to be consistent with the AQMP. Furthermore, projects must comply with applicable SCAQMD rules and regulations.

The SCAQMD has developed strategies to reduce criteria pollutant emissions, as outlined in the AQMP, pursuant to federal CAA mandates.

Contribution of the Project to Cumulative Impacts

The proposed Project would comply with all regulatory requirements and would be required by law to comply with any relevant control measures adopted by the SCAQMD as part of the AQMP. The County recognizes the importance of reducing emissions and improving air quality and would adhere to these goals and objectives.

The *2020 LA River Master Plan* would not result in substantial unplanned population growth in the County (see Section 3.13, *Population and Housing*). The proposed Project would be consistent with goals and policies in the local jurisdictions' general plans, with few, if any, exceptions. Because the Project would be consistent with the anticipated regional growth, it is considered consistent with the region's AQMP. As such, Project-related emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Furthermore, specific projects would comply with the applicable SCAQMD Rules. Therefore, the *2020 LA River Master Plan* would not conflict with or obstruct implementation of the applicable air quality plan and would not make a cumulatively considerable contribution to a cumulative air quality impact with regard to conflict with the AQMP.

Construction activities would generate air pollutant emissions. Maximum daily project-related criteria and precursor pollutant emissions would not exceed any SCAQMD regional construction-period thresholds or any LSTs during construction or operation. Since the Project would not exceed these LSTs, the project would not cause or contribute to a violation of any health-protective standard.

Construction and operation of the *2020 LA River Master Plan* would not be expected to contribute a substantial level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. Asbestos emissions would be controlled according to SCAQMD and EPA regulations. Construction would generate onsite DPM emissions from diesel-powered construction equipment and vehicles that could expose adjacent receptors to significant health risks. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. Operation would not violate the health-protective CAAQS and NAAQS. As such, the *2020 LA River Master Plan* would not be expected to contribute a significant level of air pollution during operations such that air quality within the Basin would be degraded.. However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, operations impacts would be potentially significant and it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Despite implementation of mitigation measures the project would make a cumulatively considerable contribution to cumulative effects with respect to degradation of air quality in the Basin (AQ-1, AQ-2, AQ-3, AQ-4, GHG-1a-b, GHG-2, and TRA-1b).

Project construction would involve the use of mobile sources of air quality emissions that may emit objectionable odors due to the combustion of diesel fuel and application of asphalt paving. However, for the Typical Projects, asphalt paving would occur for a limited time period (less than 2 weeks), and the locations of equipment usage and paving activities would be distributed over the 3-acre site at any one time. Longer-term construction activities would be associated with the KOP categories, but they are not expected to result in emission of objectionable odors that reach a level of significance. Mitigation Measure AQ-5 would be implemented to reduce odors from equestrian

activities to a less-than-significant level. Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Given the mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, the proposed Project would not create a significant level of objectionable odors during construction. Similarly, it is not anticipated that operation of projects under the *2020 LA River Master Plan* would result in objectionable odors.

Construction and operation of the *2020 LA River Master Plan* would result in criteria pollutant and TAC emissions. Because details about the *2020 LA River Master Plan* construction and operation scenario are unknown, emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. The associated exposure of sensitive receptors to substantial pollutant concentrations resulting in health risks could result in a significant impact. Mitigation Measures AQ-1 through AQ-4 and GHG-1a and GHG-2 would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible. It cannot be stated that health risks would be reduced to a level that would be below SCAQMD thresholds. Despite implementation of mitigation, the Project would make a cumulatively considerable contribution to cumulative effects with respect to generation of emissions above established thresholds and exposure of sensitive receptors to substantial pollutant concentrations.

The *2020 LA River Master Plan* would be generally consistent with plans and policies contained in the various applicable general plans related to air quality. Overall, implementation of the *2020 LA River Master Plan* would make a cumulatively considerable contribution to air quality impacts within the Basin.

Section 3.3
Biological Resources

3.3.1 Introduction

This section describes the geographic and regulatory setting for biological resources, identifies impacts that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. This section also identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The *Los Angeles River Master Plan Update: Existing Ecosystems and Habitat Conditions Progress Memorandum* (OLIN and Geosyntec 2018a) and *Los Angeles River Master Plan Update: Existing Open Space, Recreation, and Trails Progress Memorandum* (OLIN and Geosyntec 2018b) provide additional technical details on biological and aquatic resources.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.3.1.1 Definition of Resources

The following are definitions for the biological resources, and wetlands and jurisdictional waters analyzed in this Draft PEIR.

- **Special-Status Species.** For the purposes of this report, species are considered to have special status if they meet at least one of the following criteria:
    - Plants or animals listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) (CDFW 2018, USFWS 2020a, 2020b).
    - Bald and golden eagles protected under the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. §§ 668—668d, 54 Statute 250).
    - Species that meet the definitions of "Rare" or "Endangered" under CEQA (State CEQA Guidelines, Sections 15380 and 15125) (CDFW 2018, USFWS 2020a, 2020c).
    - California Department of Fish and Wildlife (CDFW) Species of Special Concern (CSC) (CDFW 2019).
    - CDFW fully protected species (CDFW 2019).

- Species listed as a California Rare Plant Rank (CRPR) List 1A (presumed extinct in California and either rare or extinct elsewhere), 1B (rare, threatened, and endangered in California and elsewhere), 2A (presumed extirpated in California but common elsewhere), 2B (rare, threatened, or endangered in California, but more common elsewhere), 3 (more information is needed), or 4 (plants with limited distribution). CRPR List 1A, 1B, 2A, 2B, 3, and 4 species are considered special-status plant species if they fall within any of these categories as defined in the California Native Plant Protection Act (Cal. Fish and Game Code § 1901) or the CESA (Cal. Fish and Game Code §§ 2050–2085).

- **Jurisdictional Aquatic Resources, Including Wetlands**. Jurisdictional aquatic resources in the project vicinity—including wetlands, waters of the U.S., waters of the State, and streambeds and lakes subject to CDFW jurisdiction—are regulated by the federal government (U.S. Army Corps of Engineers [USACE] with oversight from the U.S. Environmental Protection Agency [EPA]) and the State of California (State Water Resources Control Board [SWRCB] or local Regional Water Quality Control Board [RWQCB]) and CDFW. Delineated features are assumed to fall under the jurisdiction of the USACE, SWRCB or RWQCB, and CDFW for purposes of this discussion. Confirmation of these features as jurisdictional by the USACE, SWRCB or RWQCB, and CDFW would be obtained through the regulatory permitting process. Definitions of the categories that are included in the jurisdictional waters sections are presented below.

  - **Waters of the U.S.** Pursuant to USACE regulations (33 Code of Federal Regulations [C.F.R.] Part 328.3(a)), waters of the U.S. are defined as follows: (1) all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; (2) all interstate waters, including interstate wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U.S.; (5) tributaries to the foregoing types of waters; (6) the territorial seas; and (7) wetlands adjacent to the foregoing waters. Wetlands are a sub-classification of waters of the U.S., as described below.

    The basis for determination of wetland waters of the U.S. consists of indicators of wetland hydrology, hydric soils, and hydrophytic vegetation (33 C.F.R Part 331.2). The landward limits of non-wetland waters of the U.S. regulated by USACE/SWRCB under Clean Water Act (CWA) Sections 404/401 (excluding wetlands and tidal waters) is based on the ordinary high-water mark (OHWM), defined in C.F.R. 328.3(e) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

    On January 23, 2020, EPA and USACE signed and released the prepublication notice of the Navigable Waters Protection Rule, redefining waters of the U.S. (33 CFR 328). The Navigable Waters Protection Rule and revised definition of waters of the U.S. went into effect on June 23, 2020. The Navigable Waters Protection Rule outlines four clear categories of waters that are considered waters of the U.S.:

    - Territorial seas and traditional navigable waters (TNWs)
    - Tributaries to TNWs that are perennial or intermittent

- Lakes, ponds, and impoundments of jurisdictional waters
- Adjacent wetlands

The Navigable Waters Protection Rule also identified those waters that are not considered waters of the U.S., which includes, but is not limited to, groundwater, ephemeral features, diffuse stormwater and directional sheet flow over upland, ditches, artificially irrigated areas, and stormwater features excavated in uplands.

- **Waters of the State.** The SWRCB and the RWQCBs regulate waters of the State pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code § 13050(e)). On April 2, 2019, the SWRCB adopted its proposed State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State (Procedures). Among other provisions, the Procedures define certain wetlands as waters of the State under the Porter-Cologne Water Quality Control Act. The Procedures also provide a jurisdictional framework for the determination of aquatic features as wetlands. Such wetland features under the Procedures are identified and analyzed as *aquatic resources* throughout this document. This chapter uses the definitions for non-wetland waters of the U.S. set forth under Section 404 of the CWA (33 C.F.R. Part 328) and the USACE technical criteria for non-wetland waters of the U.S. (ordinary high water mark). For the purposes of this chapter, Porter-Cologne waters of the State are considered any wetland and non-wetland waters that do not qualify as waters of the U.S.
- **CDFW Jurisdiction.** Under California Fish and Game Code (CFGC) Section 1602, CDFW takes jurisdiction over rivers, streams, and lakes. The State's jurisdiction generally includes the streambed/lakebed to tops of bank. Although not specifically defined in CFGC Section 1602, jurisdiction in some instances may include adjacent riparian vegetation. The term *stream* is commonly understood as a water conveyance feature having a source and terminus, banks and channel, through which waters flow, at least periodically. A *streambed* under Section 1602 includes the channel of a watercourse, which is generally defined to include the depression between the banks worn by the regular and usual flow of the water.

- **Habitats of Concern**—Habitats of concern within this PEIR include sensitive natural communities, essential fish habitat (EFH), U.S. Fish and Wildlife Service (USFWS) critical habitat, and protected trees.
  - **Sensitive Natural Communities.** Sensitive natural communities are determined to be significant or to represent rare vegetation types (CDFG 2010, CDFW 2020f) or to have limited distribution statewide or within a county or region and include riparian areas that are jurisdictional to CDFW under CFGC Section 1600 et seq. These communities are often vulnerable to the environmental effects of projects (CDFG 2010, CDFW 2020f). A list of sensitive natural communities in California is maintained by CDFW in the Vegetation Classification and Mapping Program—Natural Communities List (CDFG 2010, CDFW 2020f).
  - **Significant Ecological Areas**. Significant Ecological Areas (SEAs) are officially designated areas within Los Angeles County that contain irreplaceable biological resources. The objective of the SEA Program in the County is to conserve physical and genetic diversity in the County by designating SEAs and applying SEA ordinances that establish permitting, design standards, and review processes for development within SEAs (Los Angeles County 2019). County SEAs are depicted within various cities in the County, although the County has no jurisdiction within cities. Some cities, such as the City of Los Angeles, have adopted

County SEAs into their general plan and municipal code. The City of Los Angeles Municipal Code Section 64.70.01 recognizes County SEAs as environmentally sensitive areas (ESAs).

- **Essential Fish Habitat.** EFH is defined as marine or anadromous fish habitat, which includes those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity. Anadromous fishes are those that migrate up rivers from the sea to spawn. Waters include aquatic areas and associated physical, chemical, and biological properties. Substrates include the sediments underlying the waters. All habitat types needed by a species throughout its lifecycle to complete spawning, breeding, feeding, or growth to maturity are considered EFH for marine or anadromous fish species. EFH is regulated under the Magnuson-Stevens Fishery Conservation and Management Act (NOAA 2007).
- **Coastal and Marine Habitats.** The Marine Life Protection Act of 1999 of the CFGC directs the State of California to redesign California's system of marine protected areas (MPAs) to function as a network. Coastal and marine habitats and resources include marine ecological preserves and refuges and MPAs. An MPA is a named, discrete, geographic marine or estuarine area seaward of the high tide line or the mouth of coastal river, Marine managed areas (MMAs) are geographic marine or estuarine areas along the California coast designated by law or administrative action, and intended to protect, conserve, or otherwise manage a variety of resources and their uses. These resources and uses may include living marine resources and their habitats, scenic views, water quality, recreational values, and cultural or geological resources.

  MPAs are a type of MMA where marine or estuarine waters are set aside to protect or conserve marine life and associated habitats. California has a coastal network of 124 protected areas designated to protect the state's marine life, habitats, and ecosystems. Within the State of California, there are 119 MPAs, 5 MMAs, and 15 special closures (an area designated by CFGC that prohibits access or restricts boating activities in waters adjacent to seabird rookeries or marine mammal haul-out sites), each with unique boundaries. There are three types of MPAs, including State marine reserves, State marine conservation areas, and State marine parks. There is one type of MMA, the State marine recreational management area. In State marine reserves it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resources, except under a permit or specific authorization. Access for activities including, but not limited to, walking, swimming, boating, and diving may be restricted to protect marine resources. In the State marine conservation areas, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial or recreational purposes, or combination of commercial or recreational purposes, that would compromise the protection of the species of interest, natural community, habitat, or geological feature. In State marine parks, it is unlawful to injure, damage, take, or possess any living or nonliving marine resource for commercial exploitation purposes. All other uses are allowed, including scientific collection with permit, research, monitoring, and public recreation, including recreational harvest, unless otherwise restricted. In the State marine recreational management area, it is unlawful to perform any activity that would compromise the recreational values for which the area has been designated. Recreational opportunities may be protected, enhanced, or restricted, while preserving the resource values of the area.
- **Critical Habitat.** Critical habitat includes areas identified under Section 4 of the FESA (16 U.S.C. § 1531–1544). Designated critical habitats are described in 50 C.F.R. Parts 17 and 226. Specifically, critical habitat includes areas for federally listed species consisting of the

specific areas within the geographic area occupied by the species, at the time it is listed in accordance with the provisions of Section 4 of the FESA, on which are found those physical or biological features (constituent elements) that are essential to the conservation of the species and that may require special management consideration or protection; and specific areas outside of the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of the FESA, on a determination by the Secretary of the Department of the Interior that such areas are essential for the conservation of the species.

- **Wildlife Movement.** Movement ability and connectivity of habitat across a landscape is critical for myriad plant and animal species to survive, access pertinent resources, reproduce, disperse, and adapt to unfavorable conditions and perturbations. Such movements may occur over varying temporal and geographic scales and at different times of the year (e.g., daily foraging, seasonal migration, or dispersal events). Because of the substantial conservation value of such connectivity, some efforts have occurred to identify areas important for fish and wildlife movement and habitat connectivity. Such efforts have used various methods (qualitative vs. quantitative geographic information system [GIS] modeling) and at various scales. For the purposes of this report, the following terminology will be used to describe these areas and other areas important for wildlife and habitat connectivity.
    - *Wildlife Corridors* referenced in this document refer to areas that have been identified by GIS modeling based on various physical and biological parameters published in statewide reports. The results of such modeling identify areas of connectivity between habitat areas, referred to as *corridors*.
    - *Linkages* referenced in this document refer to geographic areas qualitatively identified by expert opinions (not via quantitative modeling) that are or may be used for wildlife movement. Habitat linkages may aid in the dispersal and distribution of wildlife, which are crucial for maintaining species populations.
    - *Local Connectivity Areas* referenced in this document are areas that are not yet considered a corridor or linkage but still provide important connectivity function and value to wildlife and ecosystems on a local scale. These may include habitat areas, rivers, and streams.
- **Protected Trees**. Protected trees are trees or tree communities that have special significance and are provided protection by, and specifically identified in, county and city ordinances, codes, or general plans. Cities and counties traversed by the proposed Project include Los Angeles County and the Cities of Long Beach, Compton, Paramount, Downey, Lynwood, South Gate, Cudahy, Bell Gardens, Bell, Maywood, Vernon, Commerce, Los Angeles, Burbank, and Glendale. The types of trees and specific physical characteristics required to meet the local definitions vary by city and county.

3.3.1.2 Database Review

Special-Status Species

The criteria for special-status species is defined in Section 3.3.3.1 under *Special-status Species*. Unless noted below, database queries for special-status plants and animals included all reported occurrences within the search area, which includes the project footprint quadrangle (quad), plus an additional nine US Geological Survey (USGS) 7.5-minute quad search, specifically within Long Beach,

South Gate, Los Angeles, Hollywood, Burbank, Van Nuys, Canoga Park, Malibu Beach, Calabasas, Santa Susana (Simi Valley East), Oak Mountain, San Fernando, Sunland, Condor Peak, Pasadena, El Monte, Whittier, Los Alamitos, Seal Beach, San Pedro, Torrance, Inglewood, Beverly Hills, and Topanga. Database sources and search criteria included the following:

- A list was generated by the USFWS (Information, Planning, and Consultation System [IPaC]) website of federal candidate, proposed, threatened, and endangered plant and animal species for the study area (USFWS 2020a, USFWS 2020b) (Appendix D-1, Wildlife Agency Letters).
- A database search was performed using the NMFS California Species List Tool (NMFS-WCRC 2016) and an official FESA species list was obtained from the NMFS to identify special-status species that may occur. The search was based on the following quads: Long Beach (Digital), Long Beach (OE S), South Gate, Los Angeles, Hollywood, Burbank, Van Nuys, Canoga Park, Pasadena, and Beverly Hills (Appendix D.2., Special Status Species Potential to Occur Table).
- The CNPS Online Inventory of Rare and Endangered Plants of California was reviewed for special-status plant species within the USGS quads as described above (CNPS 2020).
- The California Natural Diversity Database (CNDDB) RareFind 5 database was searched (standard USGS quad search as described above) using the RareFind program (CDFW 2020a) and a manual GIS mapping process of all occurrences in the USGS quads described above.

The potential for lands within the study area boundaries (defined as the LA River channel centerline with an approximately 5,000-foot-wide buffer on both sides; see Section 3.3.3.1, *Methods*, for details) to support special-status plant and animal species was assessed via desktop analysis to identify possible project impacts on those species. Vegetation communities, land cover types, water bodies, soils, and records of occurrence within the study area were considered when determining potentially suitable habitat to support special-status species and the potential of individual special-status species to occur. Resources reviewed included U.S. Forest Service (USFS) CalVeg mapping, Google Earth aerials and photos, records of occurrence (e.g., CNDDB, Calflora, regional species lists [Griffith Park, Sepulveda Basin, Santa Monica Mountains National Recreation Area], Natural Resources Conservation Service soil mapping, and USGS topographic maps.

Vegetation Communities and Land Cover Types

Vegetation communities were mapped using the USFS CalVeg mapped vegetation communities (USFS 2014). As a part of the desktop analysis, habitat was visually assessed using Google Earth Pro and the mapped vegetation community layers. In some instances, mapping errors in the USFS dataset were observed and those have been noted in the analysis.

Habitats of Concern

Habitats of concern within this PEIR include sensitive natural communities, SEAs, marine preserves and refuges, EFH, and USFWS critical habitat.

Sensitive Natural Communities

Vegetation communities occurring within the study area were determined using the USFS CalVeg mapping (USFS 2014), as described above. The assumed presence or absence of sensitive natural communities was primarily identified based on comparing the mapped USFS CalVeg layers (Figure 3.3-1 through Figure 3.3-10) with the CDFW California Sensitive Natural Communities (CDFW 2020f). As per CDFW guidelines, natural communities with ranks of 1 through 3 were considered sensitive. In addition, CNDDB mapped sensitive terrestrial communities (as mapped on Figure 3.3-1 through Figure 3.3-10) were reviewed against the mapped CalVeg layers on Figure 3.3-1 through Figure 3.3-10. Local habitat descriptions (e.g., Dominguez Gap Wetlands [Public Works 2014], Sepulveda Basin [SBWR 2020]) and Google Earth aerial imagery and photos were reviewed to determine accuracy of mapped CalVeg layers and CNDDB mapped sensitive terrestrial communities.

Significant Ecological Areas

There are 62 SEAs identified in the County. All SEAs within the study area were mapped on Figure 3.3-11 and only one SEA is present, Griffith Park.

Coastal and Marine Habitats

The CDFW MarineBIOS (CDFW 2020b) data viewer was used to identify other coastal and marine habitats and resources (e.g., marine ecological preserves and refuges and MPAs) potentially occurring within the study area.

Essential Fish Habitat

The National Oceanic and Atmospheric Administration (NOAA) Fisheries EFH Mapper (NOAA 2020c) was used to visualize and document EFH, EFH protected areas, and Habitat Areas of Particular Concern within the study area.

Critical Habitat

A database search was performed using the USFWS Critical Habitat Online Mapper (USFWS 2020c) to identify any USFWS-designated critical habitat that may occur within the study area. Critical habitat in the vicinity of the study area is mapped on Figure 3.3-12.

Wetland Resources

A desktop jurisdictional delineation was conducted by ICF in March 2020 using aerial photographs and National Wetland Inventory (NWI) data. Jurisdictional aquatic resources are mapped on Figure 3.3-13 through Figure 3.3-21. Where known, concrete channels and earthen bottoms are mapped and rivers, creeks, ponds, and washes are identified.

Wildlife Movement and Connectivity

Data reviewed to assess wildlife movement and connectivity in the study area included the CDFW BIOS Habitat Connectivity Viewer (CDFW 2020c), CDFW California Fish Passage Assessment Database, National Wetland Inventory (NWI 2020) data, and the results of desktop reviews of species lists, database results, Google Earth imagery, and literature.

Local Policies and Ordinances

Local laws, regulations, and ordinances that are relevant to the impact analysis of biological resources in this PEIR—including general plans, municipal codes, tree ordinances, and community plans (see Section 3.3.2.2, *Regulatory*)—were reviewed to determine if the *2020 LA River Master Plan* would conflict with any local policies or ordinances that protect biological resources.

Habitat Conservation Plans and Natural Community Conservation Plans

A database search and literature review was performed to determine if any habitat conservation plans (HCPs), natural communities conservation plans (NCCPs), or other approved local, regional, or State HCPs are located within the study area, including the CDFW NCCP/HCP mapper (CDFW 2020d).

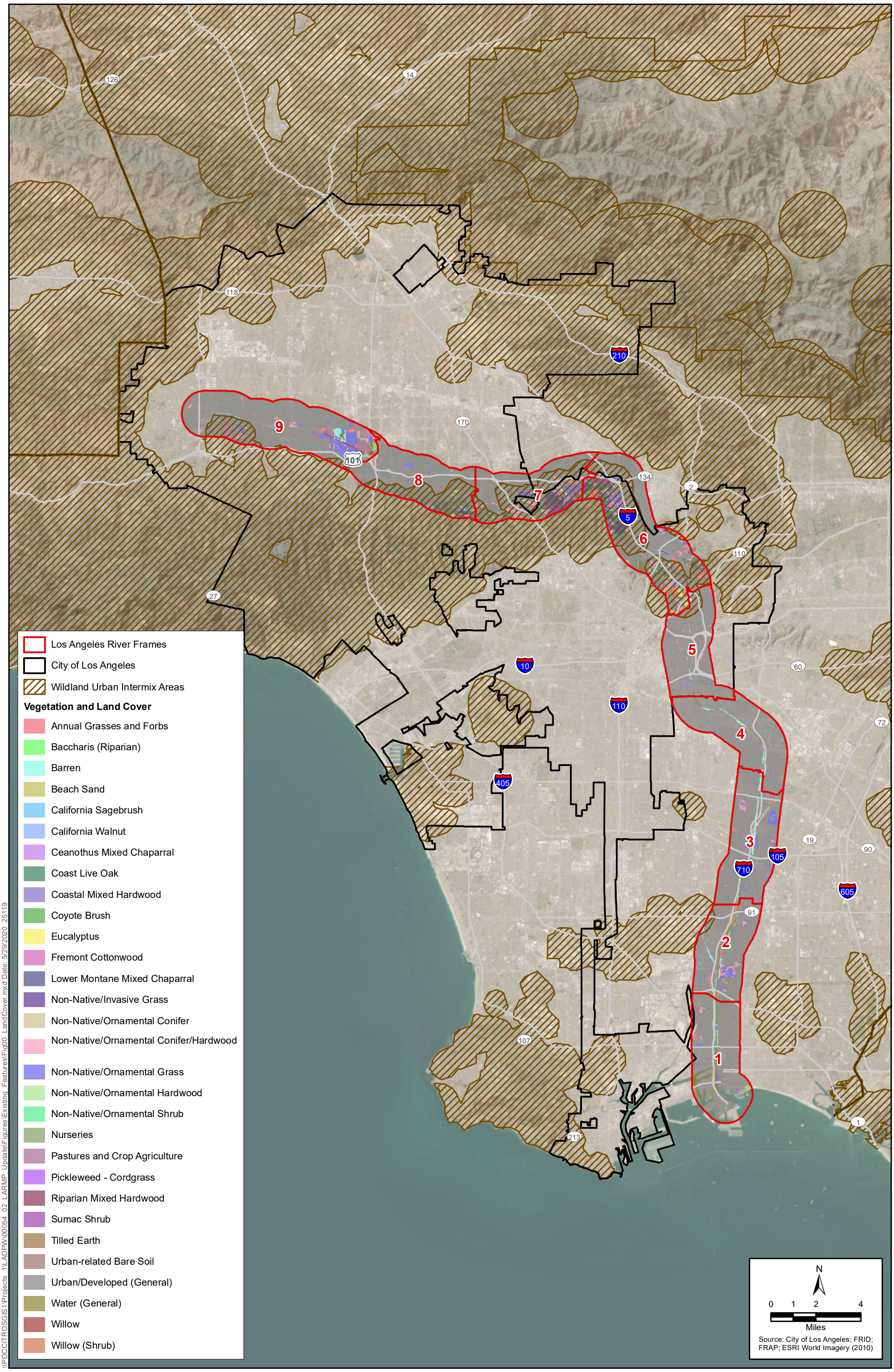
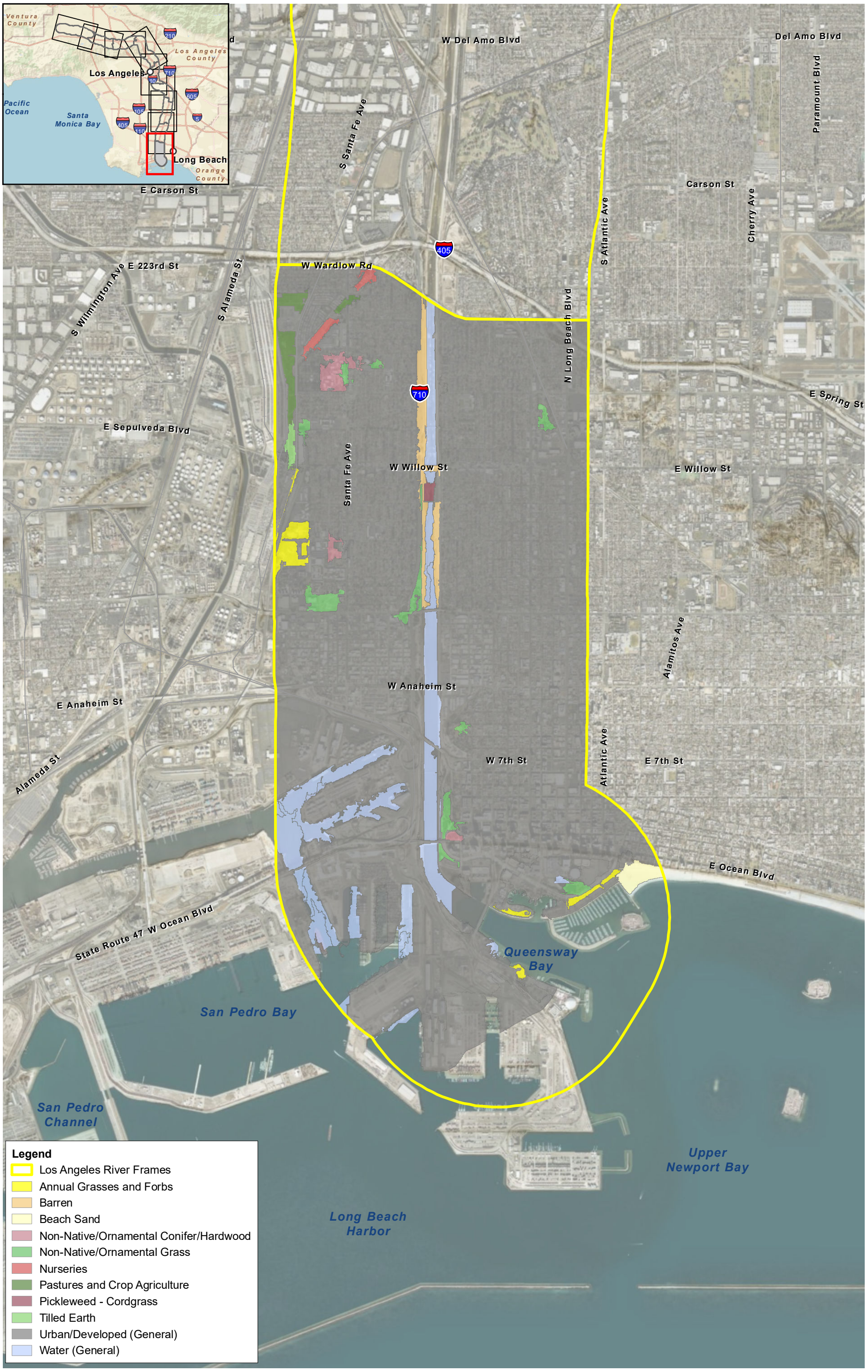


Figure 3.3-1
Land Cover and Vegetation Communities Index



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Source: CALVEG; ESRI

Figure 3.3-2
Land Cover and Vegetation Communities within Frame 1

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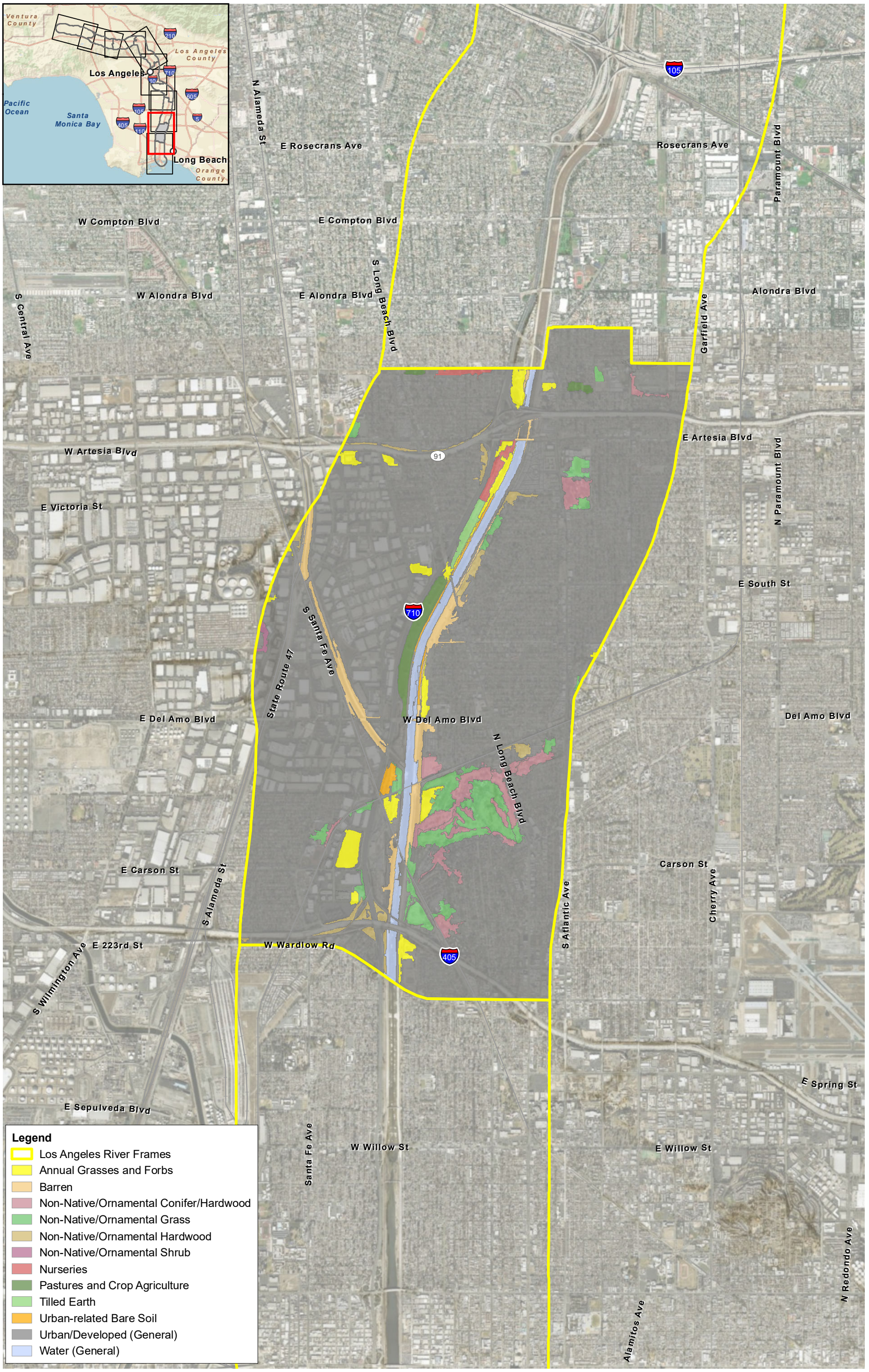

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Source: CALVEG; ESRI

Figure 3.3-3
Land Cover and Vegetation Communities within Frame 2

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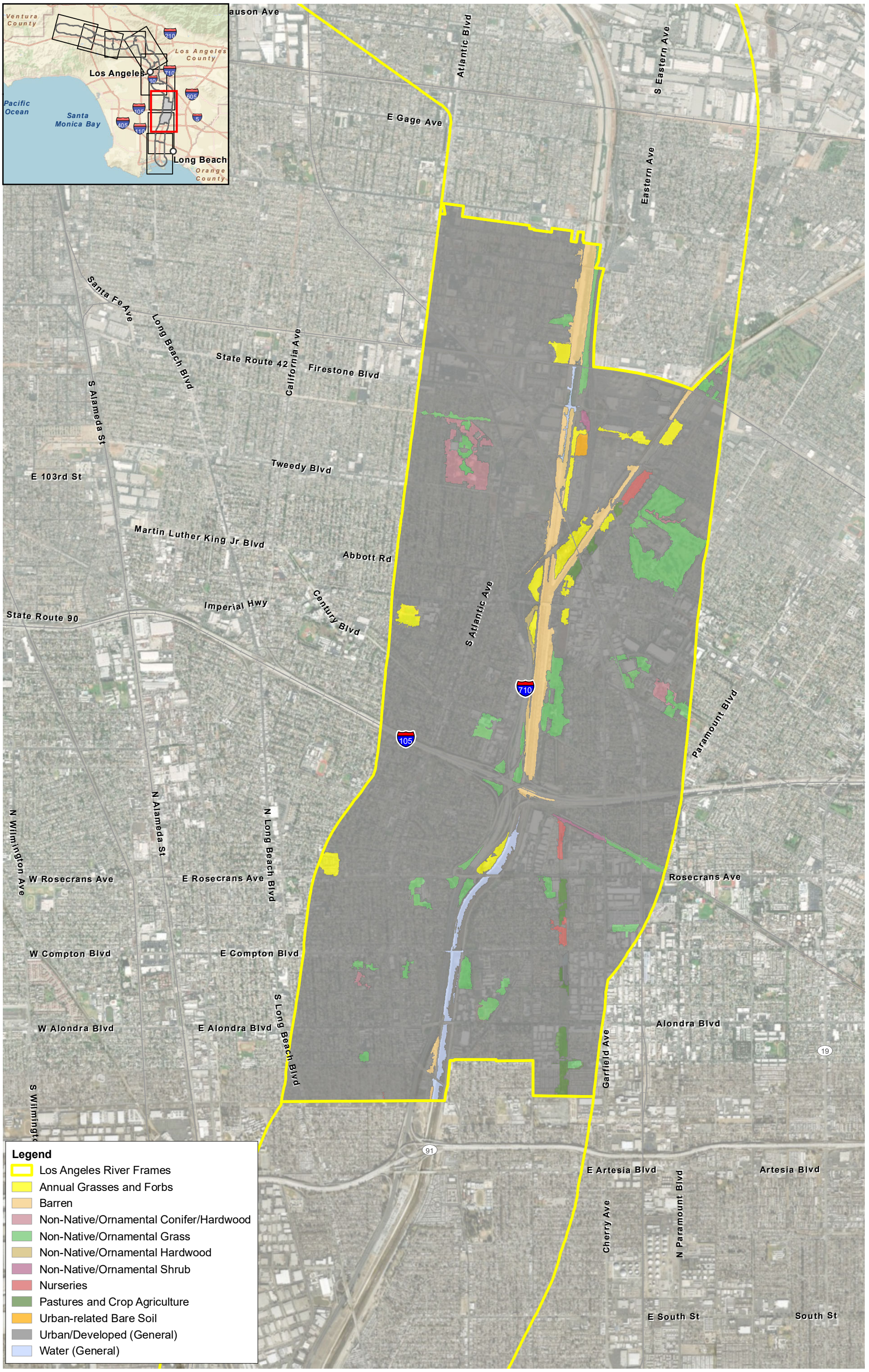

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Source: CALVEG; ESRI

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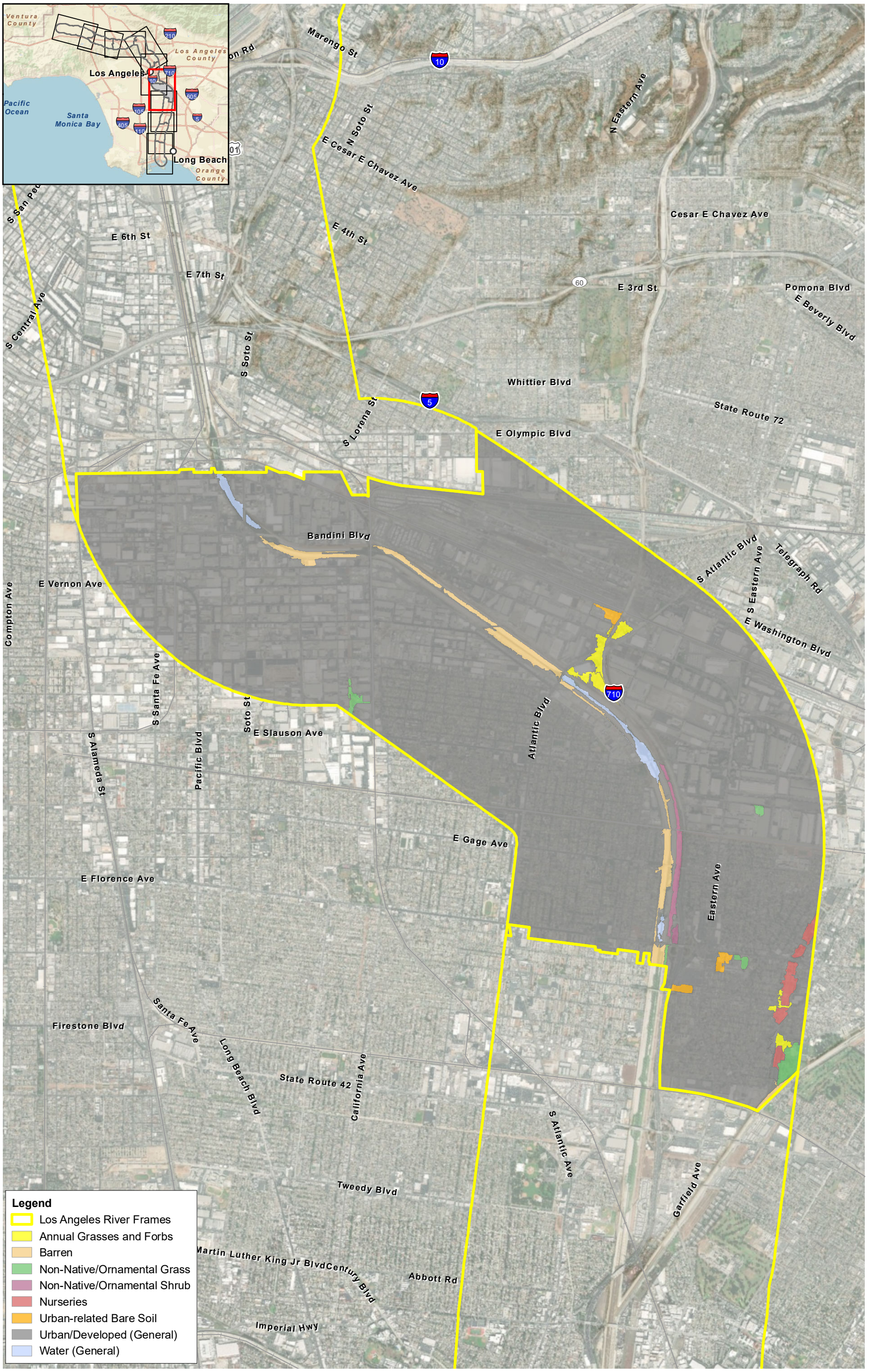
Figure 3.3-4
Land Cover and Vegetation Communities within Frame 3



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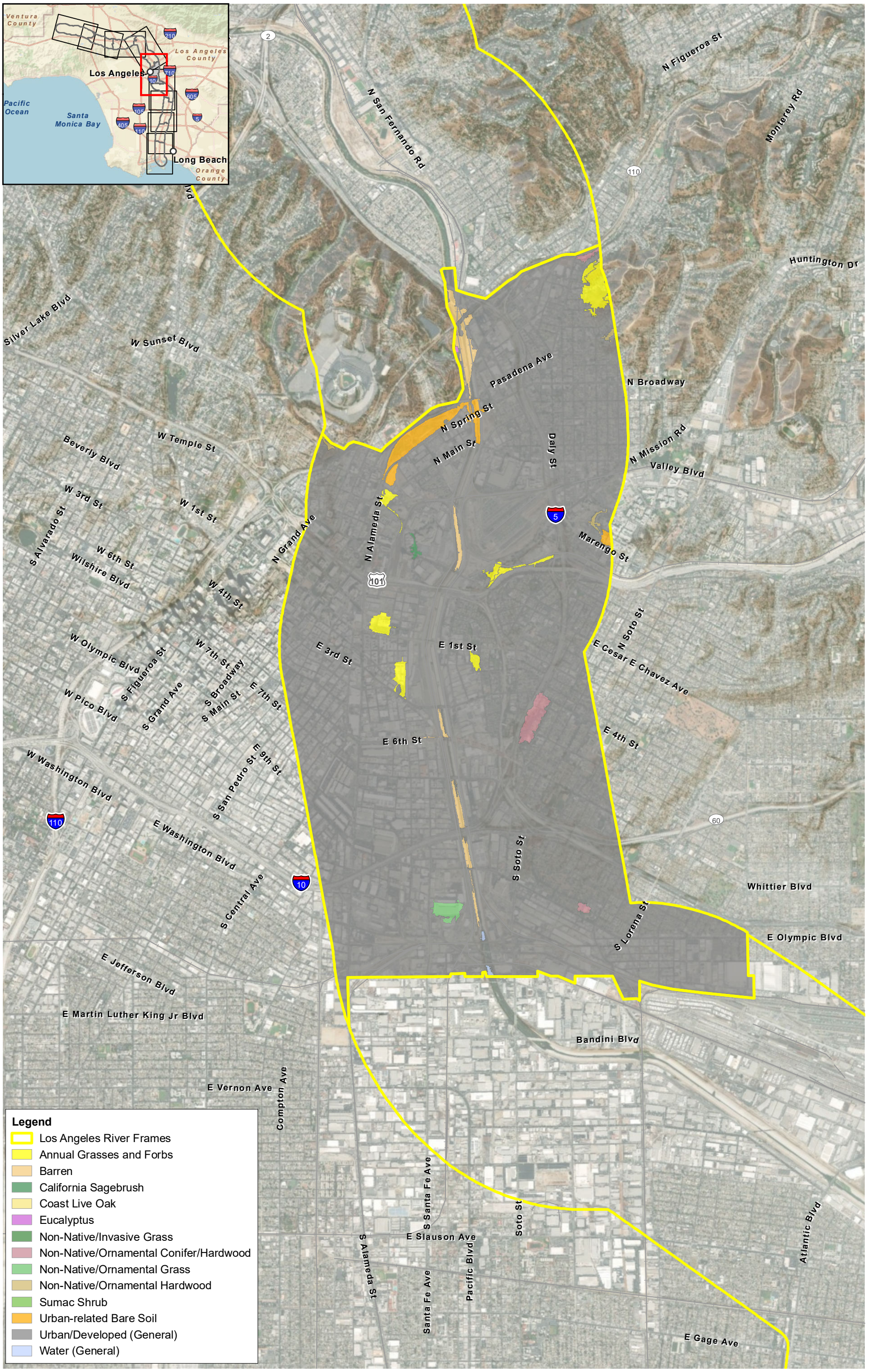
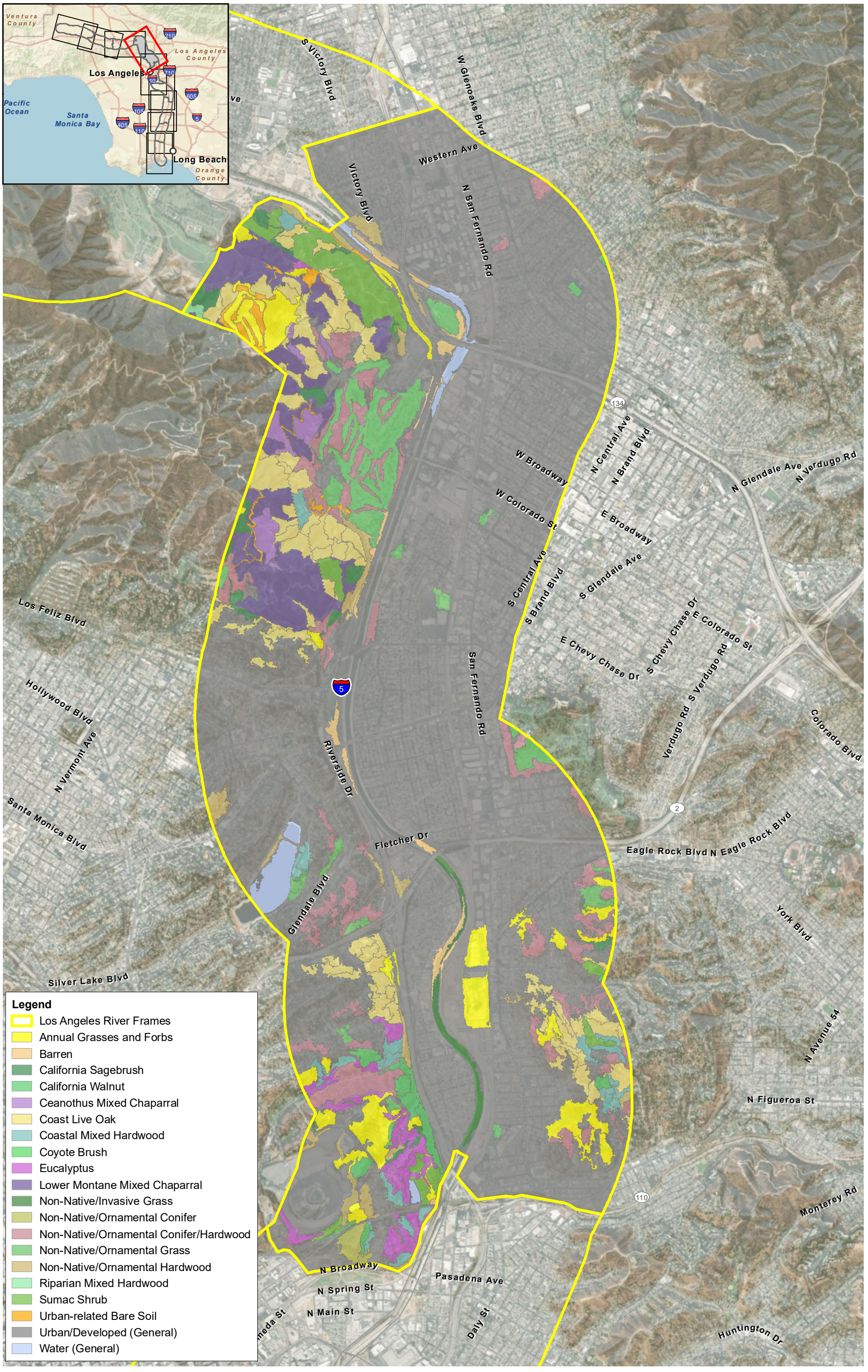
Source: CALVEG; ESRI

Figure 3.3-5
Land Cover and Vegetation Communities within Frame 4



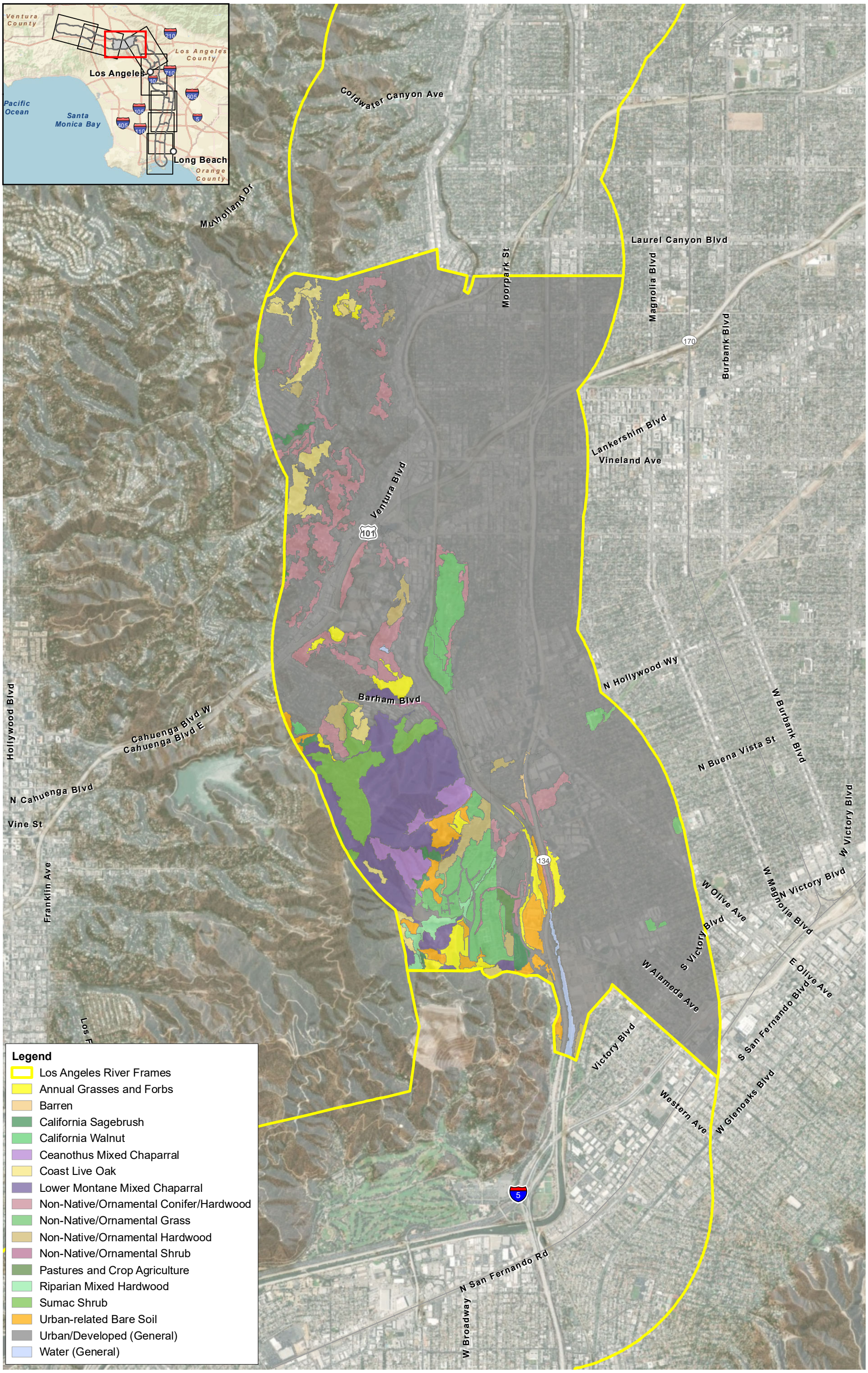
Source: CALVEG; ESRI

Figure 3.3-6
Land Cover and Vegetation Communities within Frame 5



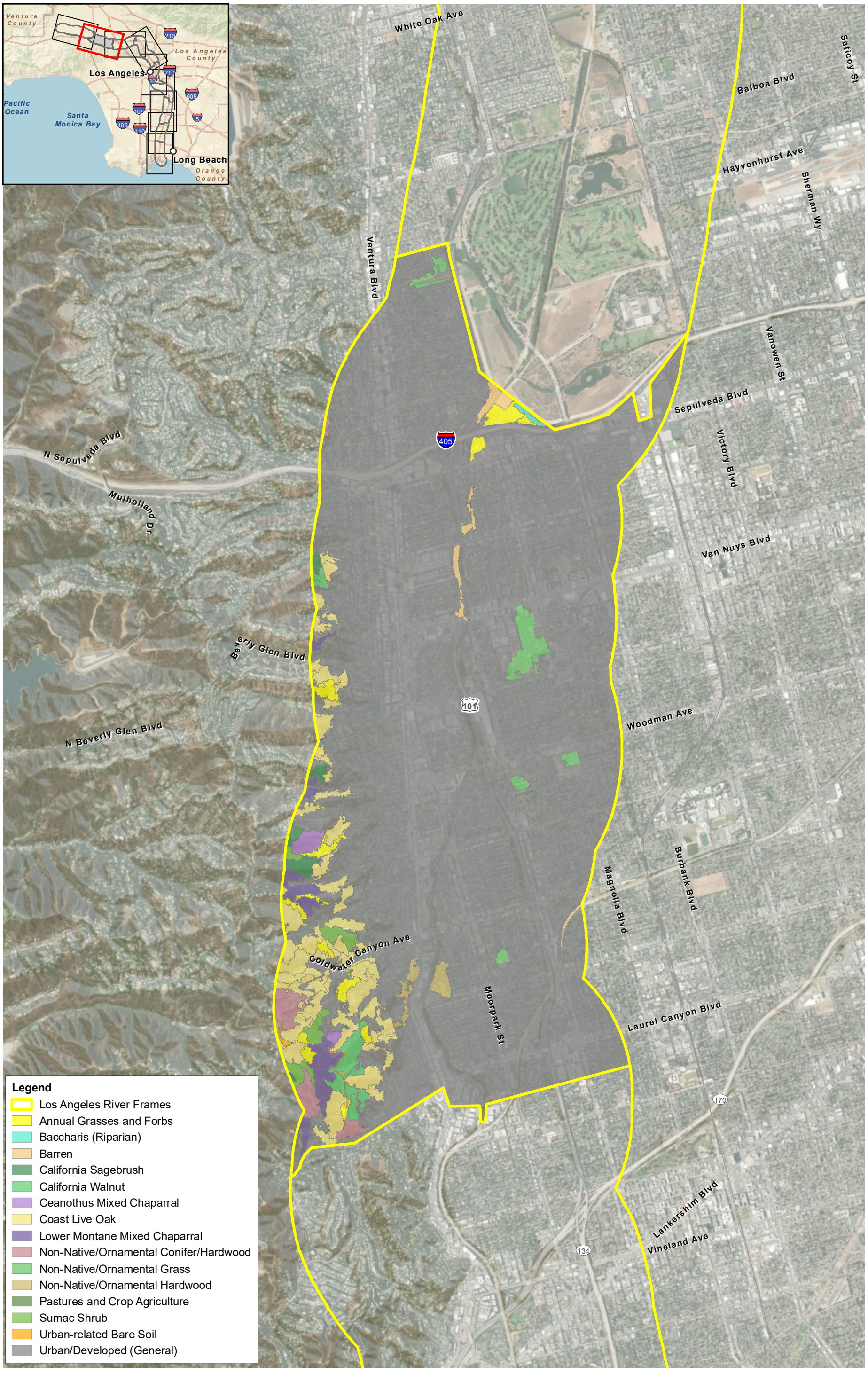
Source: CALVEG; ESRI

Figure 3.3-7
Land Cover and Vegetation Communities within Frame 6



Source: CALVEG; ESRI

Figure 3.3-8
Land Cover and Vegetation Communities within Frame 7



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Source: CALVEG; ESRI

Figure 3.3.9
Land Cover and Vegetation Communities within Frame 8

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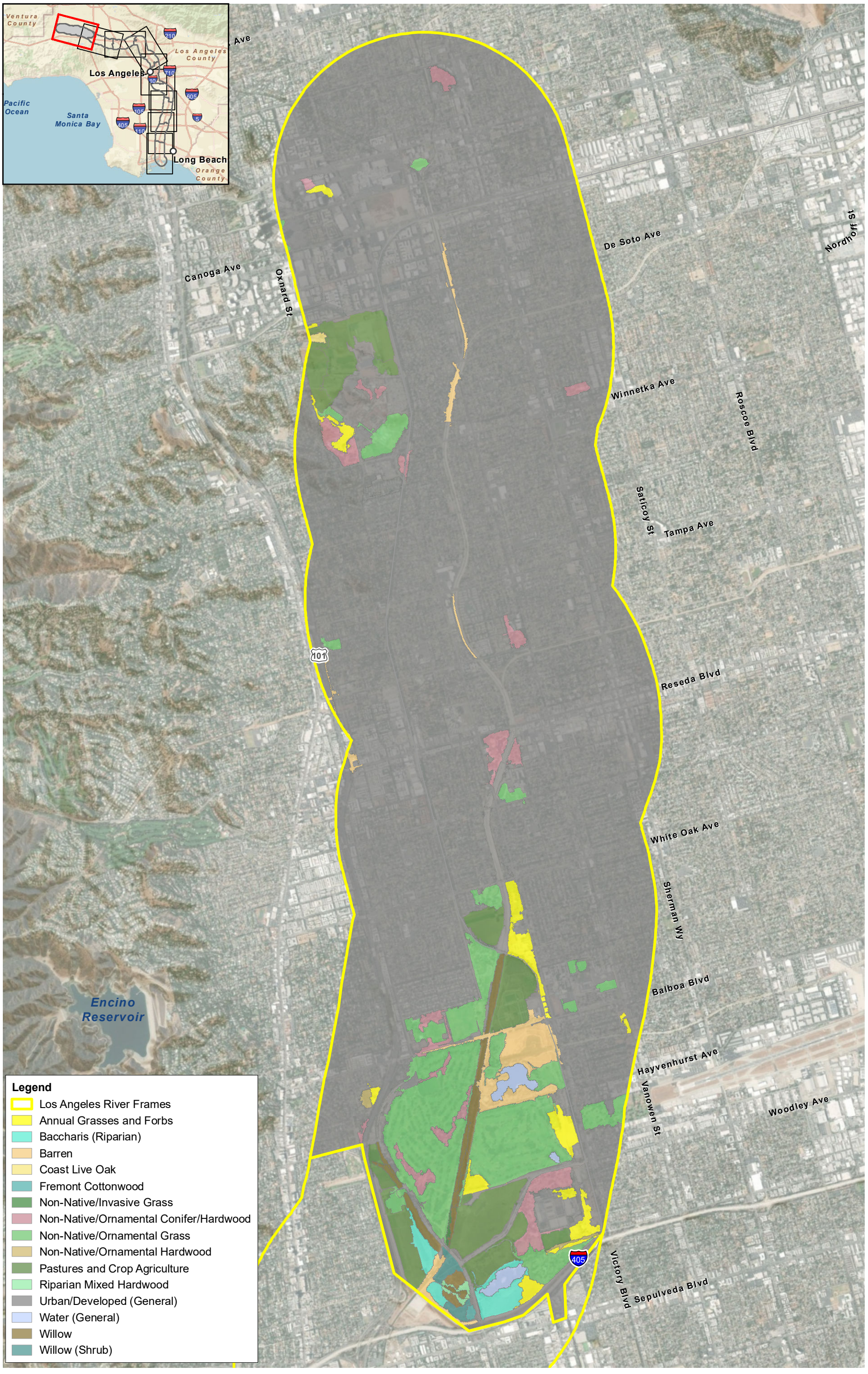

Source: CALVEG; ESRI

Figure 3.3-10
Land Cover and Vegetation Communities within Frame 9

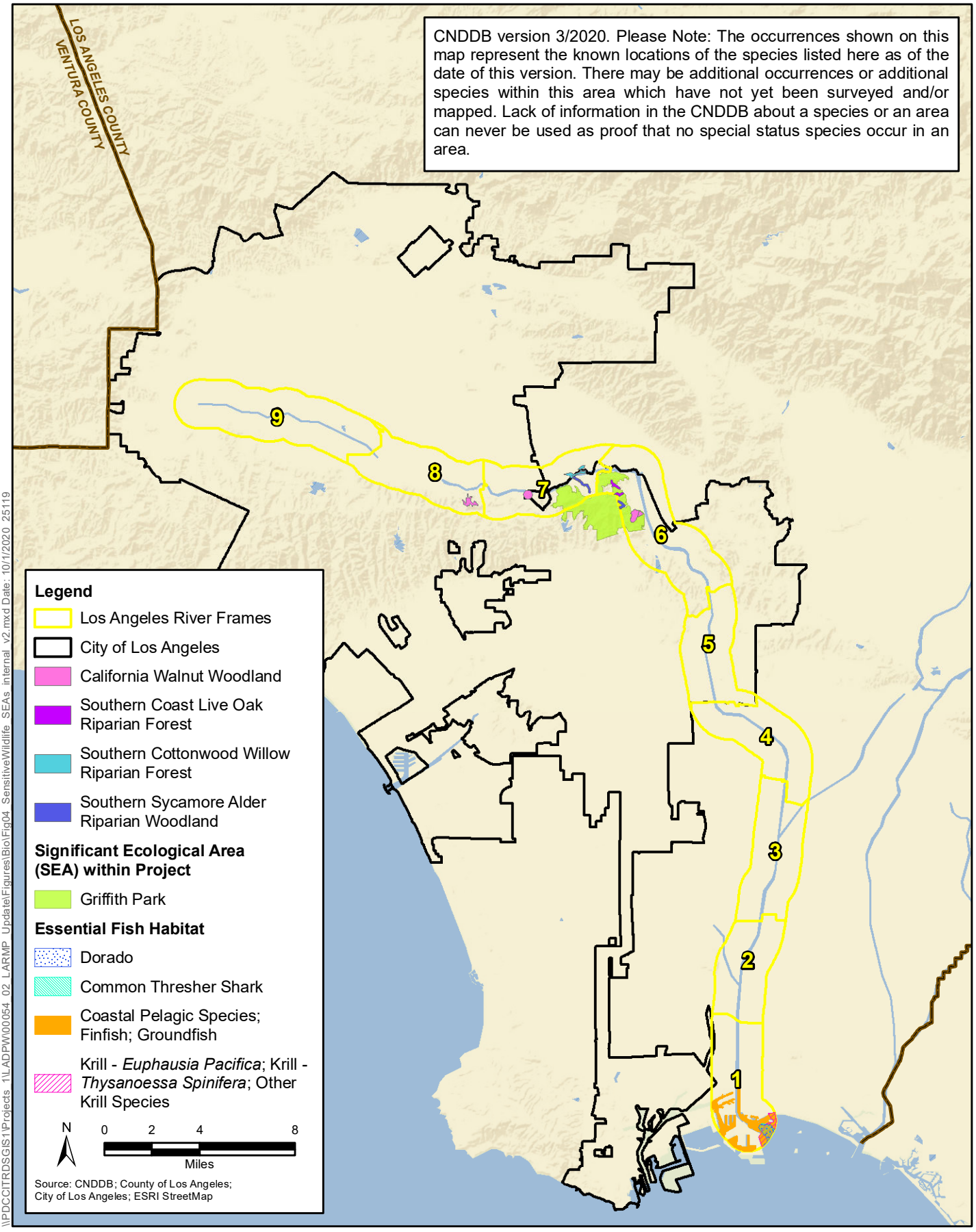

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Figure 3.3-11
CNDDB Special-Status Vegetation Communities, Significant Ecological Areas and Essential Fish Habitat

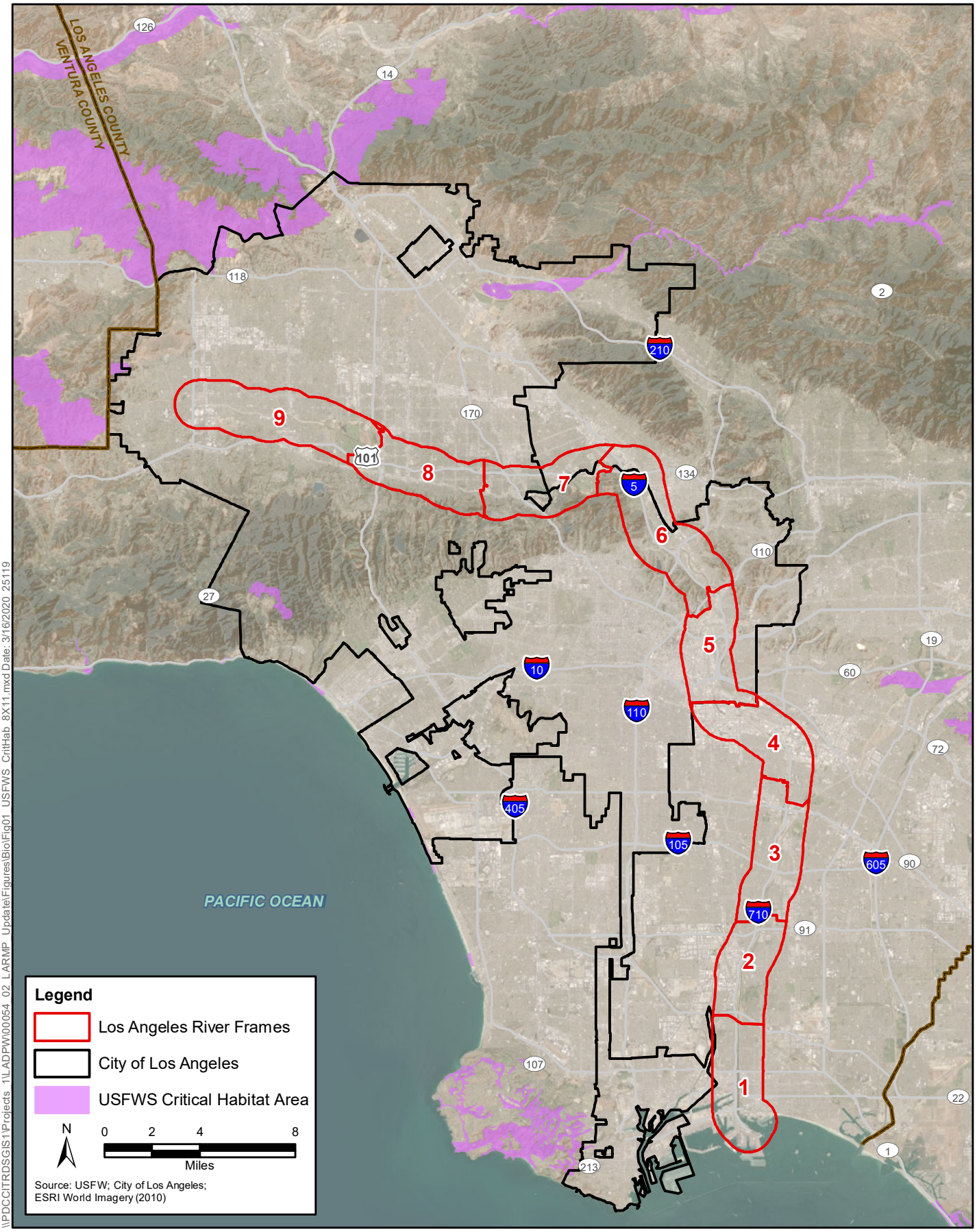

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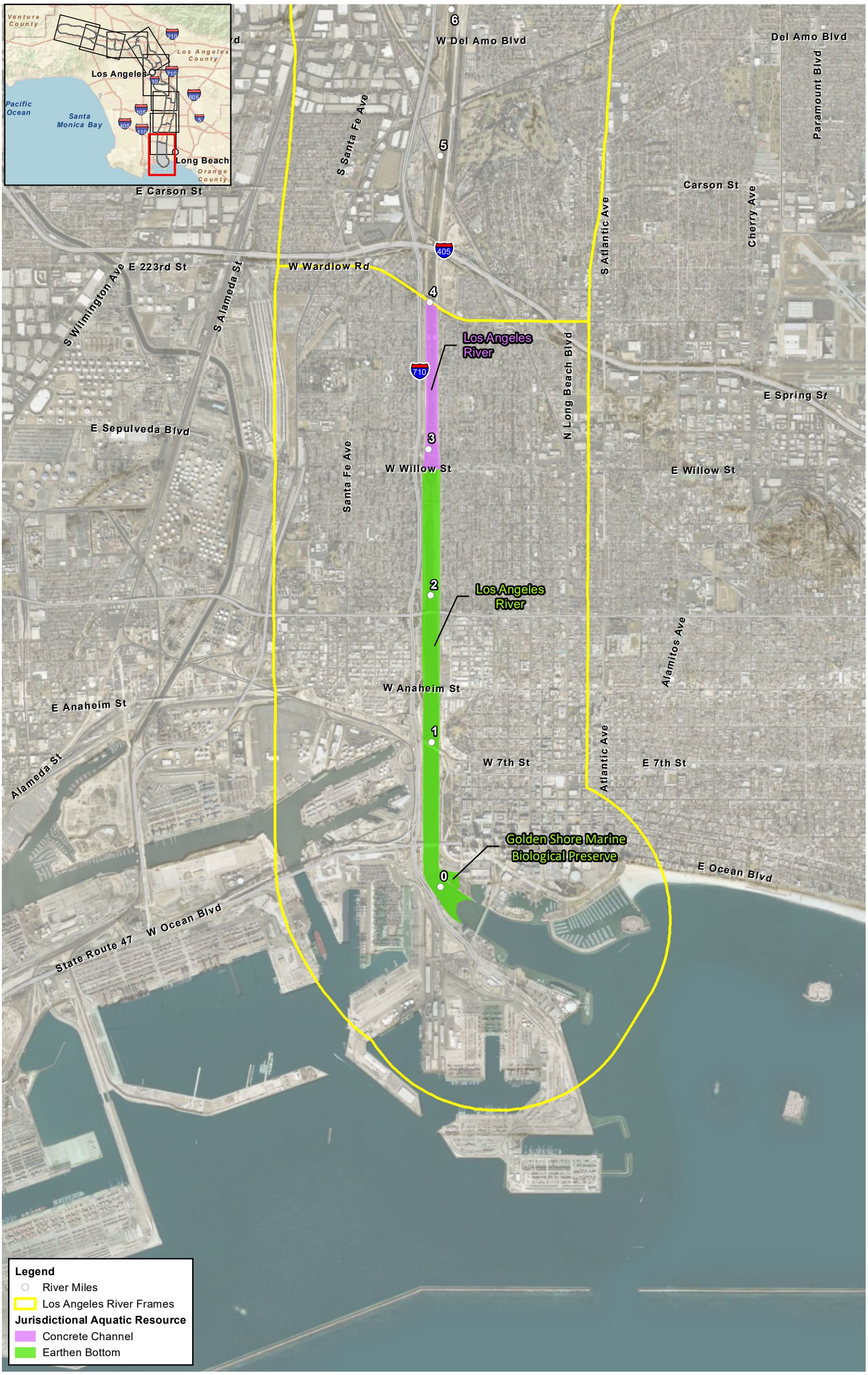
Figure 3.3-12
USFWS Critical Habitat



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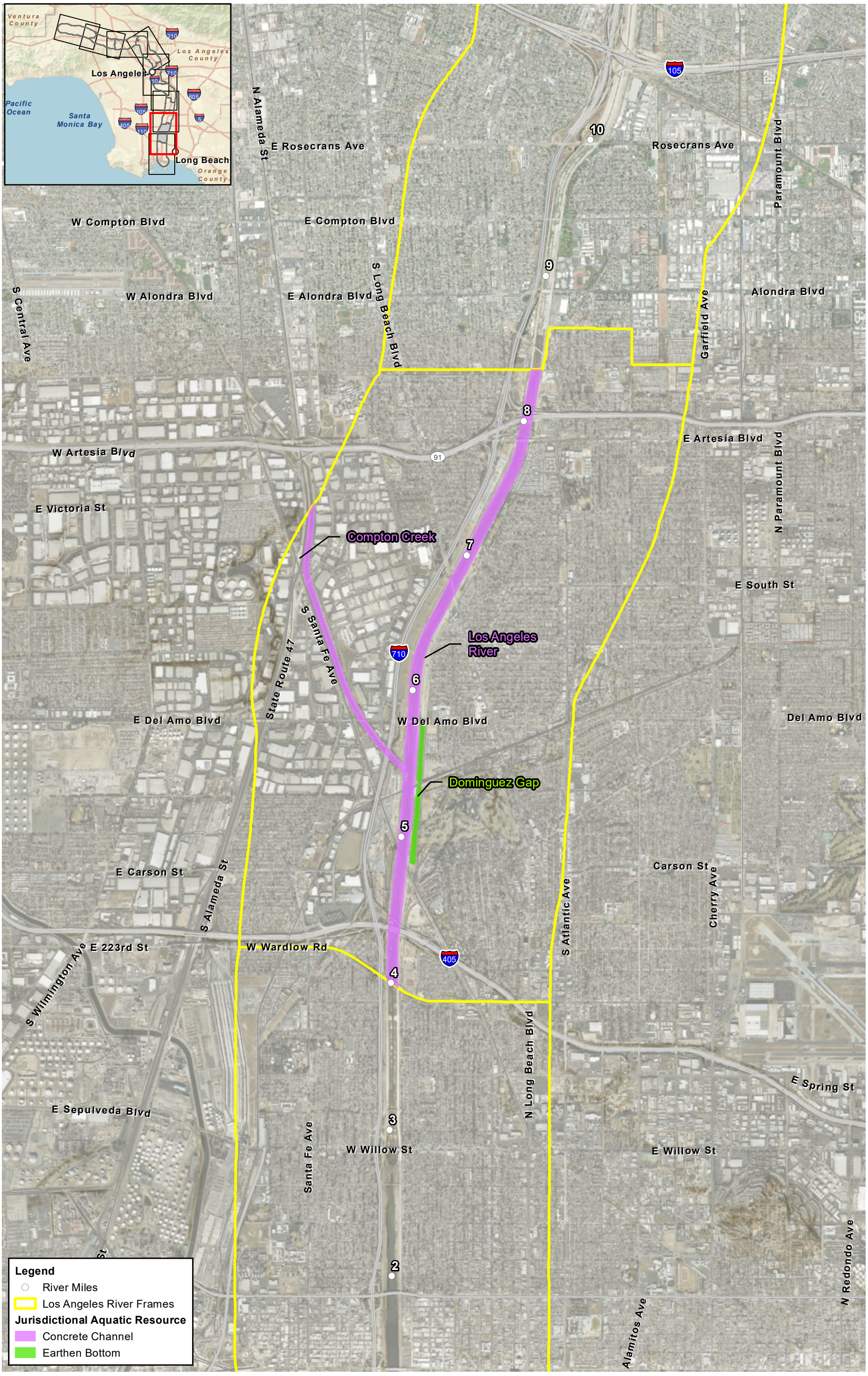
Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-13
Jurisdictional Aquatic Resources within Frame 1



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Source: NDH;
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Figure 3.3-14
Jurisdictional Aquatic Resources within Frame 2

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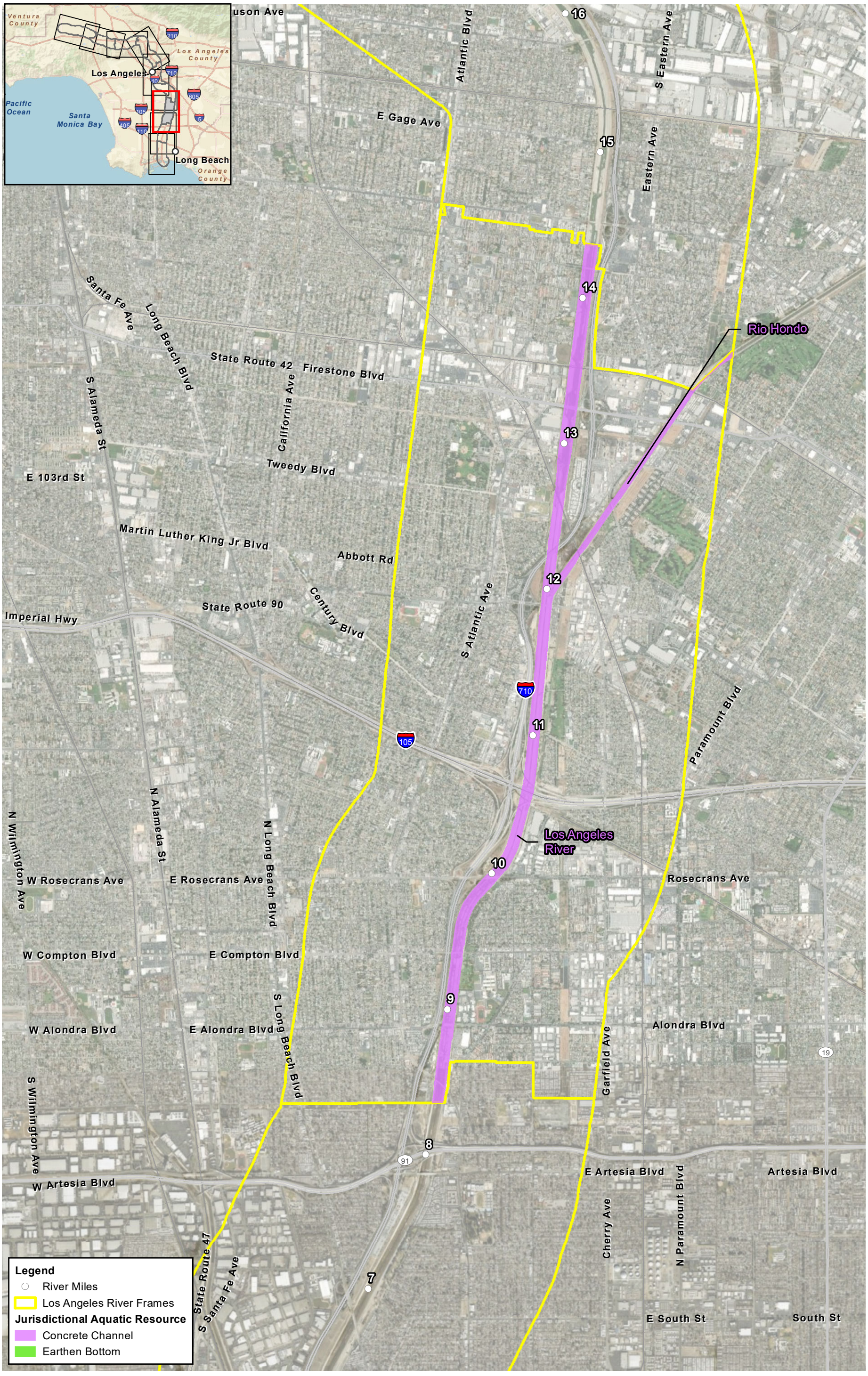

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Source: NDH;
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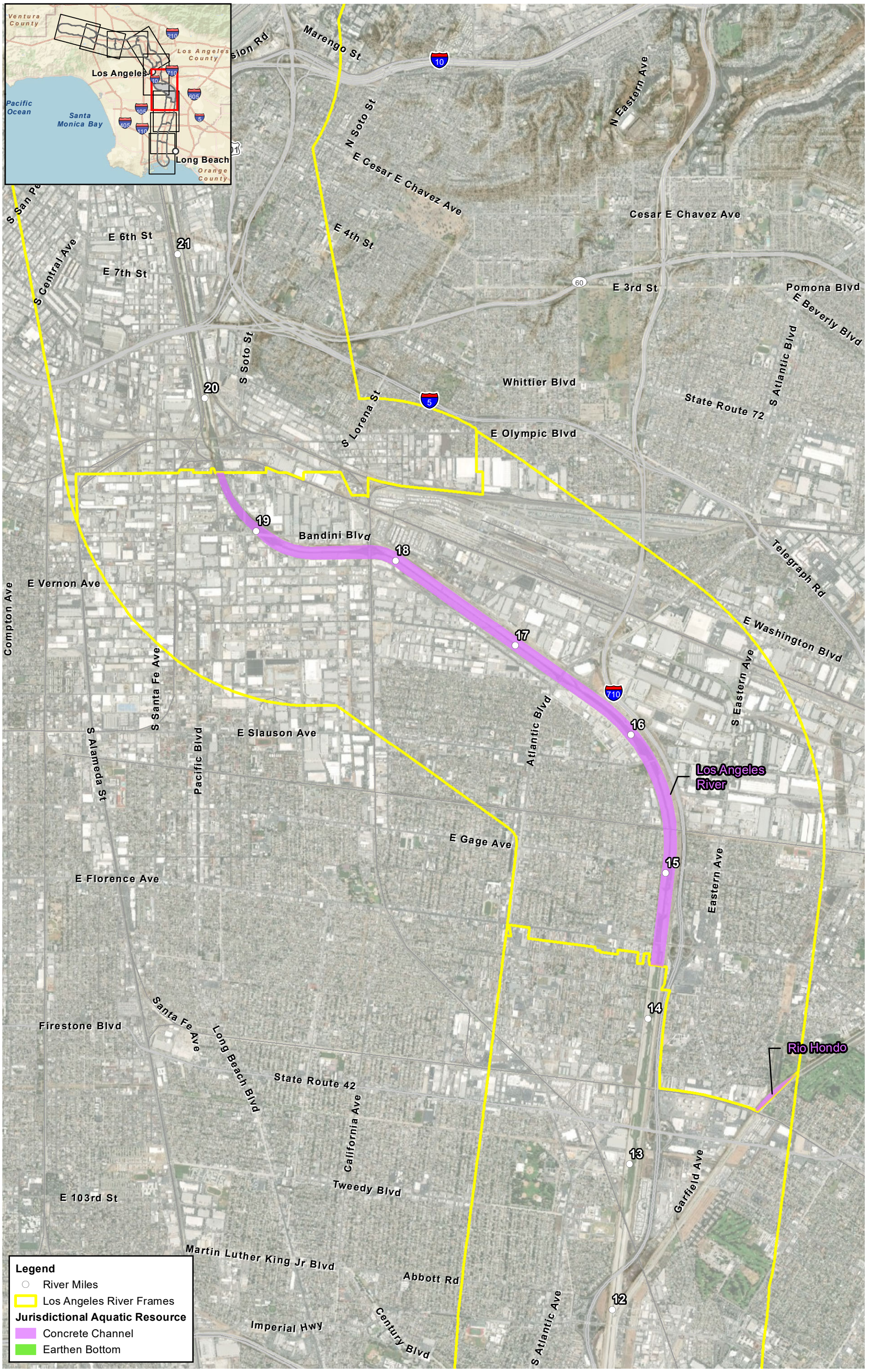
Figure 3.3-15
Jurisdictional Aquatic Resources within Frame 3



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Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-16
Jurisdictional Aquatic Resources within Frame 4

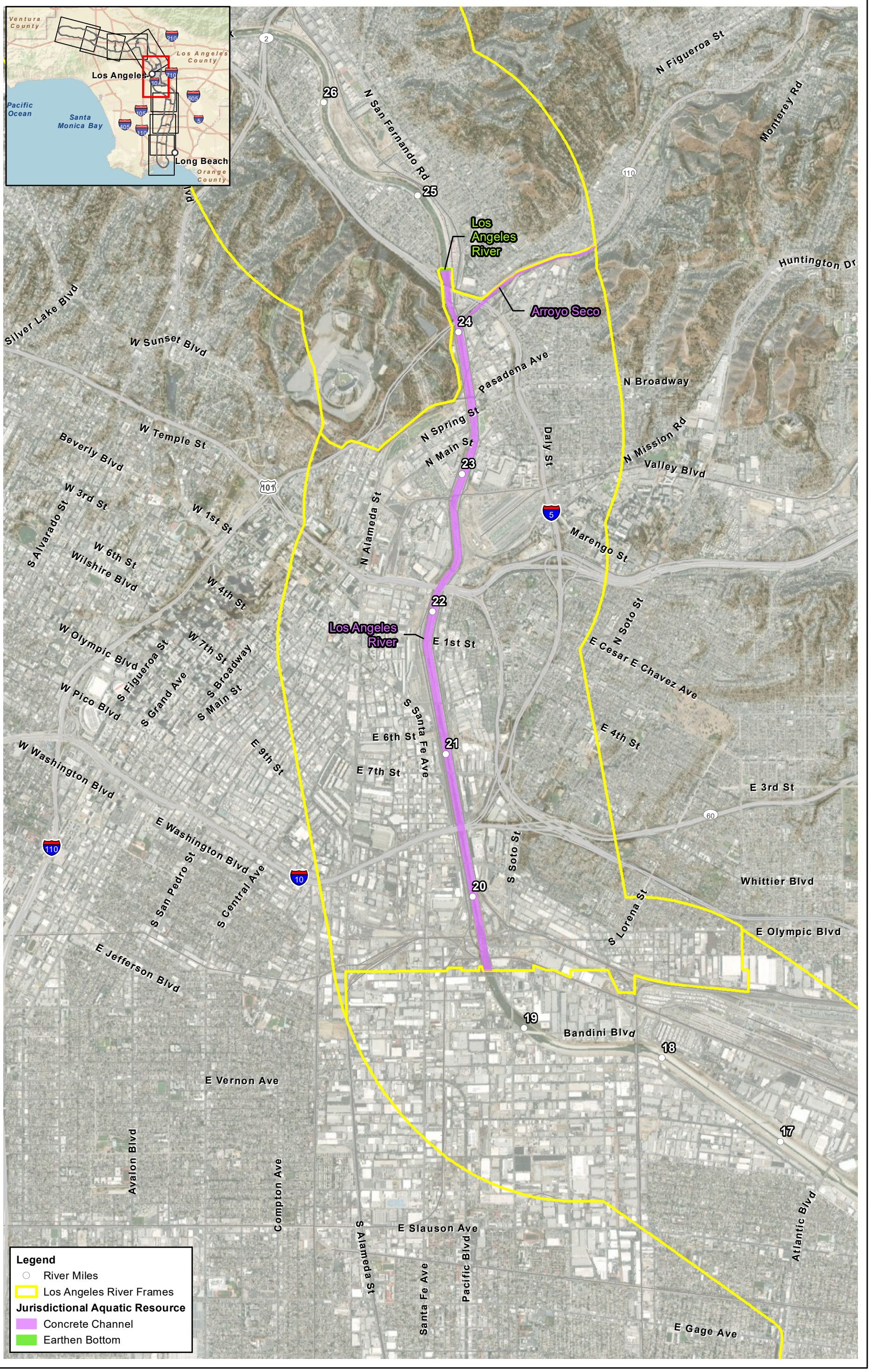


Figure 3.3-17
Jurisdictional Aquatic Resources within Frame 5

Source: NDH;
County of Los Angeles; ESRI

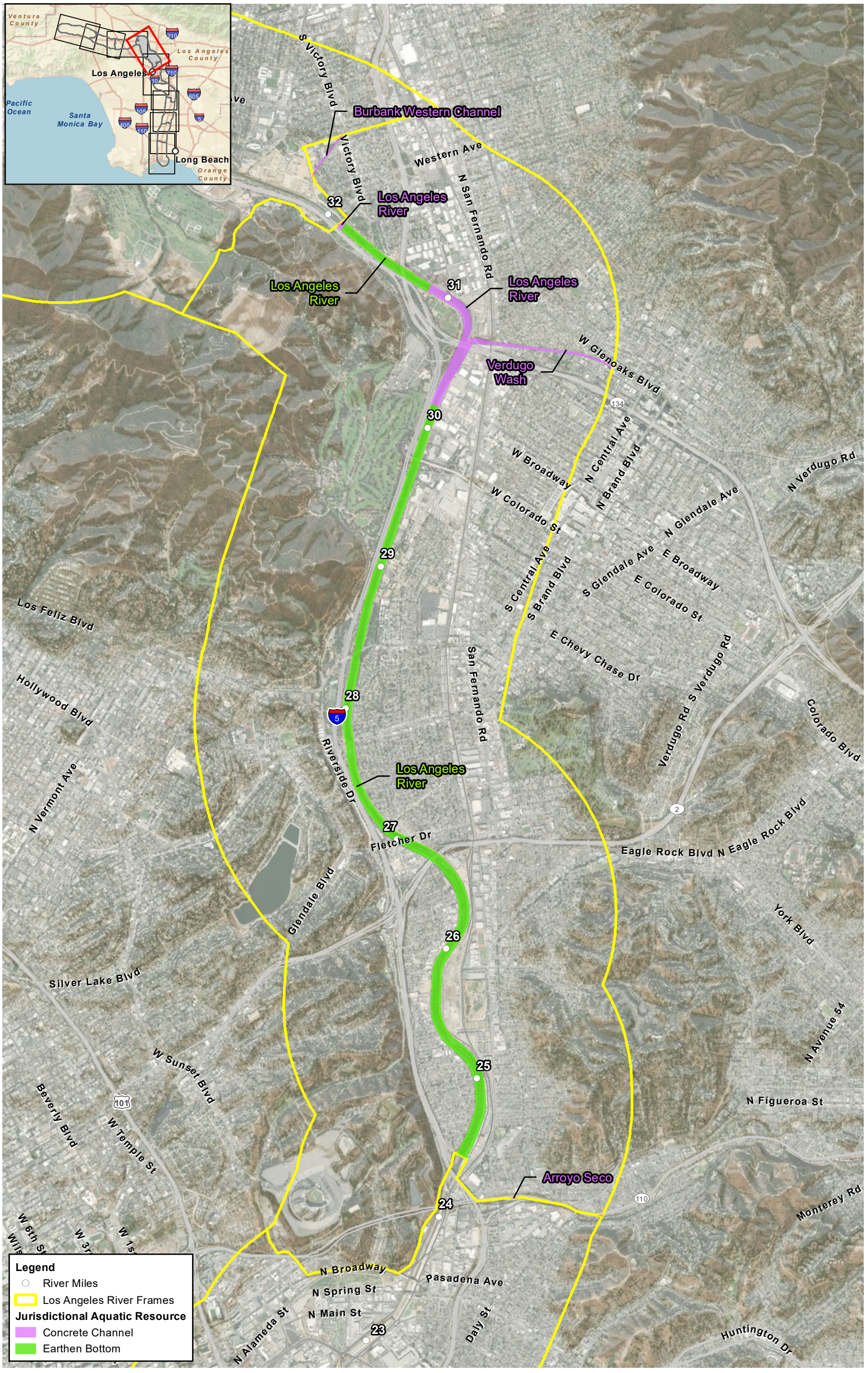
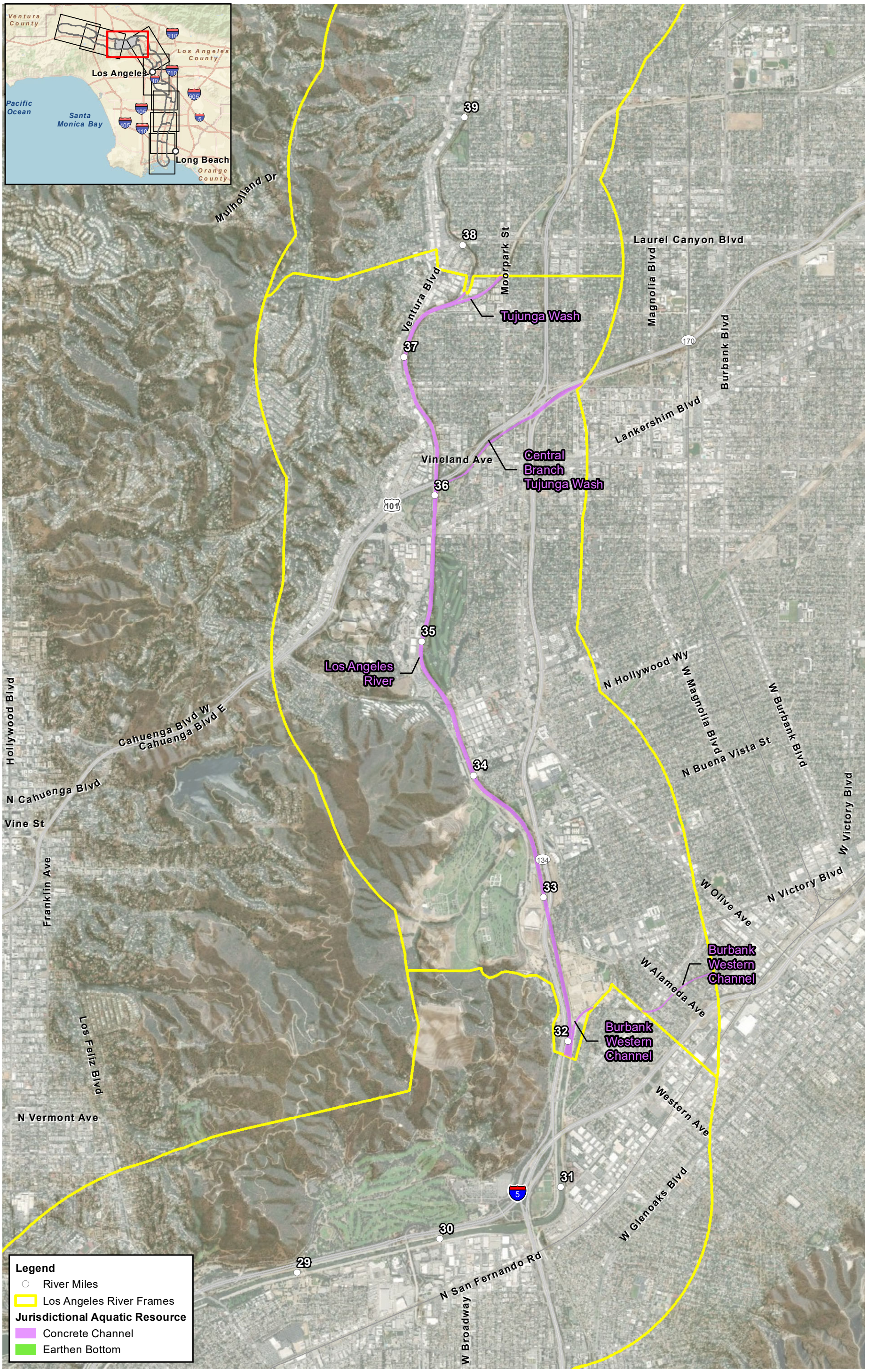


Figure 3.3-18
Jurisdictional Aquatic Resources within Frame 6

Source: NDH;
County of Los Angeles; ESRI



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Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-19
Jurisdictional Aquatic Resources within Frame 7

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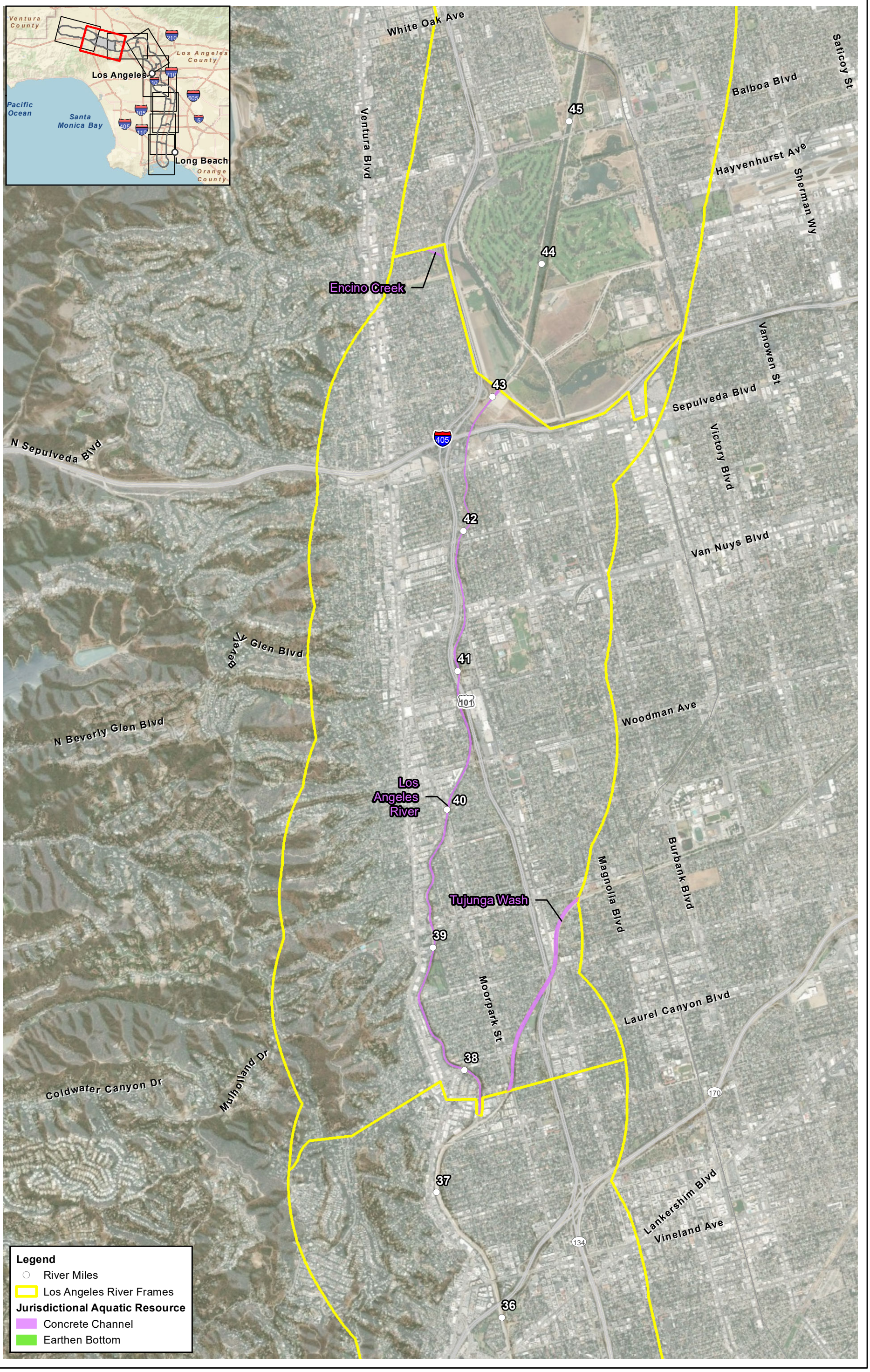

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Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-20
Jurisdictional Aquatic Resources within Frame 8

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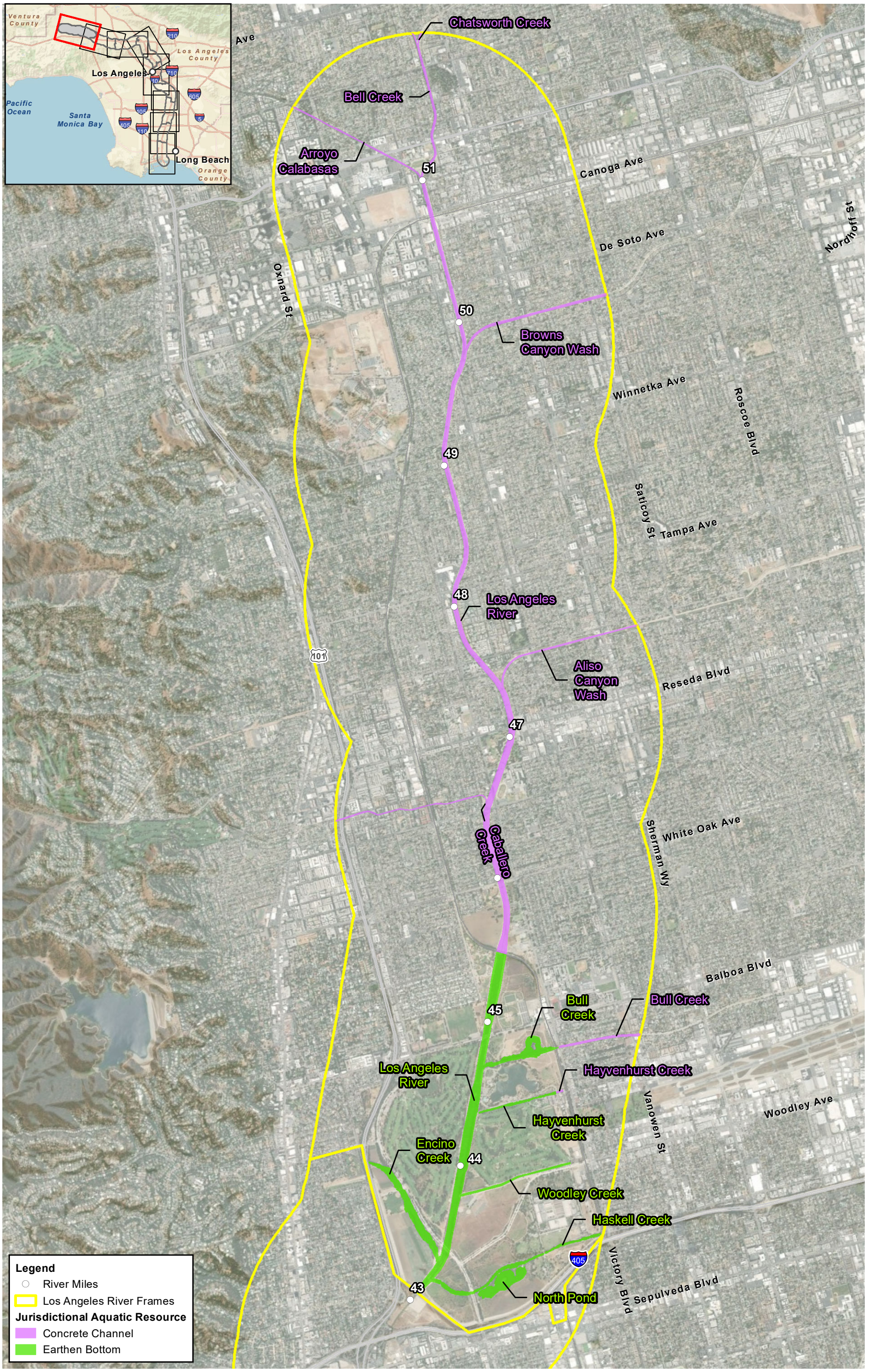


Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-21
Jurisdictional Aquatic Resources within Frame 9

\\PDCGITRDSGIS1\Projects_1\LADPW\600564_02_LARMP_Update\Figures\AquaticsFig\03_3.5_Aquatic_Resources.mxd User: 25119; Date: 10/1/2020

3.3.2 Setting

3.3.2.1 Geographic

Regional Setting

The 51-mile-long LA River flows passes through 18 local jurisdictions, including 17 cities and unincorporated County areas, flowing from the Santa Susana Mountains to the Pacific Ocean in Long Beach. In the late nineteenth and 20th centuries the LA River was channelized to protect lives and property from flooding. The *2020 LA River Master Plan* seeks to reimagine the LA River from a single-use corridor to a multi-benefit resource for the communities of Los Angeles County. From a biological perspective, the goal is to create 51 miles of connected open space that includes clean water and native habitat to improve ecosystem health, while providing flood risk management in a manner that does not increase flood risk for the communities in the LA River watershed.

Hydrological conditions, channel shape, the presence of neighborhoods, and connectivity to adjacent habitat upland to the river determine the river's capacity to support biological activity. The river channel varies between a concrete box channel, concrete trapezoidal soft bottom channel, and a trapezoidal soft bottom channel with a riparian landside right-of-way (ROW) in the Dominquez Gap Wetlands (discussed further below). The 11.3 miles of soft bottom reaches of the river at the Sepulveda Basin, the Glendale Narrows, and the tidal estuary contain the most biological resources; however, much of the river corridor supports algae, insects, fish, and birds.

The LA River is within the San Fernando Valley and the Los Angeles coastal plain. These alluvial plains are surrounded by steep mountain ranges, including the Santa Monica, Santa Susana, and San Gabriel Mountain ranges. Large quantities of wet season runoff from the mountains create large amounts of water far beyond the amount in dry conditions, with a tendency toward flash flooding. Massive floods would convert the flat, wide floodplains of the upper and lower LA Rivers into raging torrents. Historically, the river was a conveyance system carrying runoff from the mountains to the basin, where it would percolate into aquifers. The LA River is joined by tributaries from the San Gabriel Mountains and flows through the Los Angeles Basin to its mouth at the ocean in Long Beach. The course of the LA River changed frequently, with the general course of the LA River as it is known today being established in 1825 when a flood cut a channel across the existing coastal plain of wetlands and forests, causing alterations in the wetland hydrology.

The soils of the Los Angeles Basin are formed from the erosion of the mountains depositing alluvial sediments. Periodic flooding enriched these sediments, producing a fertile valley of coastal sage scrub and valley grasslands, with Southern California oak and walnut forests (Schiffman 2005). After settlement by the Spanish and later Americans, these habitats were overgrazed, converted to agriculture, and eventually converted to urban areas (Schiffman 2005). Flood-management activities, which resulted from the desire of the residents in the region to protect their lives and properties from floods, further altered the geology and biology of the Los Angeles Basin. The groundwater basins under the Los Angeles Plain are fed by water infiltrating through the highly permeable sediments and soils beneath Los Angeles.

The LA River is within the California floristic province. It sits at one of the narrowest parts of the province and is further pinched by the development of the Los Angeles metropolitan area. The south coast area of the province is the most threatened biologically diverse area in the continental U.S. (Conservation International 2018) due to rapid urbanization and subsequent loss of habitat. At this

critical point, the river could be part of a connective matrix of diverse habitats, not just for the ecological health of the watershed, but also for migratory species of the Pacific flyway and the migration of species northward within the ecoregion. The watersheds for the LA River are depicted on Figure 3.3-22. The Upper LA River watershed is associated with Frames 9, 8, 7, and 6, with the Lower LA River watershed associated with Frames 5, 4, 3, 2, and 1. Portions of Frames 2 and 1 are associated with the Alamitos Bay-San Pedro Bay watershed.

The largely urbanized LA River and study area overlay an area called the South Coast Ecoregion. This area contains mountains, hills, valleys, and plains of the Transverse Ranges and of the Peninsular Ranges that are close enough to the Pacific Ocean for the climate to be modified greatly by the marine influence. Conservation targets within this ecoregion include riparian forests and thickets, California grasslands and flower fields, and freshwater marshes.

Local Setting

Special-Status Plants and Animals

Within the study area, 37 special-status species, including 23 animals (Figure 3.3-23) and 14 plants (Figure 3.3-24), were identified through a CNDDB query. To comply with CNDDB data use guidelines (CDFG 2011) species cannot be identified in maps within public documents. CNDDB data is displayed in standardized text and graphic format as provided by CDFW. The different sizes of circles and polygons indicate the level of location detail provided in the source document(s). The accuracy of a specific bounded area with an 80-meter radius, such as Animal (80 m) in Figure 3.3-23 is the highest, with an accuracy of 1. The accuracy of a non-specific bounded area is lower, such as Animal, Non-Specific Animal, in Figure 3.3-23, with an accuracy of 3, and the accuracy of a circular bounded feature is dependent on the radius of the feature, with a larger radius being less accurate. When the term “multiple” is used, then multiple species were observed in the same observation area. Below in Table 3.3-1, the wildlife species displayed within Figure 3.3-23 are listed, as well as the frame in which the species occur. Similarly, in Table 3.3-2, the botanical species displayed in Figure 3.3-24 are listed by the frame in which the species occur. An expanded CNDDB search for the study area plus the associated adjacent nine USGS quadrangles revealed 75 animals and 99 plants. All of these species were evaluated for their potential to occur within the frames, and the results of the evaluation are included in Appendix D.2.

Wildlife Corridors, Linkages, and Local Connectivity Areas for these species are mapped on Figure 3.3-25. Soils are mapped on Figure 3.3-26 through Figure 3.3-34.

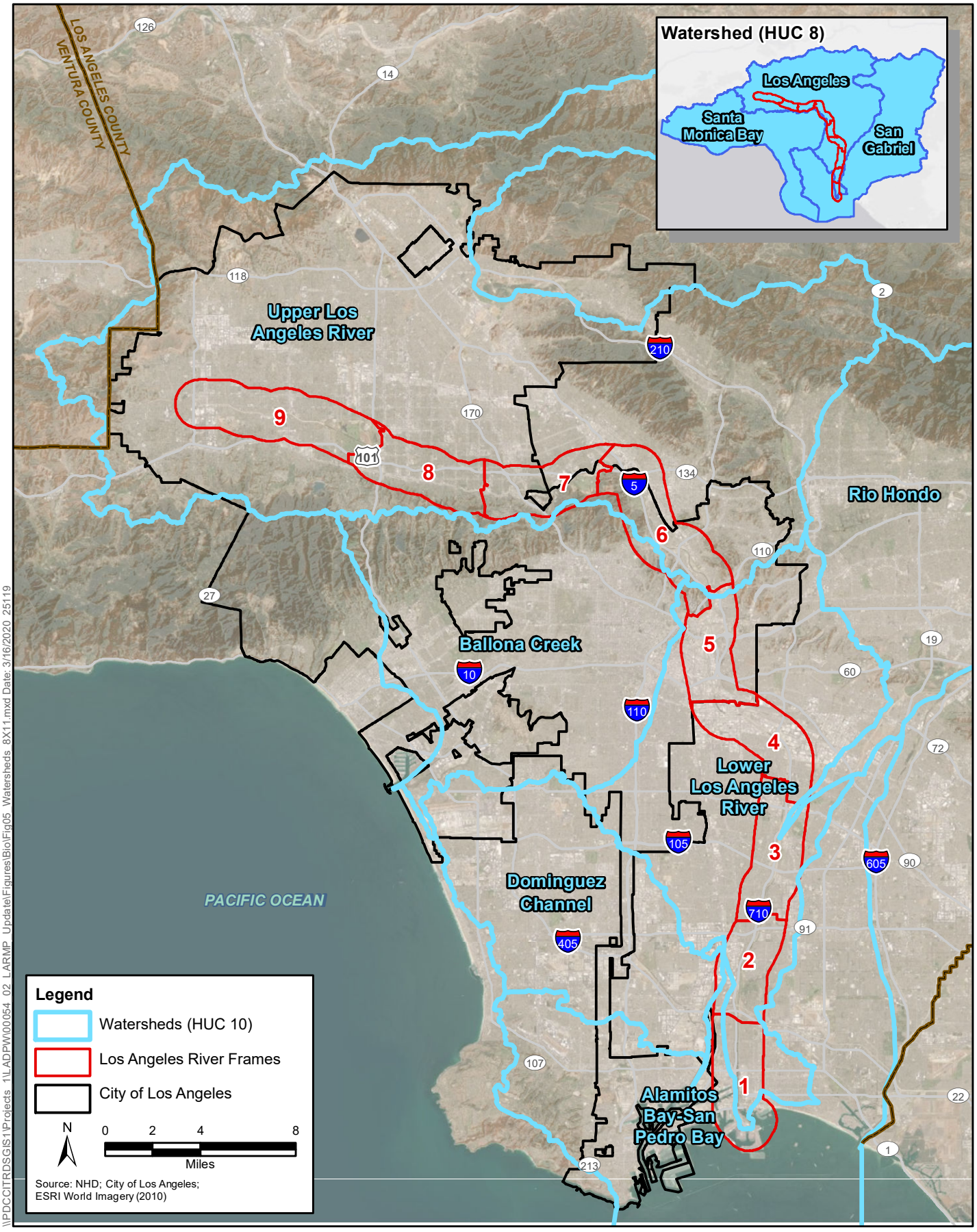


Figure 3.3-22
Watersheds

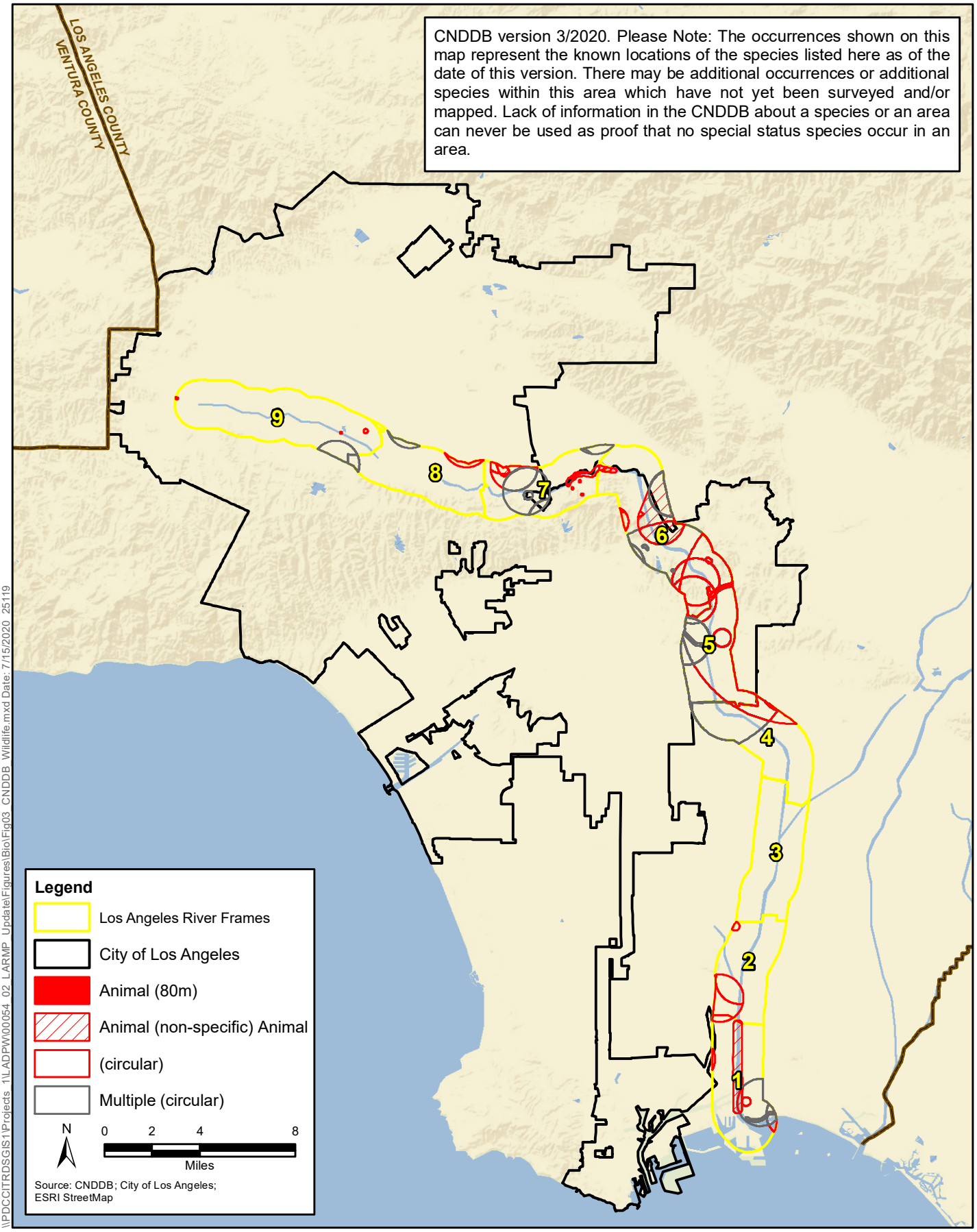


Figure 3.3-23
CNDDB Special-Status Wildlife within the LA River Biological Study Area

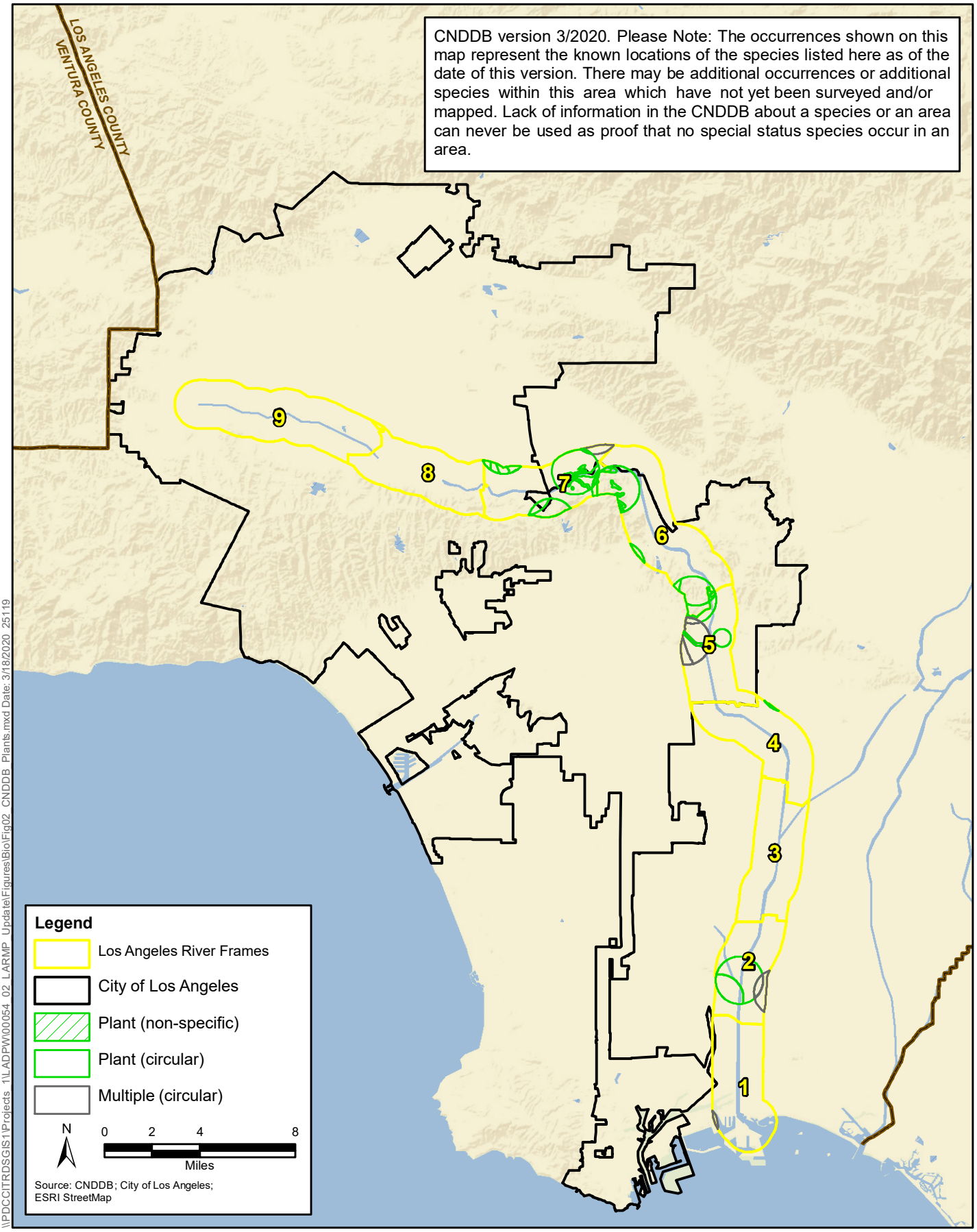
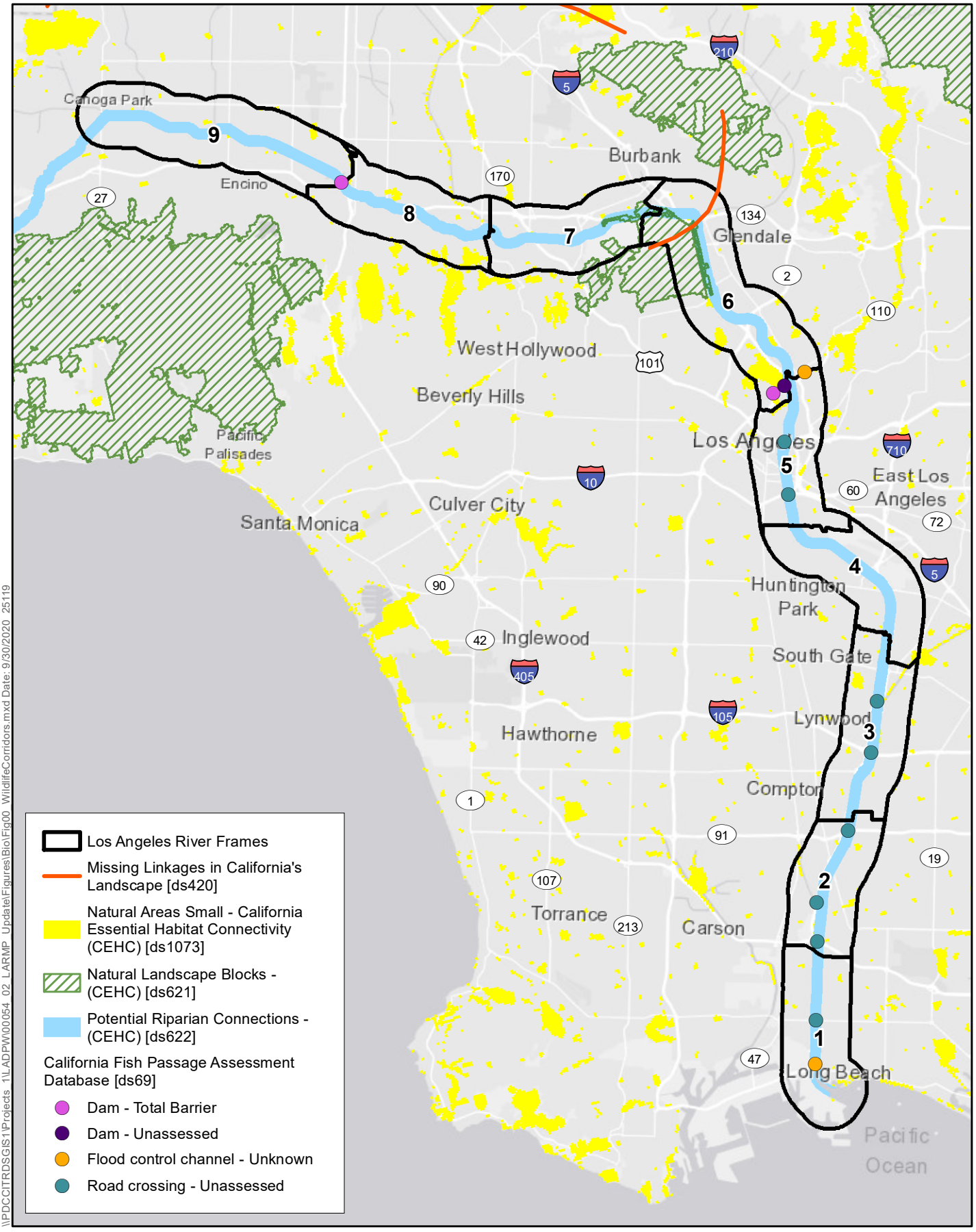


Figure 3.3-24
CNDDB Special-Status Plants within the LA River Biological Study Area

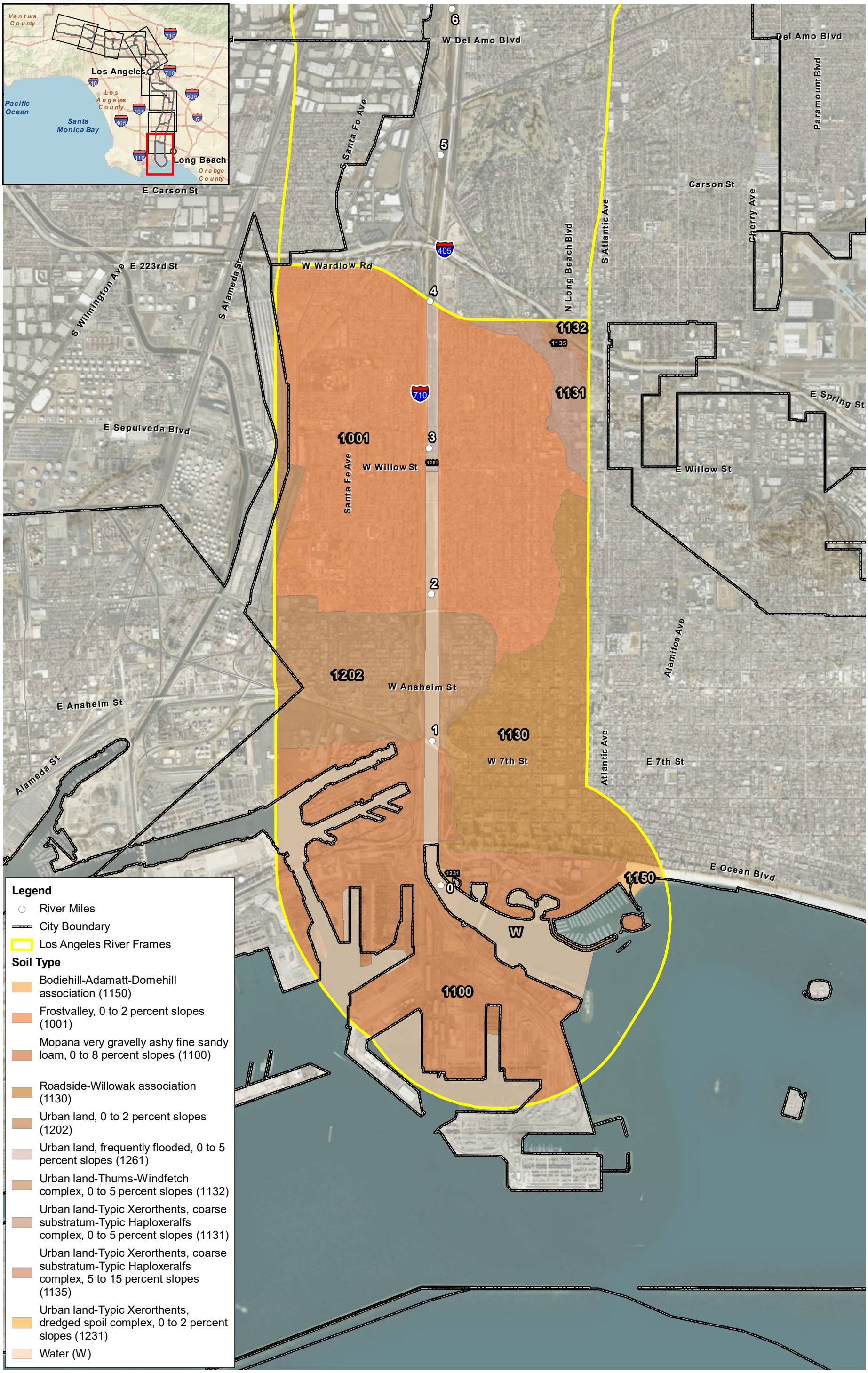


\\PDCCITRDSGIS1\Projects 1\LADPW\00054 02 LARMP UpdateFigures\Bio\Fig00 WildlifeCorridors.mxd Date: 9/30/2020 25119

Source: CDFW; Los Angeles County; ESRI StreetMap
Map Prepared: 9/30/2020

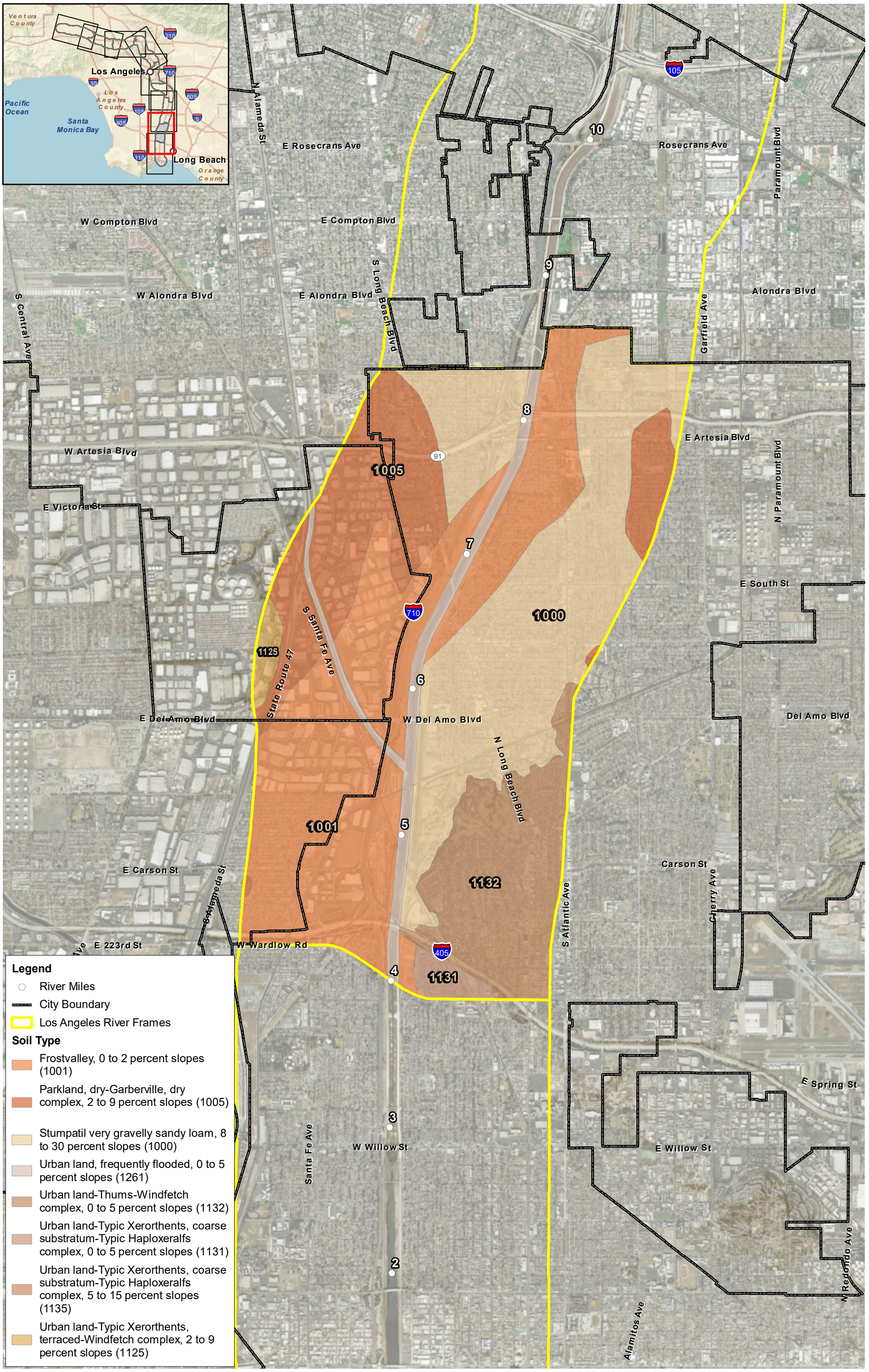
N 0 1 2 4 Miles

Figure 3.3-25
Wildlife Corridors and Linkages in the LA River Biological Study Area



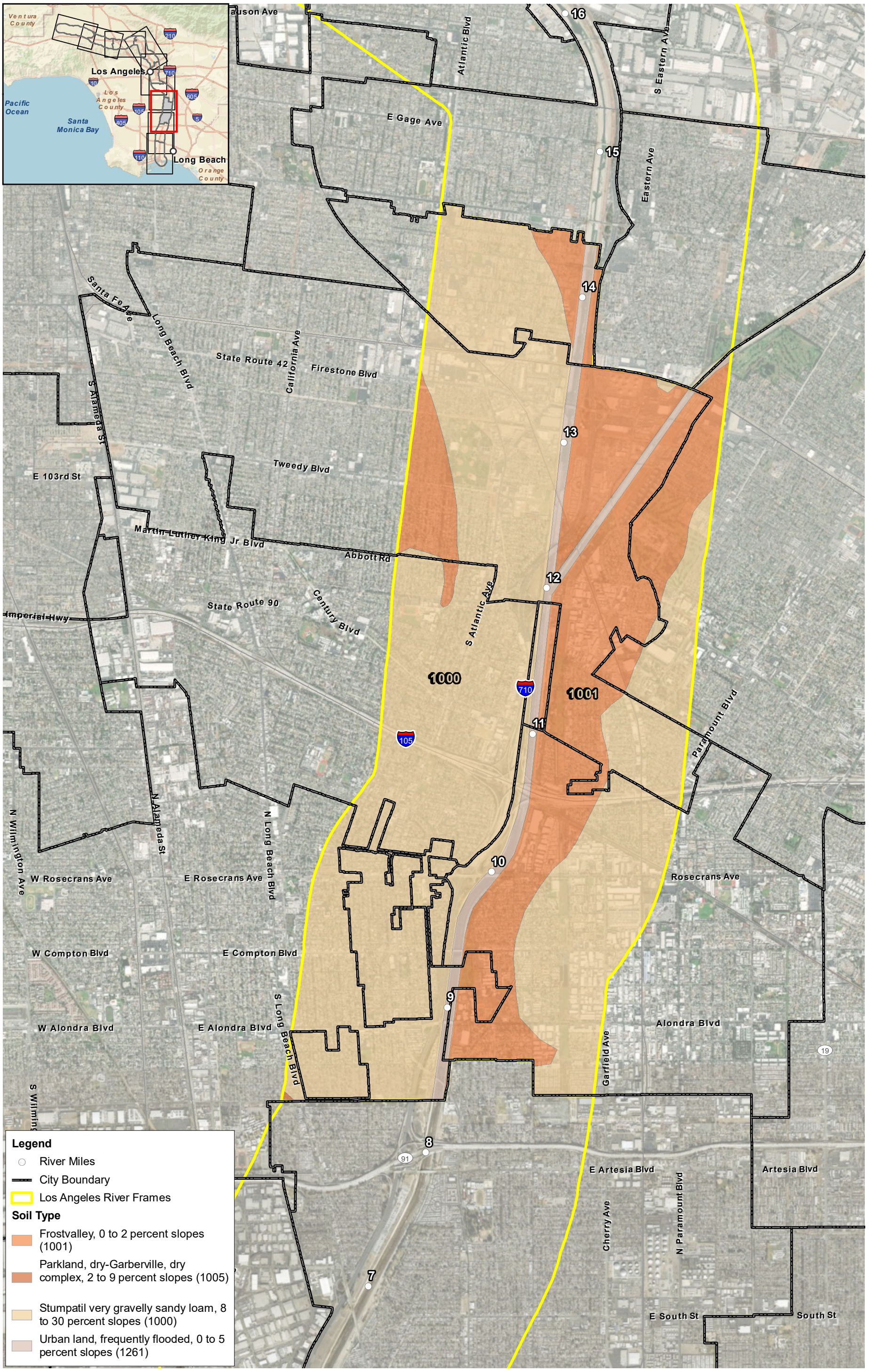
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-26
Frame 1 Soils Map



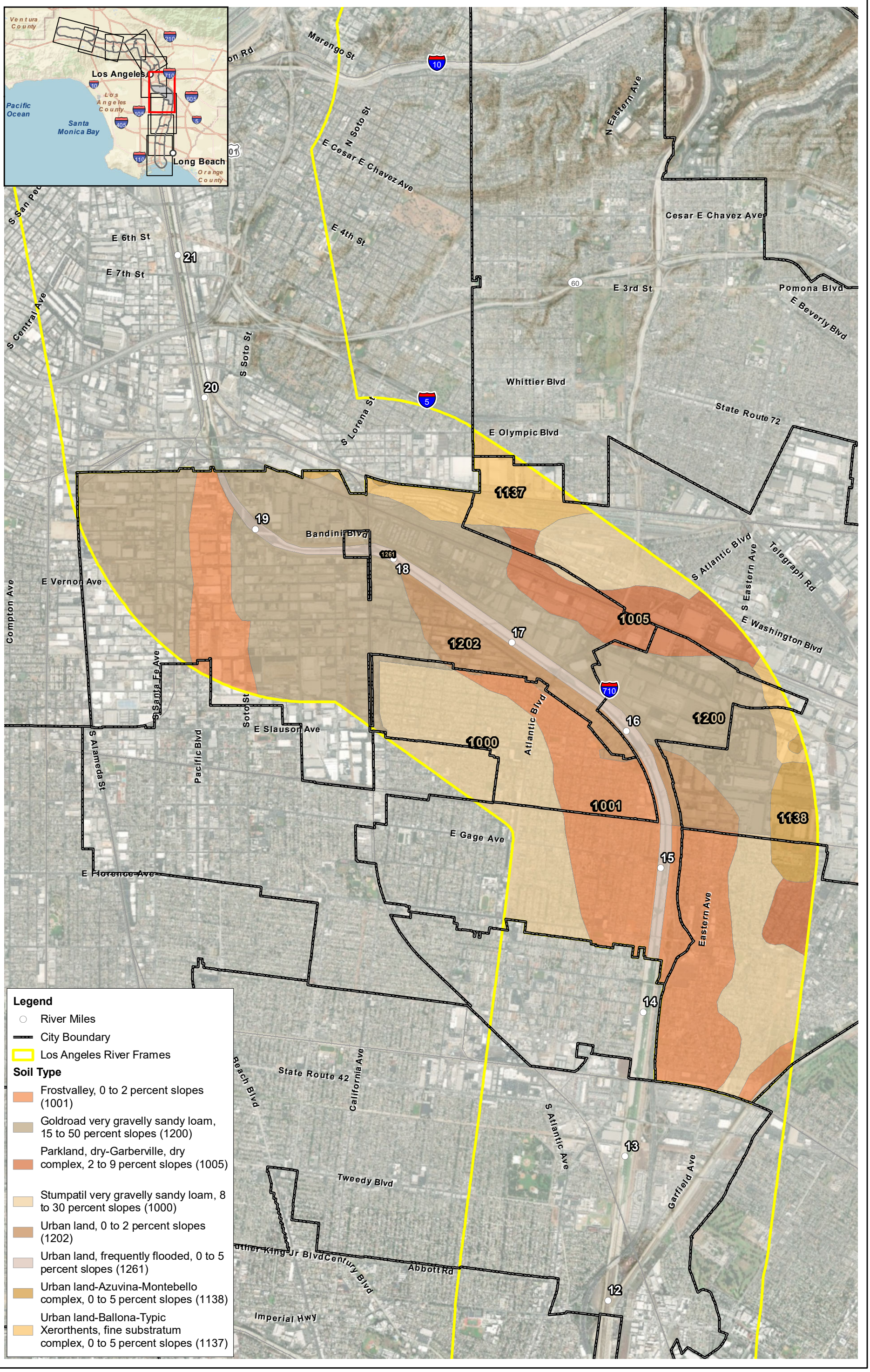
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-27
Frame 2 Soils Map



Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-28
Frame 3 Soils Map



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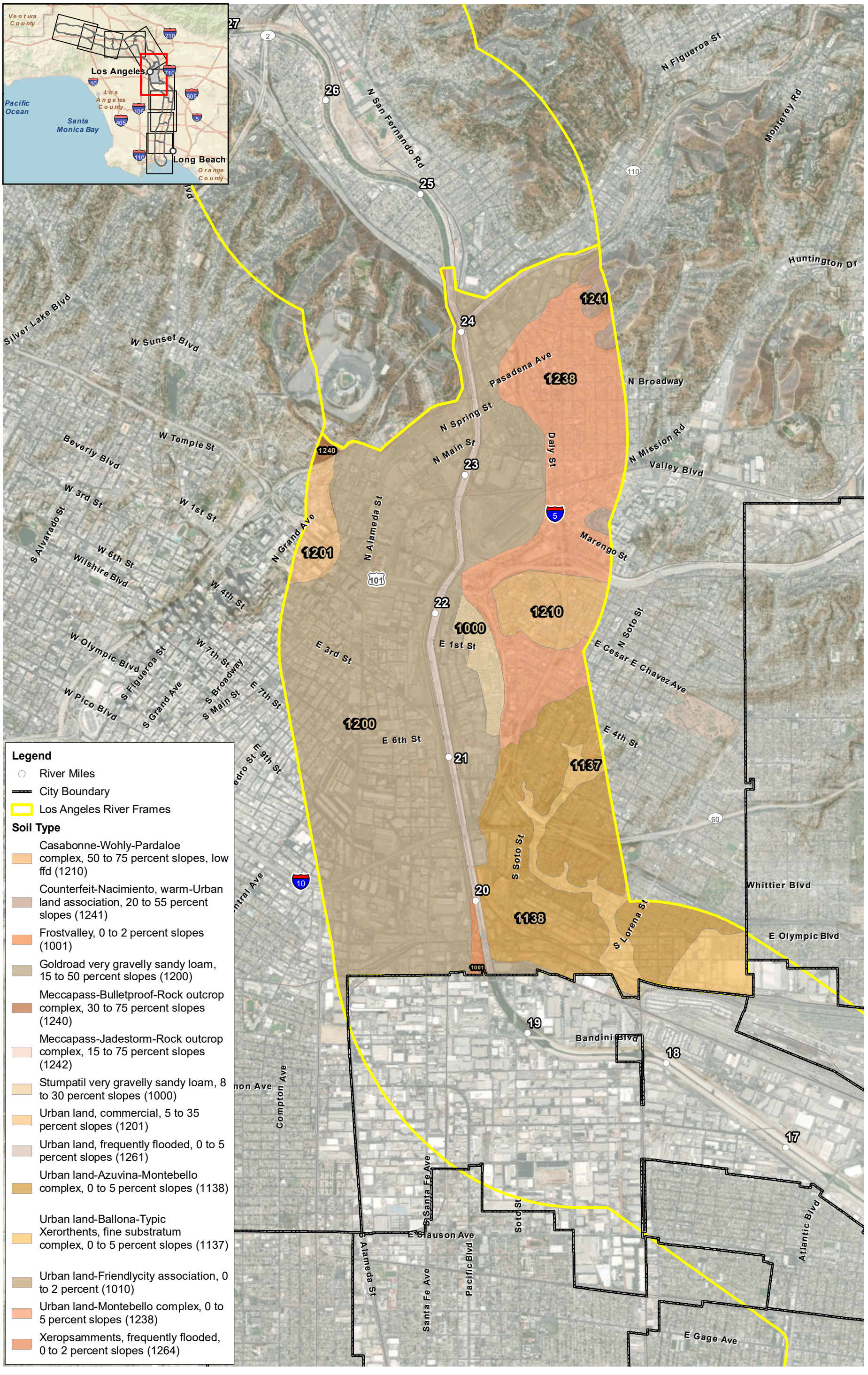
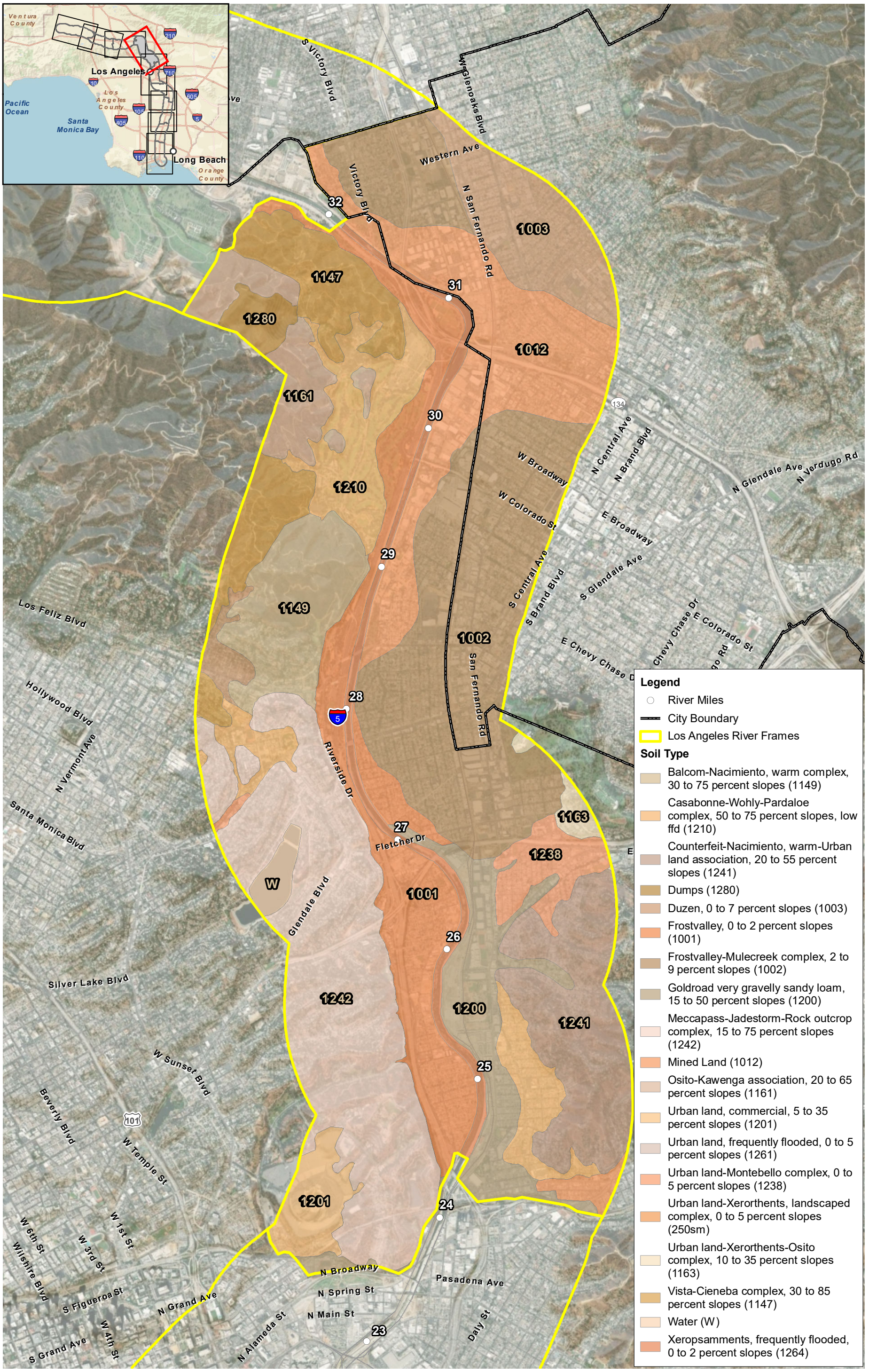
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-29
Frame 4 Soils Map



Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-30
Frame 5 Soils Map



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Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-31
Frame 6 Soils Map

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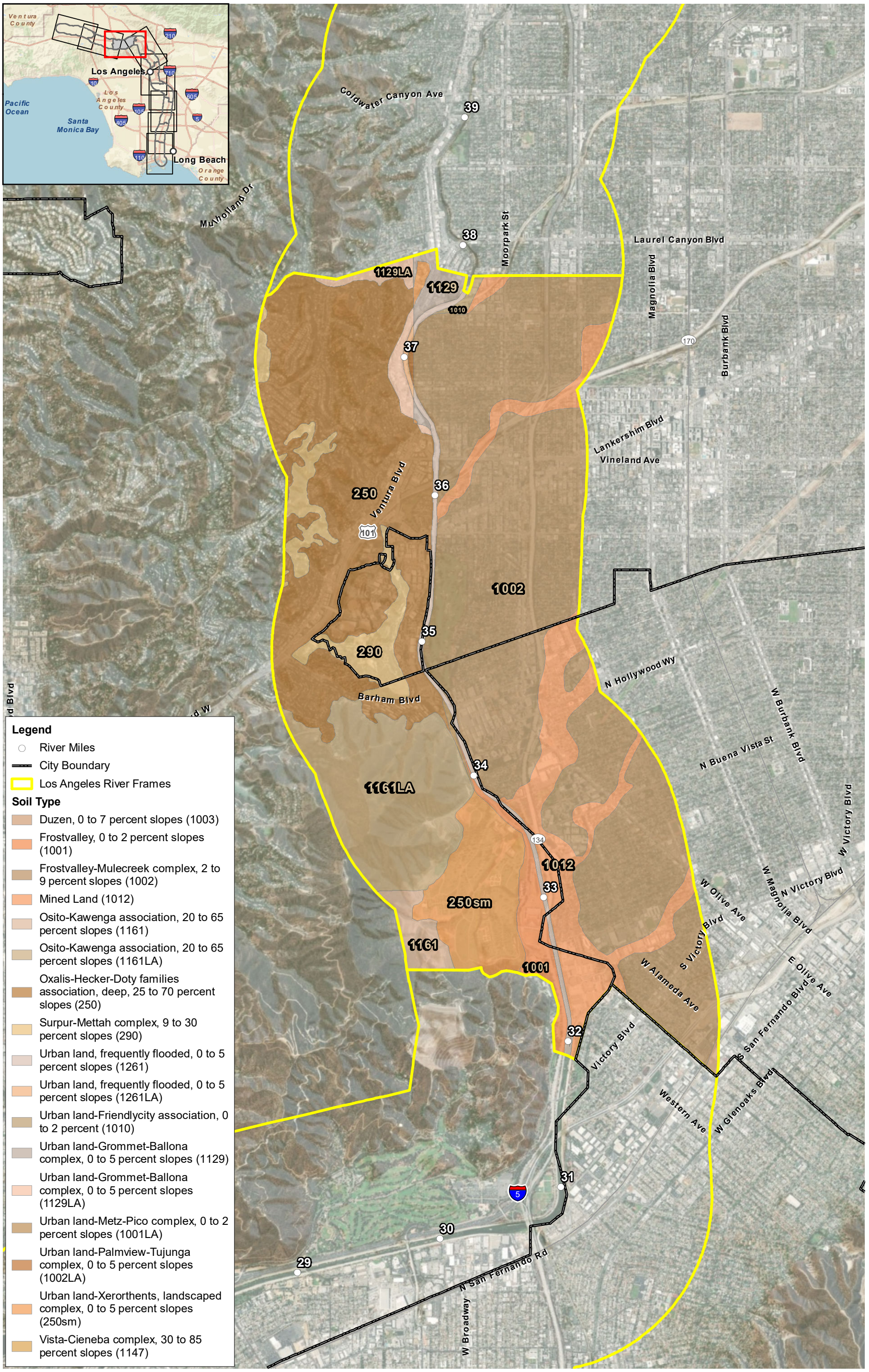
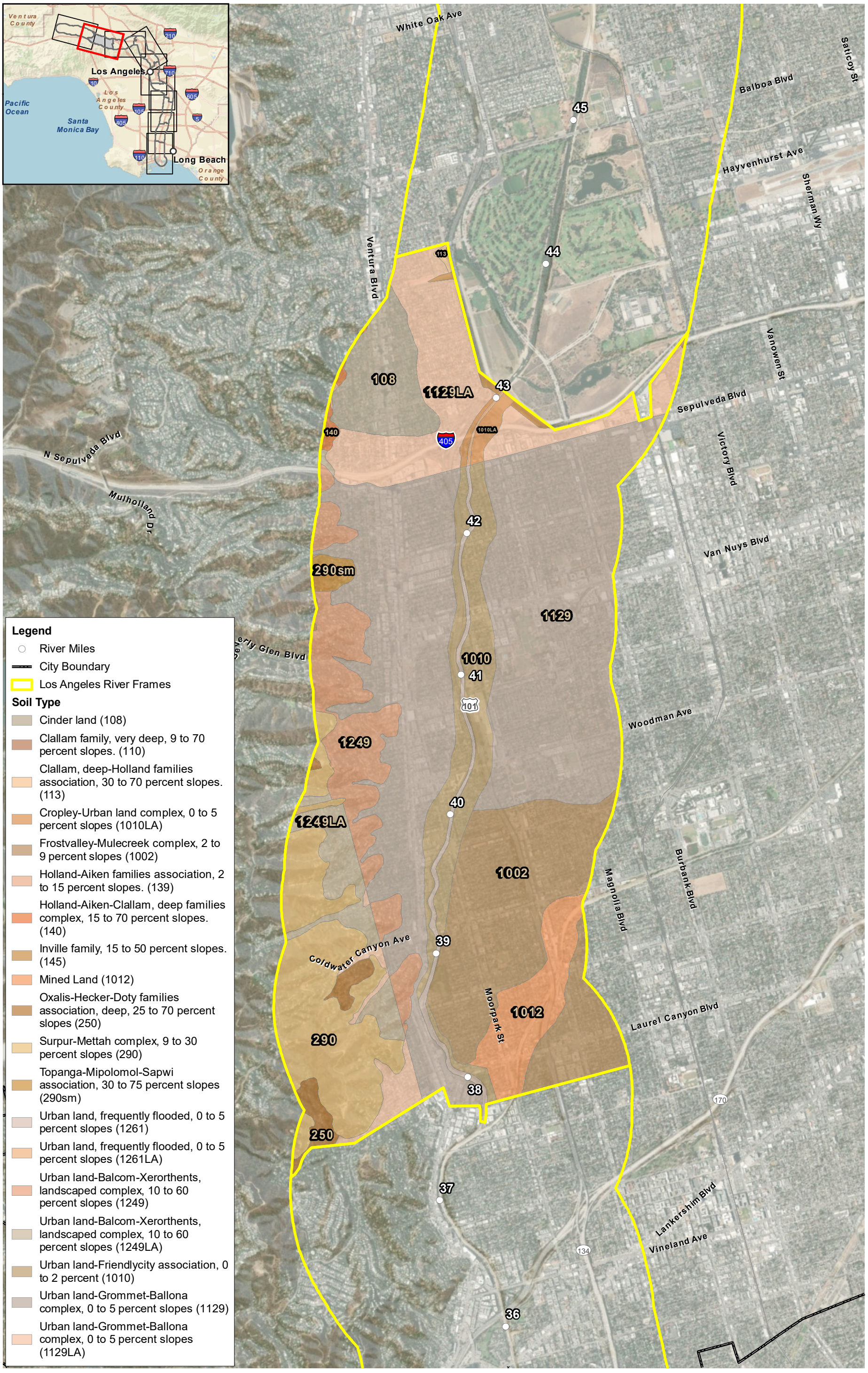


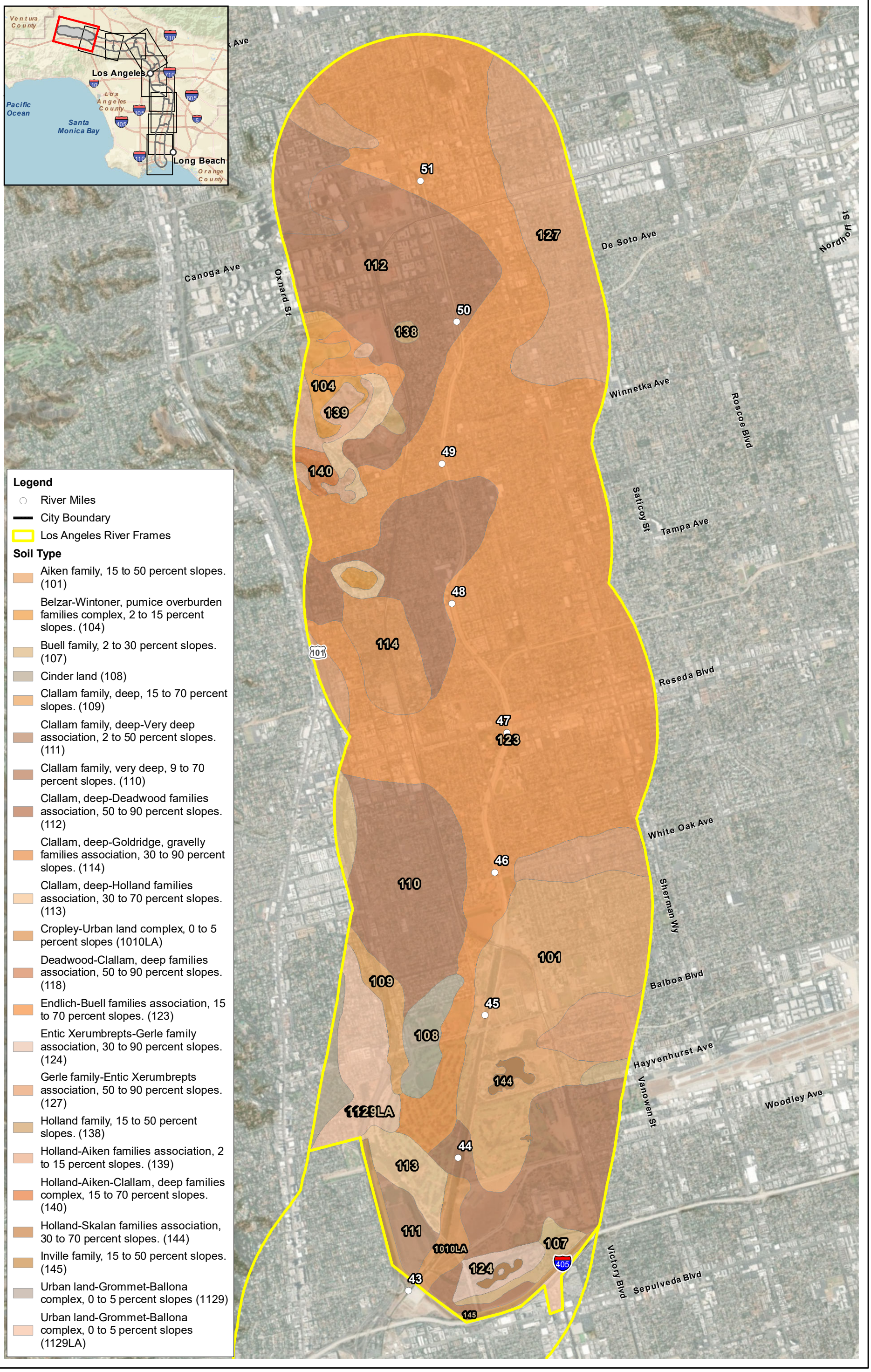
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-32
Frame 7 Soils Map



Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-33
Frame 8 Soils Map



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Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-34
Frame 9 Soils Map

Table 3.3-1. CNDDB Special-Status Wildlife Observed within the LA River Study Area

Frame	Common Name	Species Name	Status*
Avian			
4, 5, 6	Burrowing owl	*Athene cunicularia*	CSC
8, 9	Swainson's hawk	*Buteo swainsoni*	ST
1, 2	Western yellow-billed cuckoo	*Coccyzus americanas occidentalis*	FT/SE
4, 5, 6	Southwestern willow flycatcher	*Empidonax traillii extimus*	FE, SE
1, 4, 5, 6	Bank swallow	*Riparia*	ST
5, 6, 7, 9	Least Bell's vireo	*Vireo bellii pusillus*	FE, SE
Invertebrate			
1, 6, 8	Crotch's bumble bee	*Bombus crotchii*	SC
Mammal			
7, 8, 9	Pallid bat	Antrozous pallidus	CSC
5, 6	Western mastiff bat	*Eumops perotis californicus*	CSC
6	Western yellow bat	*Lasiurus xanthinus*	CSC
7	San Diego desert woodrat	*Neotoma lepida intermedia*	CSC
1, 5, 7	Big free-tailed bat	*Nyctinomops macrotis*	CSC
8	Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	CSC
4, 5, 6	American badger	*Taxidea taxus*	CSC
Reptiles and Amphibians			
9	Arroyo toad	*Anaxyrus californicus*	FE, CSC
7	California legless lizard	*Anniella spp.*	CSC
5, 6	Southern California legless lizard	*Anniella stebbinsi*	CSC
7, 9	Western pond turtle	*Emys marmorata*	CSC
1, 2	Coast horned lizard	*Phrynosoma blainvillii*	CSC

*FE–Federally endangered
FT–Federally threatened
SE–State endangered
ST–State threatened
SC–State candidate
CSC–California species of special concern

Table 3.3-2. CNDDB Special-Status Plants Observed within the LA River Study Area

Frame	Common Name	Species Name	Status*
2	Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	1B.1
2	Coulter's saltbush	*Atriplex coulteri*	1B.2
5	Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	1B.2
1	Decumbent goldenbush	*Isocoma menziesii* var. *decumbens*	1B.2
5, 6	Greata's aster	*Symphyotrichum greatae*	1B.3
4	Los Angeles sunflower	*Helianthus nuttallii* ssp. *parishii*	1A
6	Lucky morning-glory	*Calystegia felix*	1B.1
6, 7	Mesa horkelia	*Horkelia cuneata* var. *puberula*	1B.1
2, 6, 7	Parish's brittlescale	*Atriplex parishii*	1B.1

Frame	Common Name	Species Name	Status*
5	Prostrate vernal pool navarretia	*Navarretia prostrata*	1B.2
5	Robinson's pepper-grass	*Lepidium virginicum* var. *robinsonii*	4.3
1	Salt marsh bird's-beak	*Chloropyron maritimum* ssp. *maritimum*	FE, SE, 1B.2
5	Salt spring checkerbloom	*Sidalcea neomexicana*	2B.2
7, 8	San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	FP, SE, 1B.1

*FE–Federally endangered
FP–Federally proposed threatened
1A-presumed extinct in California and either rare or extinct elsewhere
1B-rare, threatened, and endangered in California and elsewhere
2B–rare, threatened, and endangered in California but more common elsewhere
4–Watch list: plants with limited distribution
0.1–seriously threatened in California
0.2–moderately threatened in California
0.3–not very threatened in California

The California sagebrush habitat (California sagebrush scrub shrubland alliance) in Frame 5 (Figure 3.3-6), based on USFS CalVeg mapping (USFS 2014), occurs within an area that is currently developed. As such, it was not considered in this assessment when determining potential to occur for special-status species within Frame 5.

Grassland habitat (red brome or Mediterranean grass herbaceous seminatural alliance, mapped as annual grasses and forbs, nonnative/invasive grass and nonnative/ornamental grass) considered potentially suitable to support special-status plant species only includes those areas associated with the Glendale Narrows (Figure 3.3-6 and Figure 3.3-7) (Frames 5 and 6), Santa Monica Mountains (Figures 3.3-7, 3.3-8, and 3.3-9), and Sepulveda Basin (Figure 3.3-10) portions of the frames. The remainder of the red brome or Mediterranean grass herbaceous seminatural alliance habitats in Frames 5, 6–8, and 9 (Figures 3.3-6, 3.3-7, 3.3-8, 3.3-9, and 3.3-10), as well as throughout the entire portion of Frames 1 through 4, were considered unsuitable as they are isolated patches of nonnative grasslands surrounded by extensive development, with the exception of habitat for plant species that tolerate disturbance (e.g., tarplant [*Centromadia* spp.]).

Candidate, sensitive, or special-status plant and animal species (referred collectively here as special-status) and their habitat requirements, regulatory status, and potential for occurrence within each frame are detailed in Appendix D.2. A summary table for the special-status wildlife species with potential to occur within each frame is included below in Table 3.3-3. A similar table for special-status plants has not been included here as there is potential for 85 special-status plants to occur. See Appendix D-2 for special-status plant information. As noted throughout this document, this potential for occurrence list is not exhaustive.

Table 3.3-3. Special-Status Wildlife Species with Potential to Occur within the 2020 LA River Master Plan Frames

Species	Frame 1	2	3	4	5	6	7	8	9
Federally Listed Marine Species									
White abalone (*Haliotis sorenseni*) (FE)	√								
Black abalone (*Haliotis cracherodii*) (FE)	√								
Loggerhead sea turtle (*Caretta caretta*) (FE)	√								
Green turtle (*Chelonia mydas*) (FT)	√								
Leatherback sea turtle (*Dermochelys coriacea*) (FT)	√								
Olive Ridley sea turtle (*Lepidochelys olivacea*) (FT)	√								
Guadalupe fur seal (*Arctocephalus townsendii*) (FT, FP)	√								
Federally and State-listed Birds									
Western snowy plover (*Charadrius alexandrines nivosus*) (FT, CSC)	√	√							
Light-footed Ridgway's Rail (*Rallus obsoletus levipes*) (FE, SE, FP)	√	√							
California least tern (*Sterna antillarun browni*) (FE, SE, CSC)	√	√							
Southwestern willow flycatcher (*Empidonax traillii extimus*) (FE, SE)						√	√	√	√
Least Bell's vireo (*Vireo bellii pusillus*) (FE, SE)						√	√	√	√
Federally Listed Fish									
Tidewater goby (*Eucyclogobius newberryi*) (FE, CSC)	√								
Federally Listed Birds									
Coastal California gnatcatcher (*Polioptila californica californica*) (FT, CSC)						√	√	√	
Federally Listed Amphibians									
Arroyo toad (*Anaxyrus californicus*) (FE, CSC)						√	√		√
California red-legged frog (*Rana draytonii*) (FT, CSC)						√	√		√
State-listed Invertebrates									
Crotch's bumble bee (*Bombus crotchii*) (CE)		√				√	√	√	√
State-listed Birds									
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) (SE)	√								
Bald eagle (*Haliaeetus leucocephalus*) (SE, FP, BGEPA)	√	√	√	√	√	√	√	√	√
Golden eagle (*Aquila chrysaetos*) (FP, BGEPA)					√	√	√	√	√
Tricolored blackbird (*Agelaius tricolor*) (FT, CSC)		√				√	√	√	√
State Species of Special Concern and Fully Protected Species									
Birds									
Burrowing owl (*Athene cunicularia*) (CSC)	√	√	√	√	√	√	√	√	√
American peregrine falcon (*Falco peregrinus anatum*) (FP)	√	√	√	√	√	√	√	√	√
Yellow rail (*Coturnicops noveboracensis*) (CSC)	√	√				√			√
Yellow-breasted chat (I*cteria virens*) (CSC)		√				√	√	√	√

Species	Frame								
	1	2	3	4	5	6	7	8	9
California brown pelican (*Pelecanus occidentalis californicus*) (FP)	√								
Black skimmer (*Rynchops niger*) (CSC)	√	√							
Yellow warbler (*Setophaga petechia*) (CSC)						√	√	√	√
Mammals									
Pallid bat (*Antrozous pallidus*) (CSC)	√	√	√	√	√	√	√	√	√
Townsend's big-eared bat (*Corynorhinus townsendi*i) (CSC)	√	√	√	√	√	√	√	√	√
Spotted bat (E*uderma maculatum*) (CSC)	√	√	√	√	√	√	√	√	√
Western mastiff bat (*Eumops perotis californicus*) (CSC)	√	√	√	√	√	√	√	√	√
Western red bat (*Lasiurus blossevillii*) (CSC)	√	√	√	√	√	√	√	√	√
Western yellow bat (*Lasiurus xanthinus*) (CSC)	√	√	√	√	√	√	√	√	√
Big free-tailed bat (*Nyctinomops macrotis*) (CSC)	√	√	√	√	√	√	√	√	√
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) (CSC)		√			√	√	√	√	√
San Diego desert woodrat (*Neotoma lepida intermedia*) (CSC)					√	√	√	√	√
American badger (*Taxidea taxus*) (CSC)					√	√	√	√	√
Southern grasshopper mouse (*Onychomys torridus ramona*) (CSC)					√	√	√	√	√
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) (CSC)					√	√	√	√	√
Reptiles									
Southern California legless lizard (*Anniella stebbinsi*) (CSC)		√			√	√	√	√	√
California glossy snake (*Arizona elegans occidentalis*) (CSC)		√			√	√	√	√	√
Coastal whiptail (*Aspidoscelis tigris stejnegeri*) (CSC)		√			√	√	√	√	√
Western pond turtle (*Emys marmorata*) (CSC)	√	√	√	√	√	√	√	√	√
Coast horned lizard (*Phrynosoma blainvillii*) (CSC)					√	√	√	√	√
Two-striped garter snake (*Thamnophis hammondii*) (CSC)		√				√	√		√
Amphibians									
Western spadefoot (*Spea hammondii*) (CSC)					√	√	√	√	√
Coastal range newt (*Taricha torosa*) (CSC)						√	√		√

Federal Classifications
FE: Federally Endangered; FT: Federally Threatened; BGEPA: Protected under the Bald Eagle/Golden Eagle Protection Act
California State Classifications
SE: State Endangered; ST: State Threatened; CSC: California Species of Special Concern; FP: Fully Protected; CE: Candidate Endangered

Frame 1

Frame 1 is the southernmost frame and is primarily in the City of Long Beach, with small portions of the City of Los Angeles near the western boundary of the frame. This frame includes the coastal plains and shoreline environments of the LA River and is unique because habitat in this frame supports a marine ecosystem, algae (such as kelp), fish, shellfish, and wildlife. Frame 1 also supports

habitats necessary for migration, acclimatization between fresh and saltwater, or other temporary activities by aquatic organisms, such as anadromous fish. The spawning, reproduction and/or early development of fish are supported by the aquatic habitats in Frame 1, as is water to support habitat suitable for filter-feeding shellfish (e.g. clams, oysters, and mussels). Frame 1 also provides estuarine habitat, such as vegetation, fish, shellfish, and wildlife. The Shoreline Aquatic Park is in the Port of Long Beach near river mile 0.0; Santa Cruz Park, Golden Park, and Cesar Chavez Park are on the west bank at river mile 0.3 to 0.8, bisected from the river by West Shoreline Drive; and Wrigley Greenbelt is on the west bank of the LA River from river mile 2.9 to 4.0.

The mouth of the LA River is designated as both warm freshwater habitat and wildlife habitat. The brackish waters of the mouth of the LA River are influenced by tidal waters and are designated as marine habitat, used by rare, threatened, or endangered species. Soils are mapped on Figure 3.3-26 through Figure 3.3-34. On Figure 3.3-26, soils are mapped for Frame 1 and consist mainly of Mopana fine sandy loam, Roadside-Willowak association, and Frostvalley soil types.

The Lower LA River Shorebird Area begins in the City of Long Beach in Frame 1 and extends north for approximately 7 miles into Frame 2. This area is one of the most important shorebird stopover sites in Southern California. The thin sheet of treated wastewater that forms in the river channel in the summer provides algae and micro-invertebrates for shorebirds. This area was once extensive shorebird habitat that included vast marshes along the coast of the Los Angeles Basin, but now it provides a human-made environment for shorebirds (Audubon 2020).

Frames 2 through 5

Frames 2 through 5 include the following cities that have similar biological resources: Cities of Long Beach, Carson, Compton, Cudahy, Downey, Lynwood, Paramount, Downey, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, Maywood, Vernon and Los Angeles and the unincorporated County areas. Frames 2 through 5 are highly urbanized with similar topography across the frames. The only exceptions being the Dominguez Gap Wetlands in Frame 2, between river miles 4.8 and 5.8 along the east bank and the Lower LA River Shorebird Area, which begins in the City of Long Beach in Frame 1 and extends into the Cities of Compton and Paramount in Frame 2. De Forest Park is within Frame 2, between river miles 6.8 and 7.5 along the west bank. Along the west bank in Frame 3, Ralph C. Dils Park is at river mile 9.5 to 10.0; Hollydale Park is at river mile 11.0 to 11.5; and the Rio Hondo confluence is at river mile 12.0. In Frame 4, Maywood Riverfront Park is located along the east bank from river mile 15.7 to 15.8. In Frame 5, Los Angeles State Historic Park is along the east bank at river mile 23.5, and Arroyo Secco confluence is located at river mile 24.0 where the Interstate 110 crosses the LA River. The Lower LA River Shorebird Area is described above in Frame 1.

Soils in Frames 2 through 5 are mapped on Figure 3.3.-27 through Figure 3.3-30. Mapped soils mainly include Frostvalley, Stumpatil sandy loam, Urban Land-Thums-Windfetch complex, Goldroad sandy loam, and Urban-Land-Azuvina-Montebello complex.

The Dominguez Gap Wetlands is a 37-acre spreading ground basin that was converted into a multi-benefit wetlands in 2008. The flows from the LA River and local urban runoff are routed through the basin to sustain year-round habitat for plants and native wildlife (Public Works 2014). This is an example of a riparian landside ROW, where riparian habitat is created on the landside of the ROW through grading and landform activities. This is done without affecting the flood capacity of the channel because it does not require levee or channel wall modification. Riparian landside ROW supports plant communities such as perennial freshwater wetland and Southern sycamore riparian

woodlands, which can support trees as well as shrubs for wildlife species (such as black terns and yellow warblers (Los Angeles County Public Works 2021).

Frames 6 through 8

Frames 6 through 8 include the following cities that have similar biological resources: Cities of Los Angeles, Burbank, and Glendale and unincorporated County areas. Frames 6 through 8 contain similar biological resources, with similar topography. Within Frame 6, Elysian Park is adjacent to the river along the east bank, at approximately river mile 24.5 through 25 and the Rio de Los Angeles State Park is along the west bank of the LA River at river mile 25.2 to 26.5. From river mile 28.5 to 32.0, part of Griffith Park is identified as an SEA. There is a privately held open space in Frame 7, adjacent to Griffith Park. In Frame 7, Tujunga Wash is at river mile 37.5, and the Burbank Channel confluence is at river mile 32. Along the east bank, Griffith Park is between river miles 32 and 34.5 and Sennett Canyon and Creek are at river mile 33.5. Frame 8 has several greenways from river mile 37.8 to 38.6 along the east bank, from river mile 38.7 to 39.1 along the west bank, and from river mile 39.2 to 39.7 along both the west and east banks.

Frames 6, 7, and 8 all have intact upland habitat that is undisturbed due to the steepness of the terrain in the mountains, with the majority of the potential habitat present in Frame 6, due to the two parks. The Glendale Narrows is also within Frame 6 from river mile 24 to 32.

Soils in Frames 6 through 8 are mapped on Figure 3.3-31 through Figure 3.3-33. Mapped soils mainly include Meccapass–Jadestorm-rock outcrop, Frostvalley–Mulecreek complex, Oxalis-Hecker-Doty families association, and Urban Land-Grommet-Ballona complex.

Where the LA River is adjacent to upland core habitat areas, such as Griffith Park or Elysian Park, the river can act as a buffer between those core habitat areas and development or can function as a constrained linkage for wildlife movement. Both Griffith Park and Elysian Park are within Frame 6.

Griffith Park is in Frame 6 and consists of over 4,210 acres of coastal sage scrub (California sagebrush scrub shrubland alliance, coyote brush shrub shrubland alliance), chaparral (chamise-black sage chaparral shrubland alliance, bigpod ceanothus shrubland alliance, broom and others shrubland seminatural alliance, laurel sumac scrub shrubland alliance), oak-walnut woodlands (coast live oak woodland and forest alliance, California walnut groves forest and woodland alliance), riparian areas (Goodding's black willow-red willow riparian forest and woodland alliance, mulefat thickets shrubland alliance) and exotic/ornamental vegetation (eucalyptus-tree of heaven-black locust groves woodland seminatural alliance, red brome or Mediterranean grass herbaceous seminatural alliance, upland mustards and other ruderal forbs herbaceous seminatural alliance). The topography of the park is rugged, with elevations ranging from 384 to 1,680 feet above sea level, including deep canyons, rocky outcrops and escarpments, perennial and ephemeral streams, and portions of the LA River. Land use in the park is largely for recreation with no area of the park protected for habitat preservation. However, the rugged topography of the park has kept human disturbance minimal over large areas of the park. Adjacent to Griffith Park is a block of privately held open space north of the Hollywood Reservoir (within Frame 7). Griffith Park and this adjacent open space are bordered by Burbank and the 134 Freeway to the north, Glendale and Interstate 5 to the east, Los Angeles to the south, and urban land uses, including the 105 Freeway, to the west, thus effectively isolating this undeveloped habitat from other intact habitat areas (Remington and Copper 2009). Part of Griffith Park is also designated a SEA by the Los Angeles County Department of Regional Planning.

Elysian Park is the second largest park in Los Angeles, after Griffith Park, at approximately 575 acres. Solano Canyon is within Elysian Park. In addition to urban areas, the park contains nonnative grassland (red brome or Mediterranean grass herbaceous seminatural alliance) with other habitats such as eucalyptus woodland (eucalyptus-tree of heaven-black locust groves woodland seminatural alliance), coast live oak woodland (coast live oak woodland and forest alliance), and California walnut (California walnut groves forest and woodland alliance). Bird species observed in the park include yellow warbler, loggerhead shrike, Bell's vireo, summer tanager, olive-sided flycatcher, and Lucy's warbler (eBird 2020).

Glendale Narrows generally continues along the LA River from Griffith Park to Elysian Park within the soft-bottom channel (concrete walls and gravelly and often inundated soils at the base). Soft-bottom channel areas of the river do not meet flood management design capacity currently. The soils in this condition allow for more riparian plant communities and greater vertical structure, which provides habitat for species such as belted kingfisher, western toad, and the Santa Ana sucker. Soft-bottom channel conditions also contain the most problematic invasive plant species, such as Arundo (*Arundo donax).* These invasive species outcompete native species that might otherwise flourish in the soft bottom areas (*2020 LA River Master Plan*).

Frame 9

Frame 9 is at the northern end of the study area and includes the City of Los Angeles. This frame includes the Sepulveda Basin Wildlife Reserve at river mile 44. Aliso Canyon Wash confluence occurs at river mile 47.3, Browns Canyon Wash confluence occurs at river mile 49.8, and Bell Creek confluence occurs at river mile 51.0. On the east bank, Reseda Park is between river miles 46.6 and 47.0. Soils are mapped on Figure 3.3-34. Mapped soils mainly include Endlich–Buell families, Aiken family, and Clailam family.

Vegetation communities and land cover types are mapped on Figure 3.3-34 with acreages provided for Frame 9 in Table 3.3-9. Although the majority of land cover in all of this frame is urban/developed (9,025.44 acres), there is native vegetation mainly associated with Sepulveda Basin. Native vegetation types include coast live oak woodland and forest alliance (4.83 acres), Fremont's cottonwood forest and woodland alliance (3.34 acres), Goodding's black willow-red willow riparian forest and woodland alliance (120.53 acres), and mulefat thickets shrubland alliance (64.99 acres). Other vegetation communities that provide habitat value for wildlife species present here include nonnative/ornamental conifer (191.91 acres), red brome or Mediterranean grass herbaceous seminatural alliance (794.36 acres), and upland mustards and other ruderal forbs herbaceous seminatural alliance (146.32 acres).

The Sepulveda Basin, which is a soft bottom basin, provides a wide variety of habitat types, including upland habitats, such as coastal sage scrub (California sagebrush scrub shrubland alliance) and riparian habitats (Goodding's black willow-red willow riparian forest and woodland alliance and mulefat thickets shrubland alliance). The Sepulveda Basin is a flood-control basin owned and operated by the USACE. Within Sepulveda Dam and Basin is a recreational area managed by the Los Angeles City Department of Recreation and Parks. It is approximately 2,150 acres and includes two parks, an 80-acre sports field, an archery range, three 18-hole golf courses, Balboa Lake with boat rentals and fishing, the Balboa Park and Sports Center, playgrounds, a velodrome, bike paths, hiking trails, tennis courts, a Japanese garden, a dog park, and a wildlife preserve, with a soft-bottom stretch of the LA River. The Sepulveda Basin Wildlife Reserve is an approximately 110-acre area to the west of Haskell Creek (on either side of Woodley Avenue). The reserve is located in a flood-

management basin, so it is subject to periodic flooding. There are five main plant communities in the wildlife reserve: riparian forest (Goodding's black willow-red willow riparian forest and woodland alliance), riparian shrubland (mulefat thickets shrubland alliance), oak and walnut woodland (coast live oak woodland and forest alliance and California walnut groves forest and woodland alliance), coastal sage scrub (California sagebrush scrub shrubland alliance), and an aquatic plant community (Sepulveda Basin Wildlife Reserve 2020).

Climate

The climate within the LA River watershed and region is considered a Mediterranean climate, which is a climate with warm, wet winters, with westerly winds and calm, hot, dry, summers. The climate is arid to semi-arid. The dry season occurs in the summer and fall and is generally hot and dry, with the majority of the rain falling in the mid-winter months (wet season) and approximately 80 percent of annual precipitation occurring between November and April. The presence of surface water (water resources) is seasonally variable between the wet and dry seasons. Rainwater often inundates the LA River and its tributaries during winter storms, common from November through March, with the LA River being completely dry or containing only nuisance or treated wastewater low flows during other seasons (NOAA 2020a, 2020b).

Cooling caused by changes in air pressure (adiabatic cooling) causes the warm, moisture-laden air masses generated over the Pacific Ocean to condense and cool as they are pushed upward over the San Gabriel and San Fernando Mountain Ranges. This results in moderate to heavy precipitation on the southwestern slopes of these mountain ranges. Mean annual precipitation for downtown Los Angeles (University of Southern California Campus) meteorological station is highly variable, ranging from 3.85 inches in 1953 to 34.04 inches in 1983, and averaging approximately 14.77 inches per year (WRCC 2016a).

Mean annual temperature records for the same station cite an average high temperature of 74 degrees and an annual average low temperature of 56 degrees (WRCC 2016a). Key climatic factors influencing this high variability in intra-seasonal and inter-annual precipitation include the Madden-Julian Oscillation (NOAA 2020b) and the El Nino Southern Oscillation (NOAA 2020a), respectively.

Within Table 3.3-4 annual precipitation data is presented for four stations located in the vicinity of the study area. Average annual precipitation ranges from 10.66 inches at the Sepulveda Dam to 20.24 inches in Pasadena.

Table 3.3-4. Historical Annual Precipitation

Station	Location Relative to the LA River	Elevation (msl)	Data Range	Mean Annual Rainfall (inches)
Pasadena (046719)	North	820 feet	1893–2015	20.24
Sepulveda Dam (048092)	East	74 feet	1948–1960	10.66
Downey Fire Stn FC107C (042494)	East	112 feet	1906–2012	14.46
Los Angeles Downtown USC Campus (045115)	West	175 feet	1877–2016	14.77
Long Beach Daugherty Fld (045085)	East	31 feet	1949–2016	12.01

Source: WRCC 2016b.
msl = mean sea level; USC = University of Southern California

Vegetation Communities and Land Cover Types

Today, 48 of the 51 miles of the river are within heavily developed areas. Vegetation communities are mapped on Figure 3.3-1 through Figure 3.3-10. The majority of land cover is Urban/Developed. Many nonnative habitats are also mapped. Some wildland urban intermix areas exist, mainly within Frames 6, 7, 8, and 9. Vegetation communities are described below and discussed in more detail within the discussions of frames below. Except for Sepulveda Basin and Griffith Park, few intact natural communities of the South Coast Region remain within or adjacent to the river. However, opportunities to improve connectivity to large natural areas found in the San Gabriel, Santa Monica, and Santa Susana Mountains at the headwaters near Canoga Park, and between Griffith Park and the Verdugo Mountains at the Glendale Narrows could be bolstered to improve the resiliency of species through the urbanized region (Spencer et al. 2010a).

Vegetation communities and land cover types were mapped using the U.S. Forest Service (USFS) CalVeg mapped vegetation communities (USFS 2014). Vegetation mapping was initially accomplished using color infrared satellite imagery and field verification (initiated in 1978) of types by current soil-vegetation mapping efforts. Classification were then expanded with enhanced image resolution. The mapped communities are described as a result of USFS Pacific Southwest Region Ecology Program and are based on information compiled about fire return intervals for major vegetation types. This dataset was used to create Figure 3.3-1 through Figure 3.3-10. The vegetation communities were converted to the California Native Plant Society (CNPS) *A Manual of California Vegetation* (CNPS 2020), and the descriptions of the vegetation communities and land cover types are included below. Sixteen native communities were mapped within the study area. Once converted to CNPS vegetation communities, three of these communities were considered to be duplicates of those described. Coastal mixed hardwood was considered to be coast live oak woodland and forest alliance, and willow and willow (scrub) were considered to be Goodding's willow-red willow riparian woodland and forest alliance. Fourteen nonnative communities and land cover types were mapped using the USFS CalVeg dataset with verification using Google Earth Pro. All of the vegetation communities are described below with acreages for each vegetation community and land cover type within the study area included in Table 3.3-5 below.

Table 3.3-5. Vegetation Communities and Land Cover Types, Acreages, Sensitivities, and Locations within the LA River Study Area

Vegetation Community or Land Cover Type (Manual of California Vegetation)	CalVeg Equivalent	Acres in Study Area	CDFW Sensitive Vegetation Community	Mapped in Frames
Barren		863.07	No	All
Bigpod ceanothus shrubland alliance	Ceanothus mixed chaparral	169.17	No*	6, 7, 8
Broom and others shrubland semi-natural alliance	Nonnative ornamental shrub	49.15	Yes	2, 3, 4, 7
California sagebrush scrub shrubland alliance	California Sagebrush	158.25	No*	5, 6, 7, 8
California walnut groves forest and woodland alliance	California walnut	135.34	Yes	6, 7, 8
Chamise-black sage chaparral shrubland alliance	Lower montane mixed chaparral	912.72	No*	6, 7, 8

Vegetation Community or Land Cover Type (Manual of California Vegetation)	CalVeg Equivalent	Acres in Study Area	CDFW Sensitive Vegetation Community	Mapped in Frames
Coast live oak woodland and forest alliance	coast live oak, coastal mixed hardwood	1,191.71	No*	6, 7, 8, 9
Coyote brush shrub shrubland alliance	Coyote brush	2.78	No*	6
Estuary		1,035.49	No	1
Eucalyptus-tree of heaven-black locust groves woodland seminatural alliance	Eucalyptus	152.44	No	5, 6
Fremont cottonwood forest and woodland alliance	Fremont cottonwood	3.34	Yes	9
Goodding's black willow-red willow riparian forest and woodland alliance	Riparian mixed hardwood, willow, and willow (shrub)	157.79	Yes	6, 7, 9
Laurel sumac scrub shrubland alliance	Sumac shrub	397.5	No*	5, 6, 7, 8
Mulefat thickets shrubland alliance	Baccharis (Riparian)	70.72	Yes	8, 9
Nonnative/ornamental conifer		1,392.72	No	6
Nurseries		101.59	No	1, 2, 3, 4
Pastures and crop agriculture		631.19	No	1, 2, 3, 7, 8, 9
Pepper tree-myoporum forest and woodland semi-natural alliance	Nonnative/ ornamental hardwood	338.81	No	2, 3, 5, 6, 7, 8, 9
Pickleweed mats herbaceous alliance	Pickleweed–cordgrass	5.78	Yes	1
Red brome or Mediterranean grass herbaceous semi-natural alliance	Nonnative invasive grass, nonnative ornamental grass	2,243.69	No	All
Tilled earth		26.69	No	1, 2
Upland mustards and other ruderal forbs herbaceous semi-natural alliance	Annual grasses and forbs	1,118.14	No	All
Urban/developed		57,917.25	No	All
Urban-related bare soil		271.58	No	2, 3, 4, 5, 6, 7, 8
Water		840.79	No	1, 2, 3, 4, 5, 6, 7, 9
Yellow sand verbena, silver beachweed herbaceous alliance	Beach sand	25.44	Yes	1
Grand Total		**70,213.12**		

* Vegetation community as mapped is not sensitive; however, similar alliances are sensitive. Field verification would be required to determine sensitivity.

Native

Annual Grasses and Forbs

Annual grasses and forbs is a broad classification that encompasses both native and nonnative grasses and forbs in a herbaceous layer. This vegetation community could be equivalent to numerous Manual of California Vegetation (MCV) communities (CNPS 2020) including fiddleneck (*Amsinckia menziesii*)-phacelia (*Phacelia* spp.) herbaceous alliance; wild oats (*Avena* spp.) and annual bromes (*Bromus* spp.) herbaceous seminatural alliance; upland mustards (*Brassica* spp.) and other ruderal forbs (wild radish, *Raphanus* spp.) herbaceous seminatural alliance; red brome (*Bromus rubens*) or Mediterranean grass (*Schismus arabicus*) herbaceous seminatural alliance; yellow star-thistle (*Centaurea* spp.) herbaceous seminatural alliance; tar plant (*Centromadia* spp.) herbaceous alliance; clustered tarweed (*Deinandra fasciculata*) herbaceous alliance; California goldfields (*Lasthenia californica*), dwarf plantain (*Plantago erecta*), and small fescue flower (*Vulpia microstachys*) herbaceous alliance; Spanish clover (*Lotus unifoliolatus*) herbaceous alliance; popcorn flower (*Plagiobothrys nothofulvus*) herbaceous alliance; and bushy spikemoss (*Selaginella bigelovii)* herbaceous alliance. For the purposes of this analysis, this vegetation community will be considered to be upland mustards and other ruderal forbs herbaceous seminatural alliance. Emergent shrubs may be present at low cover. This vegetation type can be found in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, or waste places (CNPS 2020).

Baccharis (Riparian)

This vegetation community is equivalent to the MCV community mulefat (*Baccharis salicifolia*) thickets shrubland alliance. Mulefat is dominant or co-dominant in the shrub canopy, with California sagebrush (*Artemisia californica*), other mulefat species, laurel sumac (*Malosma laurina*), tree tobacco (*Nicotiana glauca)*, willow (*Salix* spp.), elderberry (*Sambucus nigra*), and tamarisk (*Tamarix* spp.) present. Some emergent trees may be present. This vegetation community is found at canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels (CNPS 2020).

Beach Sand

Beach sand is equivalent to the MCV community yellow sand verbena (*Abronia latifolia)*, silver beachweed (*Ambrosia chamissonis)* herbaceous alliance and may consist of sand dunes of coastal bars, river mouths, or spits along the coastline. Vegetation observed may include yellow sand verbena, silver beachweed, or other non-woody dune plants. Emergent shrubs may be present at low cover. Cover can be sparse to continuous (CNPS 2020).

California Sagebrush

This vegetation community is equivalent to the MCV community California sagebrush scrub shrubland alliance. California sagebrush is the dominant to co-dominant in the shrub canopy. Other shrubs include chamise (*Adenostoma fasciculatum*), coyote brush (*Baccharis pilularis),* bladderpod (*Peritoma arborea),* brittlebush (*Encelia farinosa),* buckwheat (*Eriogonum fasciculatum*), common deerweed (*Lotus scoparius*), and sage (*Salvia* spp.). This vegetation community is usually found on steep slopes that are rarely flooded (CNPS 2020).

California Walnut

California walnut (*Juglans californica)* is equivalent to the MCV community of California walnut groves forest and woodland alliance. California walnut is the dominant to co-dominant in the tree canopy. Other tree species include white alder (*Alnus rhombifolia*), California ash (*Fraxinus dipetala*), toyon (*Heteromeles arbutifolia*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), willow (*Salix* spp.), elderberry, and California bay laurel (*Umbellularia californica*). This alliance contains tall trees with sparse shrubs and a sparse to grassy herbaceous layer. California walnut can be found in riparian corridors, but most stands are found on hillslopes.

Ceanothus Mixed Chaparral

Ceanothus mixed chaparral is likely equivalent to the MCV community of bigpod ceanothus (*Ceanothus megacarpus*) shrubland alliance where bigpod ceanothus is the dominant in the shrub canopy, with chamise, redshank (*Adenostoma sparsifolium*), redheart (*Ceanothus spinosus*), mountain mahogany (*Cercocarpus montanus*), ashlyleaf buckwheat (*Eriogonum cinereum*), Lord's candle (*Hesperoyucca whipplei*), toyon, laurel sumac, scrub oak (*Quercus berberidifolia*), hollyleaf redberry (*Rhamnus ilicifolia*), and California bay laurel (CNPS 2020).

Lower Montane Mixed Chaparral

Lower montane mixed chaparral is equivalent to the MCV community of chamise-black sage (*Salvia mellifera*) chaparral shrubland alliance. Chamise and black sage are co-dominants in this alliance. Other shrub species present include California sagebrush (*Artemisia californica*), ceanothus (*Ceanothus crassifolius*), buckbrush (*Ceanothus cuneatus*), deer brush (*Ceanothus integerrimus*), buckwheat, Lord's candle, common deerweed, laurel sumac, and sugar sumac (*Rhus ovata*) (CNPS 2020).

Coast Live Oak

Both coast live oak and coastal mixed hardwood (below) are equivalent to the MCV community of coast live oak woodland and forest alliance. Coast live oak is the dominant or co-dominant in the tree canopy. Other trees present would include big leaf maple (*Acer macrophyllum*), California box elder (*Acer negundo*), Pacific madrone (*Arbutus menziesii*), California walnut, California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus femontii*), blue oak (*Quercus douglasii*), Engelmann oak (*Quercus engelmannii*), California black oak (*Quercus kelloggii*), and willow. The shrub layer is sparse to intermittent with a sparse to grassy herbaceous layer. Coast live oak and coastal mixed hardwood are found in alluvial terraces, canyon bottoms, banks of streams, slopes, or flats (CNPS 2020).

Coastal Mixed Hardwood

See *Coast Live Oak*, above.

Coyote Brush

Coyote brush is equivalent to the MCV community coyote brush scrub shrubland alliance. Coyote brush is the dominant to co-dominant in the shrub canopy, with California sagebrush, blue blossom ceanothus (*Ceanothus thyrsiflorus*), beaked hazelnut (*Corylus cornuta*), sticky monkey-flower (*Diplacus aurantiacus*), buckwheat, seaside woolly sunflower (*Eriophyllum staechadifolium*), California buckthorn (*Frangula californica*), coast silk-tassel (*Garrya elliptica*), salal (*Gaultheria*

shallon), Holodiscolor discolor, common deerweed, yellow bush lupine (*Lupinus arboreus*), California wax myrtle (*Morella californica*), dewberry (*Rubus ursinus*), white sage (*Salvia apiana*), San Luis purple sage (*Salvia leucophylla*), and poison oak (*Toxicodendron diversilobum*). Trees may be present at low cover. Coyote brush has been observed at river mouths, stream sides, terraces, stabilized dunes, spits along the coastline, coastal bluffs, open slopes, and ridges (CNPS 2020).

Fremont Cottonwood

Fremont cottonwood is equivalent to MCV community Fremont cottonwood forest and woodland alliance. Fremont cottonwood is dominant or co-dominant in the tree canopy with California box elder, desert baccharis (*Baccharis sergiloides*), Oregon ash (*Fraxinus latifolia*), velvet ash (*Fraxinus velutina*), Northern California black walnut (*Juglans hindsii*), California sycamore (*Plantanus racemosa*), coast live oak, narrowleaf willow (*Salix exigua*), Goodding's black willow (*Salix gooddingii*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), pacific willow (*Salix lucida* spp. *lasiandra*) and yellow willow (*Salix lutea*). Found on floodplains, low gradient rivers, perennial or seasonally intermittent streams, springs, in lower canyons, in alluvial fans, and in valleys with dependable subsurface water (CNPS 2020).

Pickleweed-Cordgrass

Pickleweed-cordgrass is likely equivalent to MCV community pickleweed mats herbaceous alliance. Common glasswort (*Salicornia depressa*) or sea asparagus (*Sarcocornia pacifica*) is dominant or co-dominant in the subshrub and herbaceous layers with algae and spear saltbush (*Atriplex patula*), triangle orache (*Atriplex prostrata*), pickleweed (*Batis maritima*), saltmarsh tuber-bulrush (*Bolboschoenus maritimus)*, buttonweed (*Cotula coronopifolia*), swamp pricklegrass (*Crypsis schoenoides*), salt marsh dodder (*Cuscuta salina*), seashore saltgrass (*Distichlis spicata*), cockspur (*Echinochloa crus-galli*), alkali heath (*Frankenia salina*), Oregon gumplant (*Grindelia stricta*), marsh jaumea (*Jaumea carnosa*), rushes (*Juncus* spp.), peppergrass (*Lepidium latifolius*), sea lavender (*Limonium californicum*), shoregrass (*Monanthochloe littoralis*), pale persicaria (*Persicaria lapathifolia*), sea-purslane (*Sesuvium verrucosum*), California cordgrass (*Spartina foliosa*), estuary seablite (*Suaeda esteroa*), woolly seablite (*Suaeda taxifolia*), saltmarsh arrow-grass (*Triglochin maritima*), and common cocklebur (*Xanthium strumarium*). Vegetation is a herbaceous, with cover intermittent to continuous. Pickleweed-cordgrass is found in coastal salt marshes and alkali flats (CNPS 2020), and it is a sensitive natural community.

Riparian Mixed Hardwood

Riparian mixed hardwood is equivalent to MCV community Goodding's willow-red willow riparian forest and woodland alliance. Goodding's black willow and/or red willow is dominant or co-dominant in the tree or shrub canopy with California box elder, California horse-chestnut (*Aesculus californica*), white alder (*Alnus rhombifolia*), incense cedar (*Calocedrus decurrens*), Oregon ash, gray pine (*Pinus sabiniana*), California sycamore, Fremont's cottonwood, coast live oak, canyon oak, valley oak, Pacific willow, Washingtonia filifera, and desert fan palm (*Washingtonia filifera*). Shrubs include mulefat, red osier dogwood (*Cornus sericea*), California wildrose (*Rosa californica*), Himalayan blackberry (*Rubus armeniacus*), narrowleaf willow, arroyo willow, and elderberry. Riparian mixed hardwood is found in terraces along rivers, canyons, along floodplains of streams, seeps, springs, ditches, lake edges, and low-gradient depositions (CNPS 2020).

Sumac Shrub

Sumac shrub is equivalent to MCV community laurel sumac scrub shrubland alliance where laurel sumac is the dominant or co-dominant in the shrub canopy with sagebrush, bigpod ceanothus, sticky monkeyflower, brittlebush, ashlyleaf buckwheat, buckwheat, Lord's candle, toyon, chaparral beardtongue (*Keckiella antirrhinoides*), hollyleaf redberry, lemonade sumac (*Rhus integrifolia*), sugar sumac, San Luis purple sage, black sage, Parry's tetracoccus (*Tetracoccus dioicus*) and poison oak. The canopy is open or continuous, with a sparse or grassy herbaceous layer. Found on slopes, often steep slopes, with shallow soils (CNPS 2020).

Willow

Willow is equivalent to MCV Goodding's black willow-red willow riparian forest and woodland alliance.

Willow (Shrub)

Willow (shrub) is equivalent to MCV Goodding's black willow-red willow riparian forest and woodland alliance.

Nonnative and Land Cover

Barren

Barren areas are devoid or mostly devoid of vegetation.

Eucalyptus

Eucalyptus (*Eucalyptus* spp.) is equivalent to MCV community eucalyptus-tree of heaven (*Ailanthus altissima*)–black locust (*Robinia pseudoacacia*) groves woodland seminatural alliance. These species are dominant in the tree canopy, with eucalyptus being greater than 80 percent of the cover in the tree layer. Eucalyptus is nonnative. It is often planted in groves or windbreaks or has become naturalized on uplands or bottomlands and adjacent to stream courses, lakes, and levees. Tree of heaven and black locust are both also nonnative and invasive (CNPS 2020).

Nonnative Invasive Grass

Nonnative invasive grass is likely equivalent to MCV community red brome or Mediterranean grass herbaceous seminatural alliance. Red brome and/or Mediterranean grass is dominant or co-dominant with other nonnative in the herbaceous layer. Shrubs may be present at low cover (CNPS 2020).

Nonnative Ornamental Conifer

No equivalent MCV community exists for this community. This community has nonnative, ornamental conifers as the dominant or co-dominant trees.

Nonnative Ornamental Conifer/Hardwood

No equivalent MCV community exists for this community. This community has nonnative, ornamental conifers and/or hardwood trees as the dominant or co-dominant trees.

Nonnative Ornamental Grass

Nonnative ornamental grass likely equivalent to MCV community red brome or Mediterranean grass herbaceous seminatural alliance. See nonnative invasive grass.

Nonnative Ornamental Hardwood

Nonnative ornamental hardwood is equivalent to MCV community pepper tree (*Schinus molle/ Schinus terebinthifolius*)-Myoporum (*Myoporum laetum*) forest and woodland seminatural alliance. Over 80 percent of relative tree cover is pepper tree. This community is found in coastal canyons, washes, slopes, riparian areas, and roadsides (CNPS 2020).

Nonnative Ornamental Shrub

Nonnative ornamental shrub is equivalent to MCV community broom (*Cytisus scoparius*) and others shrubland seminatural alliance. Brome, French broom (*Genista monspessulana)*, Spanish broom (*Spartium junceum*), gorse (*Ulex europaeus*), or other broom species are dominant in the shrub canopy. Emergent trees may be present at low cover. This community is found in roadsides, disturbed places, eroding slopes, riverbanks, disturbed grasslands, shrublands, and forest openings (CNPS 2020).

Nurseries

Nurseries contain cultivated plants, trees, and shrubs.

Pastures and Crop Agriculture

Pastures and crop agriculture contain pasture lands for grazing and agricultural crop lands.

Tilled Earth

Tilled earth contains earth prepared for cultivation.

Urban/Developed

Urban/developed includes commercial and industrial uses, businesses, warehouses, industrial factories, junkyards, equipment storage yards, maintenance yards, parking lots, airports, manufacturing, railroads, major roads and freeways, residential areas, flood waterways and structures, mineral extraction (oil and gas), construction sites, and local parks and recreation. Urban/developed is the predominant land use in the study area.

Urban-related Bare Soil

Urban-related bare soil consists of areas of bare soil associated with urban/developed land uses.

Water

Water includes areas of open water. Open water habitats include water within the LA River and tributaries, freshwater ponds and lakes, and basins that are dry much of the time but inundated at least occasionally. This includes Compton Creek, Dominguez Gap Wetlands, Rio Hondo, Arroyo Seco, Verdugo Wash, Burbank Western Channel, Tujunga Wash, Haskell Creek, Encino Creek, Woodley Creek, Hayvenhurst Creek, Bull Creek, Caballero Creek, Aliso Canyon Wash, Browns Canyon Wash, Bell Creek, and Arroyo Calabasas.

Frame 1

Vegetation communities for Frame 1 are mapped on Figure 3.3-2, and acreages are provided in Table 3.3-6. The majority of land cover in Frame 1 is urban/developed (5748.80 acres). A small patch (approximately 5.78 acres) of pickleweed mats herbaceous alliance, a sensitive natural community, was mapped within this frame in the LA River, south of West Willow Street. There is a small area (25.44 acres) of yellow sand verbena, silver beachweed herbaceous alliance (beach sand) near East Ocean Boulevard in Alamitos Beach. Other than small patches of annual grasses and forbs along the ocean shoreline, the majority of the rest of the vegetation within this frame is nonnative/ornamental (nonnative/ornamental conifer), nurseries, pastures, and tilled earth. There is mapped water (425.82 acres) and estuary (1,035.49 acres) within the LA River and adjacent in the port areas.

Table 3.3-6. Acreages of Vegetation Communities and Land Cover Types within the LA River Study Area, Frame 1

Vegetation Community or Land Cover Type	Acres in Study Area
Barren	80.52
Estuary	1,035.49
Nonnative/ornamental conifer	38.03
Nurseries	18.02
Pastures and crop agriculture	48.61
Pickleweed mats herbaceous alliance	5.78
Red brome or Mediterranean grass herbaceous semi-natural alliance	86.74
Tilled earth	9.56
Upland mustards and other ruderal forbs herbaceous semi-natural alliance	53.92
Urban/developed	5,748.80
Water	425.82
Yellow sand verbena, silver beachweed herbaceous alliance	25.44
Total Acres	**7,576.74**

Frames 2 through 5

Vegetation communities and land cover types for Frames 2 through 5 are mapped on Figure 3.3-2 through Figure 3.3-6, and acreages within the study area are provided in Table 3.3-7. The majority of land cover in all of these frames is urban/developed. Red brome or Mediterranean grass herbaceous grass and upland mustards and other ruderal forbs herbaceous seminatural alliance are present in Frames 2 through 5. Broom and other shrubland seminatural alliance are present in Frames 2 through 4. Within Frame 5, some additional native communities present include California sagebrush scrub shrubland alliance (2.67 acres) (this appears to be a mapping error, and this is in fact urban/developed land cover), coast live oak woodland and forest alliance (0.69 acre), and laurel sumac scrub shrubland alliance (0.23 acre). The mapped coast live oak is associated with remnant habitat on steep slopes near Montecito Heights. The mapped laurel sumac scrub is associated with a larger patch of similar habitat within Elysian Reservoir in Frame 6 to the north. Water is present in all of these frames, mainly associated with the LA River.

Table 3.3-7. Acreages of Vegetation Communities and Land Cover Types within the LA River Study Area, Frames 2 to 5

Vegetation Community or Land Cover Type	Acres in Study Area			
	Frame 2	Frame 3	Frame 4	Frame 5
Barren	128.82	230.29	101.41	53.31
Broom and others shrubland semi-natural alliance	6.00	7.78	26.24	0
California sagebrush scrub shrubland alliance	0	0	0	2.67**
Coast live oak woodland and forest alliance	0	0	0	0.69
Eucalyptus-tree of heaven-black locust groves woodland seminatural alliance	0	0	0	1.89
Laurel sumac scrub shrubland alliance	0	0	0	0.23
Nonnative/ornamental conifer	138.56	69.29	0.00	26.92
Nurseries	24.20	24.28	35.09	0
Pastures and crop agriculture	54.41	43.89	0	0
Pepper tree-myoporum forest and woodland semi-natural alliance	55.32	6.67	0	5.40
Red brome or Mediterranean grass herbaceous semi-natural alliance	197.16	331.24	34.02	13.69
Tilled earth	17.13	0	0	0
Upland mustards and other ruderal forbs herbaceous semi-natural alliance	119.83	120.33	36.70	69.70
Urban/developed	5,171.55	6,580.96	6,707.89	5,866.34
Urban-related bare soil	21.13	7.12	17.35	54.92
Water	145.66	60.28	34.03	1.78
Total Acres	**6,079.78**	**7,482.12**	**6,992.72**	**6,097.53**

** Appears to be a mapping error and is urban/developed.

Frames 6 through 8

Vegetation communities and land cover types are mapped on Figure 3.3-7 through Figure 3.3-9, and acreages are provided in Table 3.3-8. The majority of land cover in all of these frames remains urban/developed (18,816.29 acres in all three frames); however, these frames have more native vegetation types present and a greater amount of mapped native vegetation than the other frames in the study area (3011.16 acres in all three frames). Native vegetation types include bigpod ceanothus shrubland alliance, broom and other shrubland seminatural alliance, California sagebrush scrub shrubland alliance, California walnut groves forest and woodland alliance, chamise-black sage chaparral shrubland alliance (912.71 acres in all three frames), coast live oak woodland and forest alliance (1,186.18 acres in all three frames), coyote brush shrub shrubland alliance, Goodding's black willow-red willow riparian forest and woodland alliance, laurel sumac scrub alliance (397.27 acres in all three frames), and mulefat thickets shrubland alliance. Other nonnative vegetation communities that provide habitat value for wildlife species present here include eucalyptus-tree of heaven-black locust groves woodland seminatural alliance (150.55 acres in all three frames), nonnative/ornamental conifer (928.01 acres in all three frames), pepper tree-myoporum forest and woodland seminatural alliance (263.40 acres in all three frames), red brome or Mediterranean grass herbaceous seminatural alliance (786.48 acres in all three frames), and upland mustards and other ruderal forbs herbaceous seminatural alliance (571.32 acres in all three frames).

Table 3.3-8. Acreages of Vegetation Communities and Land Cover Types within the LA River Study Area, Frames 6 to 8

Vegetation Community or Land Cover Type	Acres in Study Area		
	Frame 6	Frame 7	Frame 8
Barren	71.01	1.56	37.31
Bigpod ceanothus shrubland alliance	74.13	74.13	20.90
Broom and others shrubland semi-natural alliance	0	9.12	0
California sagebrush scrub shrubland alliance	87.57	34.99	33.03
California walnut groves forest and woodland alliance	75.45	4.45	55.45
Chamise-black sage chaparral shrubland alliance	443.07	388.93	80.71
Coast live oak woodland and forest alliance	684.22	128.39	373.57
Coyote brush shrub shrubland alliance	2.78	0	0
Eucalyptus-tree of heaven-black locust groves woodland seminatural alliance	150.55	0	0
Goodding's black willow-red willow riparian forest and woodland alliance	7.36	29.90	0.00
Laurel sumac scrub shrubland alliance	206.78	145.42	45.07
Mulefat thickets shrubland alliance	0	0	5.73
Nonnative/ornamental conifer	525.95	339.35	62.71
Pastures and crop agriculture	0	13.12	0.27
Pepper tree-myoporum forest and woodland semi-natural alliance	143.53	92.75	27.12
Red brome or Mediterranean grass herbaceous semi-natural alliance	422.77	286.99	76.72
Upland mustards and other ruderal forbs herbaceous semi-natural alliance	381.16	105.99	84.17
Urban/developed	7,425.61	5,249.82	6,140.86
Urban-related bare soil	52.13	115.05	3.89
Water	109.81	19.38	0.00
Total Acres	**10,863.90**	**7,039.34**	**7,047.50**

Frame 9

Vegetation communities and land cover types are mapped on Figure 3.3-10, and acreages are provided in Table 3.3-9. Although the majority of land cover is urban/developed (9,025.44 acres), there is native vegetation mainly associated with Sepulveda Basin. Native vegetation types include coast live oak woodland and forest alliance (4.83 acres), Fremont's cottonwood forest and woodland alliance (3.34 acres), Goodding's black willow-red willow riparian forest and woodland alliance (120.53 acres), and mulefat thickets shrubland alliance (64.99 acres). Other vegetation communities that provide habitat value for wildlife species present include nonnative/ornamental conifer (191.91 acres), red brome or Mediterranean grass herbaceous seminatural alliance (794.36 acres), and upland mustards and other ruderal forbs herbaceous seminatural alliance (146.32 acres).

Table 3.3-9. Acreages of Vegetation Communities and Land Cover Types within the LA River Study Area, Frame 9

Vegetation Community or Land Cover Type	Acres in Study Area
Barren	158.86
Coast live oak woodland and forest alliance	4.83
Fremont cottonwood forest and woodland alliance	3.34
Goodding's black willow-red willow riparian forest and woodland alliance	120.53
Mulefat thickets shrubland alliance	64.99
Nonnative/ornamental conifer	191.91
Pastures and crop agriculture	470.89
Pepper tree-myoporum forest and woodland semi-natural alliance	8.01
Red brome or Mediterranean grass herbaceous semi-natural alliance	794.36
Upland mustards and other ruderal forbs herbaceous semi-natural alliance	146.32
Urban/developed	9,025.44
Water	44.03
Total Acres	**11,033.50**

Habitats of Concern

Habitats of concern within this PEIR include sensitive natural communities, SEAs, marine preserves and refuges, EFH, and USFWS critical habitat.

Sensitive Natural Communities

Based on the review conducted, of the mapped USFS CalVeg mapping (USFS 2014) depicted on Figure 3.3-1 through Figure 3.3-10, the following natural vegetation communities are considered sensitive (i.e., they have a sensitivity rank of 1 through 3 in the CDFW California Sensitive Natural Communities lists) (CDFW 2020f) (see Table 3.3-10): broom and others shrubland seminatural alliance, 49.15 acres in Frames 2, 3, 4, and 7; California walnut groves forest and woodland alliance, 135.34 acres in Frames 6, 7, and 8; Fremont cottonwood forest and woodland alliance, 3.34 acres in Frame 9; Goodding's black willow-red willow riparian forest and woodland alliance, 157.79 acres in Frames 6, 7, and 9; mulefat thickets shrubland alliance, 70.72 acres in Frames 8 and 9; pickleweed mats herbaceous alliance, 5.78 acres in Frame 1; and yellow sand verbena, silver beachweed herbaceous alliance, 25.44 acres in Frame 1.

CNDDB sensitive vegetation communities are mapped on Figure 3.3-11 and described in Table 3.3-10. The described CNDDB vegetation community was compared with the CalVeg mapped vegetation community. In some cases, the community has been extirpated (a species or population has been removed locally, i.e., local extinction) and replaced by urban land cover. This occurred for two of the three mapped communities in Frame 7. In other instances, the vegetation community mapped in CalVeg would not be considered a sensitive vegetation community. For instance, coast live oak woodlands are not a CDFW sensitive vegetation community. However, if during field verification it was determined that coast live oak was intermixed with California walnut, then the vegetation community would be considered sensitive. Only two of the eight mapped CNDDB sensitive vegetation communities appear to contain sensitive vegetation. Both contain California

walnut woodland; one is Frame 6 in Griffith Park, near Fern Canyon, and one is in Frame 8, north of Iredell Canyon.

Table 3.3-10. Mapped CNDDB Sensitive Vegetation Communities within the LA River Study Area

CNDDB Sensitive Vegetation Community	Frame	CalVeg Mapped Community	CDFW Sensitive Vegetation Community	Location and CalVeg Vegetation Mapping Notes
California walnut woodland	6	Coast live oak and California walnut	Yes	Griffith Park, west of Griffith Park Drive, southeast of Fern Canyon, tree species present include *Juglans californica* and *Quercus agrifolia.* Mapped vegetation includes coast live oak.
Southern sycamore alder riparian woodland	6	Coast live oak, chaparral	No*	Griffith Park, in Spring Canyon and adjoining intermittent stream. Tree species present include *Quercus agrifolia* and *Plantanus racemosa*. Mapped vegetation includes chaparral and coast live oak.
Southern coast live oak riparian forest	6	Coast live oak, coastal sage scrub	No*	Griffith Park, west of Harding Golf Course. Mapped vegetation communities include coast live oak, coastal sage scrub, and urban areas.
Southern coast live oak riparian forest	6	Coast live oak	No*	Griffith Park, west of the zoo. Mapped vegetation communities include coast live oak, nonnative/ornamental conifer hardwood, annual grasses and forbs, and chaparral.
Southern sycamore alder riparian woodland	7	Coast live oak	No*	Mainly mapped as coast live oak with some riparian mixed hardwood and chaparral.
Southern cottonwood willow riparian forest	7	Extirpated–urban, nonnative grasses	No	No longer present, river channelized, nonnative grasses, some urban woodlands.
California walnut woodland	7	Extirpated–urban	No	No longer present, urban.
California walnut woodland	8	California walnut and coast live oak	Yes	Beyond ridge north of Iredell Canyon, California walnut is mainly on north-facing slopes with coast live oak and sage scrub also present. Mapped vegetation includes coast live oak and California walnut.

* Vegetation community as mapped is not sensitive; however, similar alliances are sensitive. Field verification would be required to determine sensitivity.

Significant Ecological Areas

The Los Angeles County Significant Ecological Areas (SEAs) located within the study area are mapped on Figure 3.3-11. Only one County SEA occurs within the study area—the Griffith Park SEA,

which occurs in Frames 6 and 7. Griffith Park is an extensive, relatively undisturbed island of natural vegetation consisting of coastal sage scrub, chaparral, riparian, grasslands, and southern oak woodland plant communities. This SEA is important because of its geographical location, as it is an island of natural vegetation surrounded by urban development.

Coastal and Marine Habitats

Although there are no MPAs in the study area, there are two MPAs to the west of the study area at the Palos Verdes Peninsula. MPAs are intended to protect and conserve marine life and habitat. There are no marine ecological preserves in the study area. The MPAs include one State marine conservation area (Abalone Cove State Marine Conservation Area) and one State marine reserve (Point Vicente State Marine Reserve), both about 7 miles to the west of Frame 1.

In State marine conservation areas, it is unlawful to injure, damage, take, or possess any marine resource for commercial or recreational purposes that would compromise the protection of the species of interest, natural community, habitat, or geological feature.

In State marine reserves it is unlawful to injure, damage, take, or possess any marine resource, except under a permit or specific authorization. Access for activities including, but not limited to, walking, swimming, boating, and diving may be restricted to protect marine resources.

Essential Fish Habitat

Within Frame 1, EFH (habitat essential for the spawning, breeding, feeding, and growth to maturity of federally managed fish) occurs in marine and estuarine waters and includes EFH for groundfish, finfish and market squid, coastal pelagic species, krill, dorado, and common thresher shark (Figure 3.3-11). In addition, the estuary habitat has a Habitat Areas of Particular Concern (HAPC) designation. HAPC are high priority conservation areas due to their important and fragile ecosystem function (NOAA 2020c).

Critical Habitat

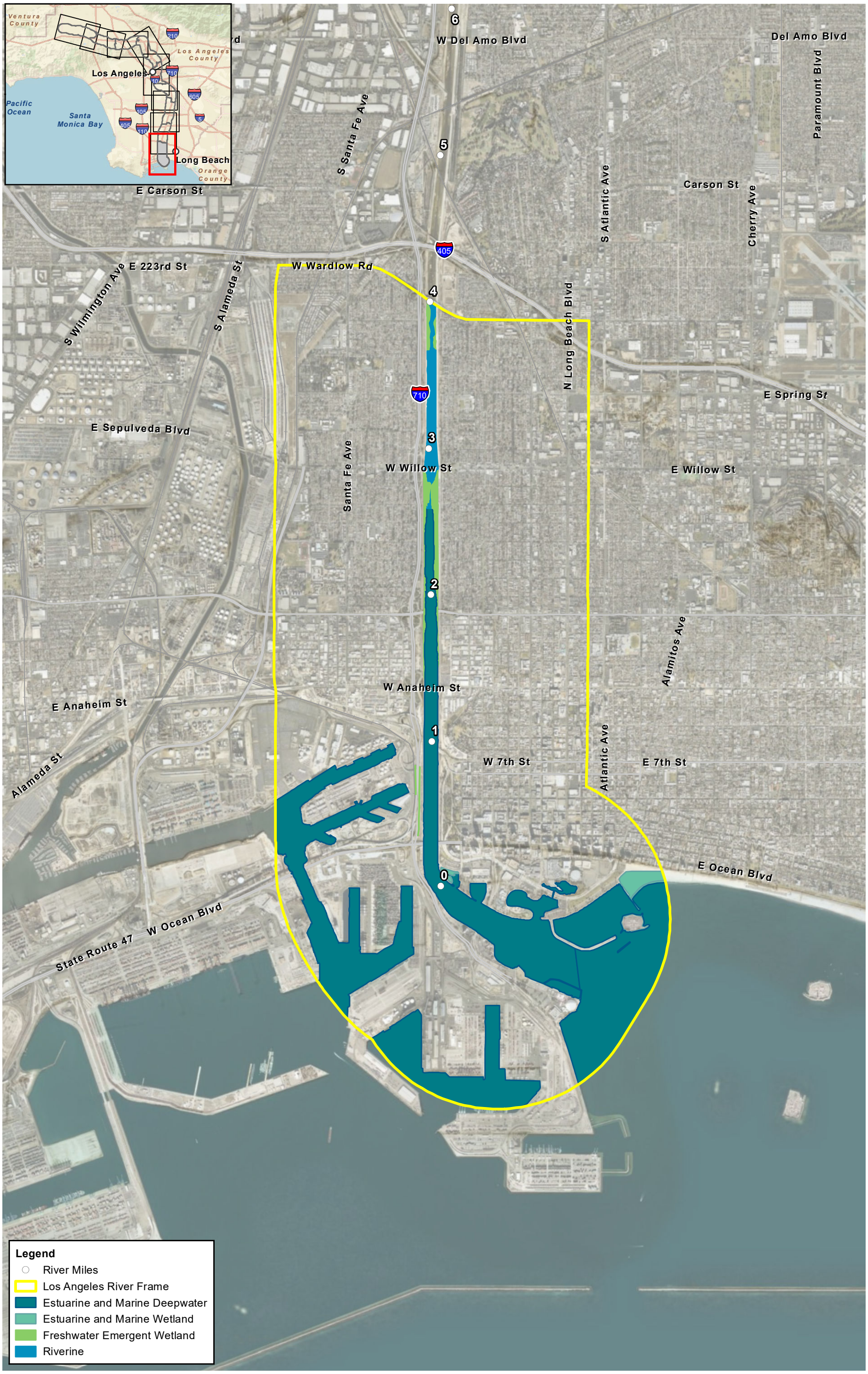
A database search was performed using the USFWS Critical Habitat Online Mapper (USFWS 2020c) to identify any USFWS-designated critical habitat that may occur within the study area. Critical habitat in the vicinity of the study area is mapped on Figure 3.3-12. The nearest critical habitat for a plant species is for Braunton's milkvetch (*Astragalus brauntonii*; federally endangered) and is 2.3 miles to the west of the study area for Frame 9. The nearest critical habitat for an animal species is for California red-legged frog (*Rana draytonii;* federally threatened) and is approximately 3 miles to the west of the study area for Frame 9. California red-legged frogs are not expected in the study area as the only known population in Los Angeles County is in San Francisquito Canyon in the Angeles National Forest.

Aquatic Resources

The primary aquatic resource within the study area is the LA River, which reaches from the Port of Long Beach, at the mouth of the river, to Canoga Park. The channel supports either earthen (soft bottom) or concrete lining and is either a trapezoidal or rectangular. There are additional aquatic resources within the various frames that are tributary to the LA River, described in more detail below. In addition to the aquatic resources identified within this chapter, there is the potential for additional, smaller jurisdictional features to occur within each frame.

The major tributaries or adjacent aquatic resources of the LA River within the nine frames include Compton Creek, Dominguez Gap Wetlands, Rio Hondo, Arroyo Seco, Verdugo Wash, Burbank Western Channel, Tujunga Wash, Haskell Creek, Encino Creek, Woodley Creek, Hayvenhurst Creek, Bull Creek, Caballero Creek, Aliso Canyon Wash, Browns Canyon Wash, Bell Creek, and Arroyo Calabasas.

Aquatic resources within Frames 1 through 9 are mapped on Figures 3.3-13 through 3.3-21 and Figure 3.3-35 through 3.5-43.



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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-35
National Wetland Inventory within Frame 1

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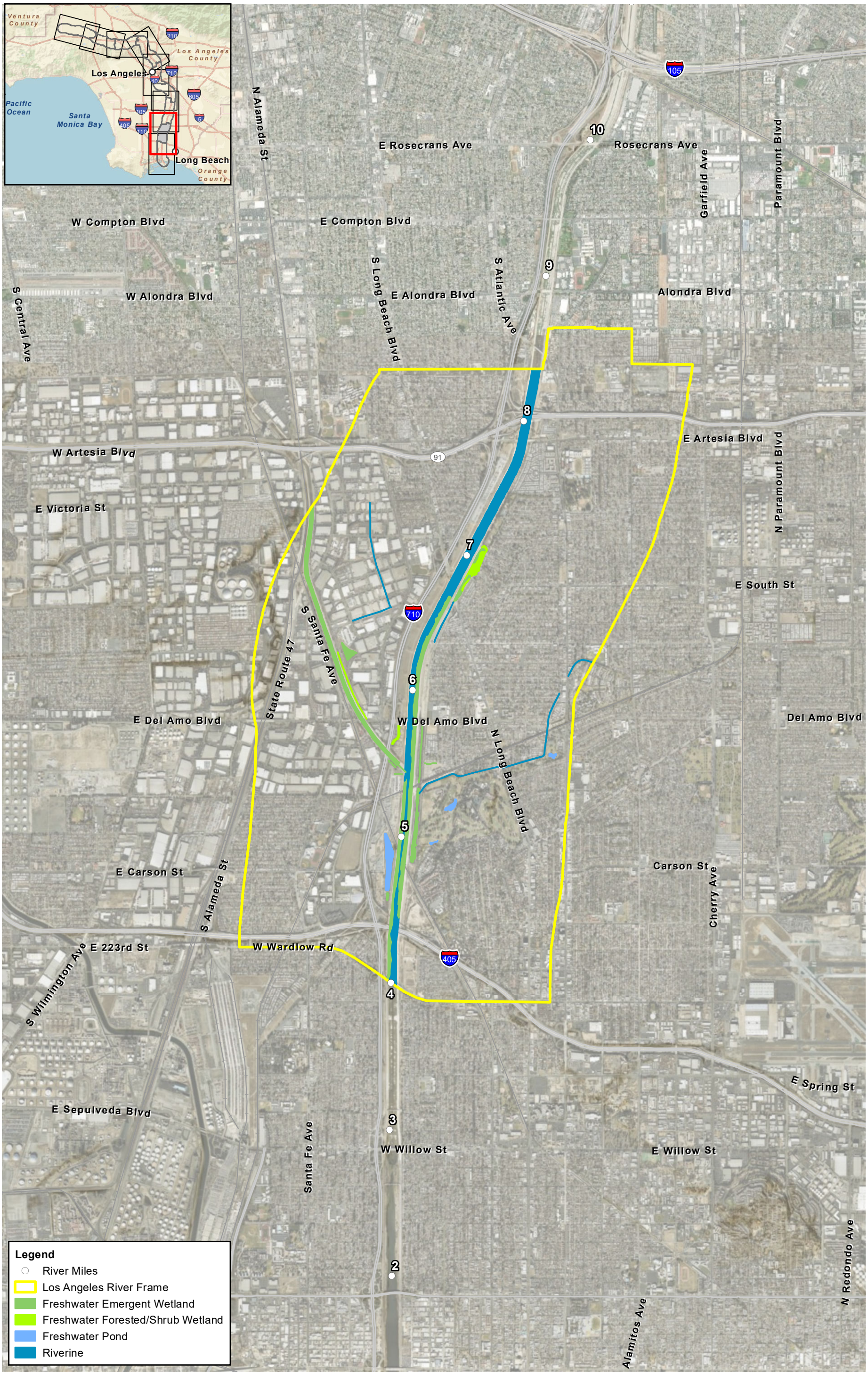

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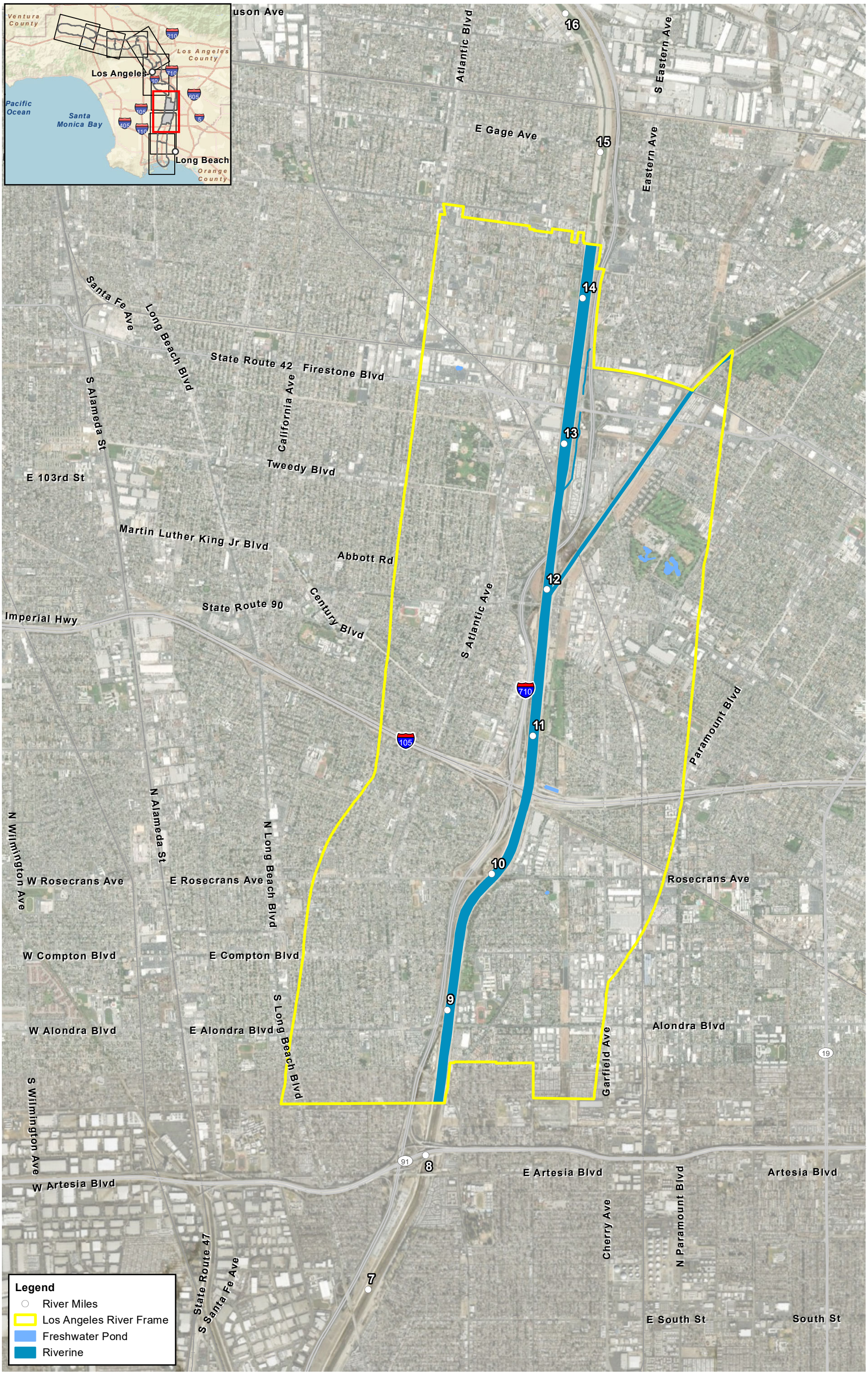
Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-36
National Wetland Inventory within Frame 2



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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-37
National Wetland Inventory within Frame 3

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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-38
National Wetland Inventory within Frame 4

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Figure 3.3-39
National Wetland Inventory within Frame 5

Source: NWI;
County of Los Angeles; ESRI

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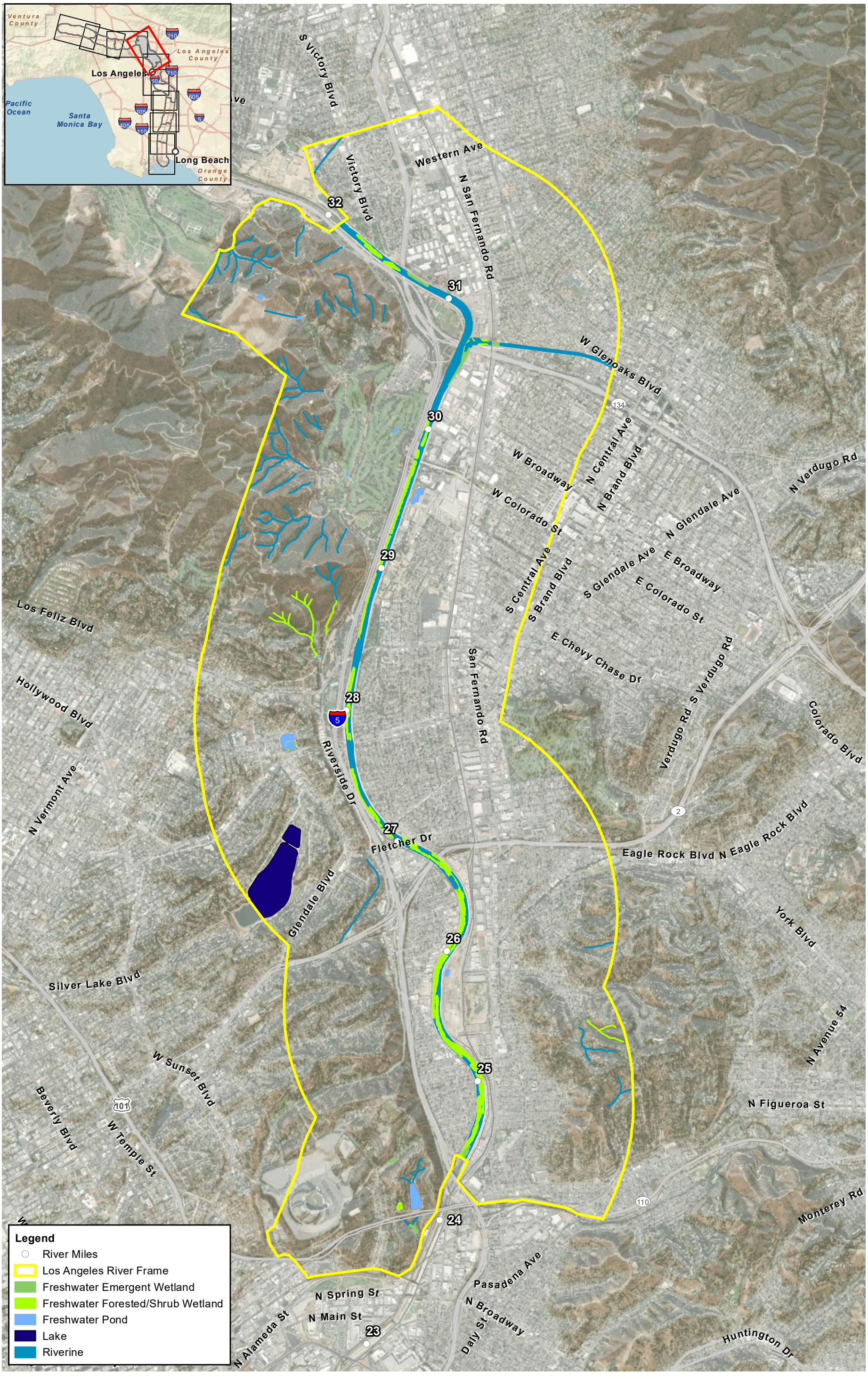

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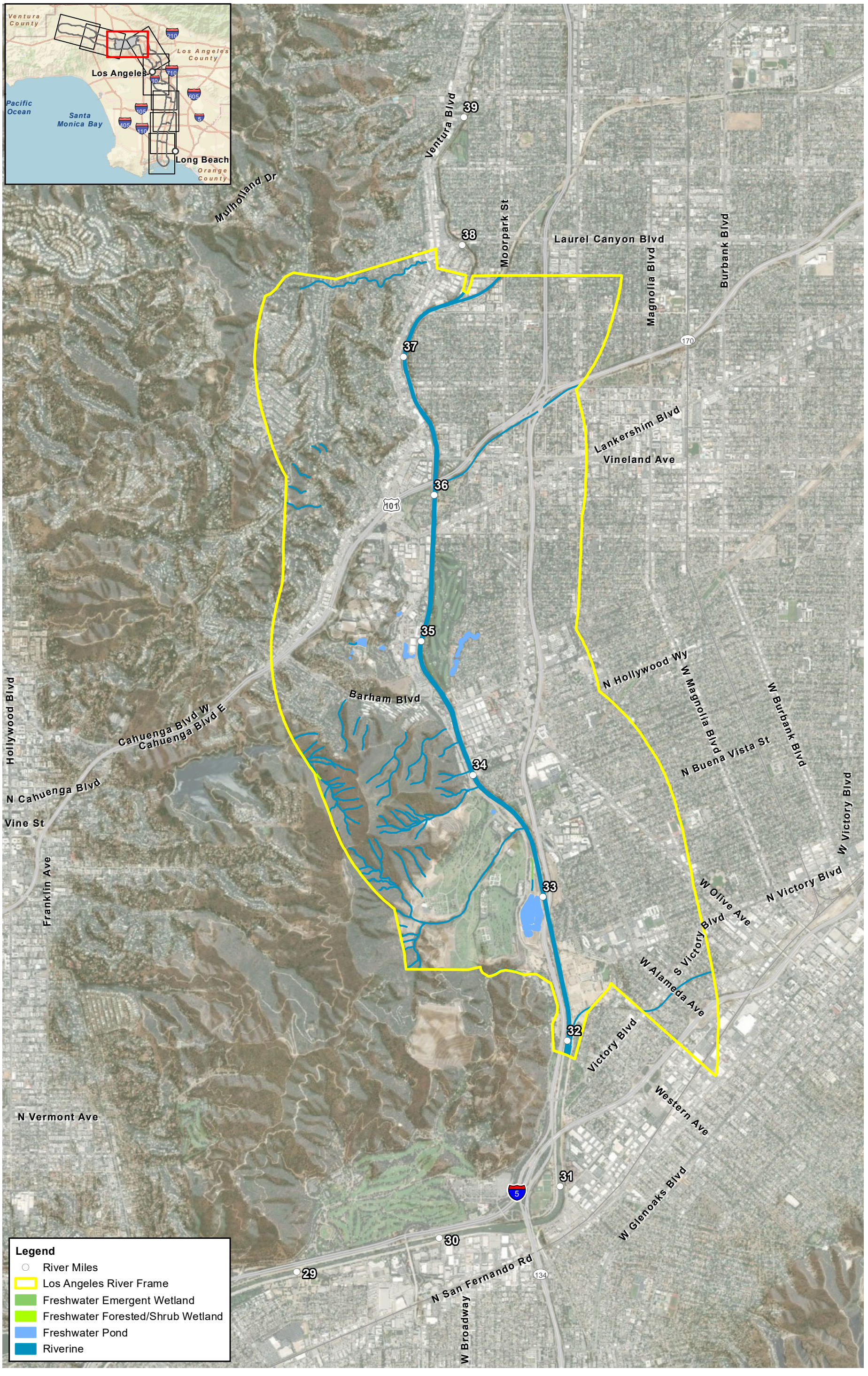
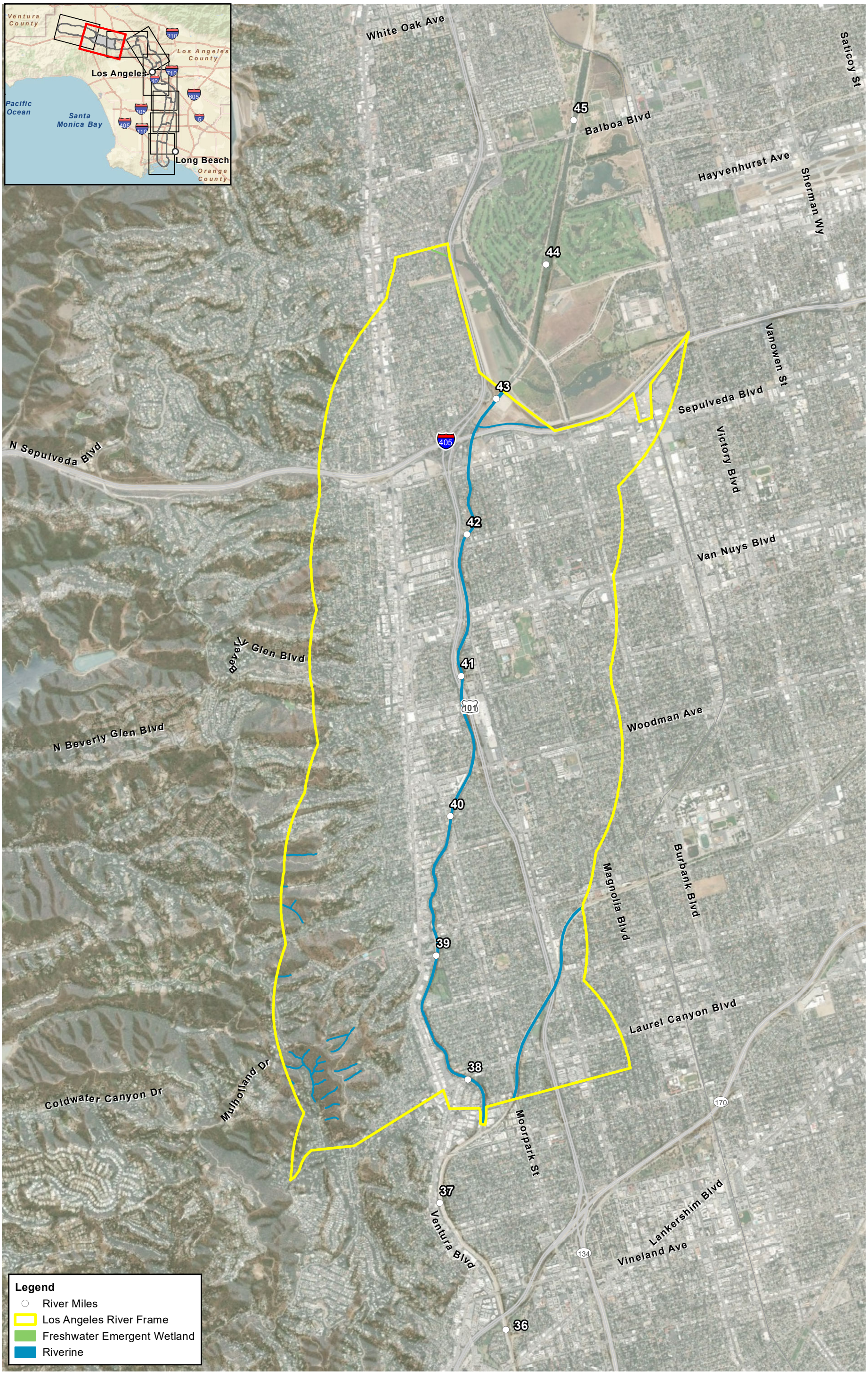
Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-40
National Wetland Inventory within Frame 6



Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-41
National Wetland Inventory within Frame 7



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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-42
National Wetland Inventory within Frame 8

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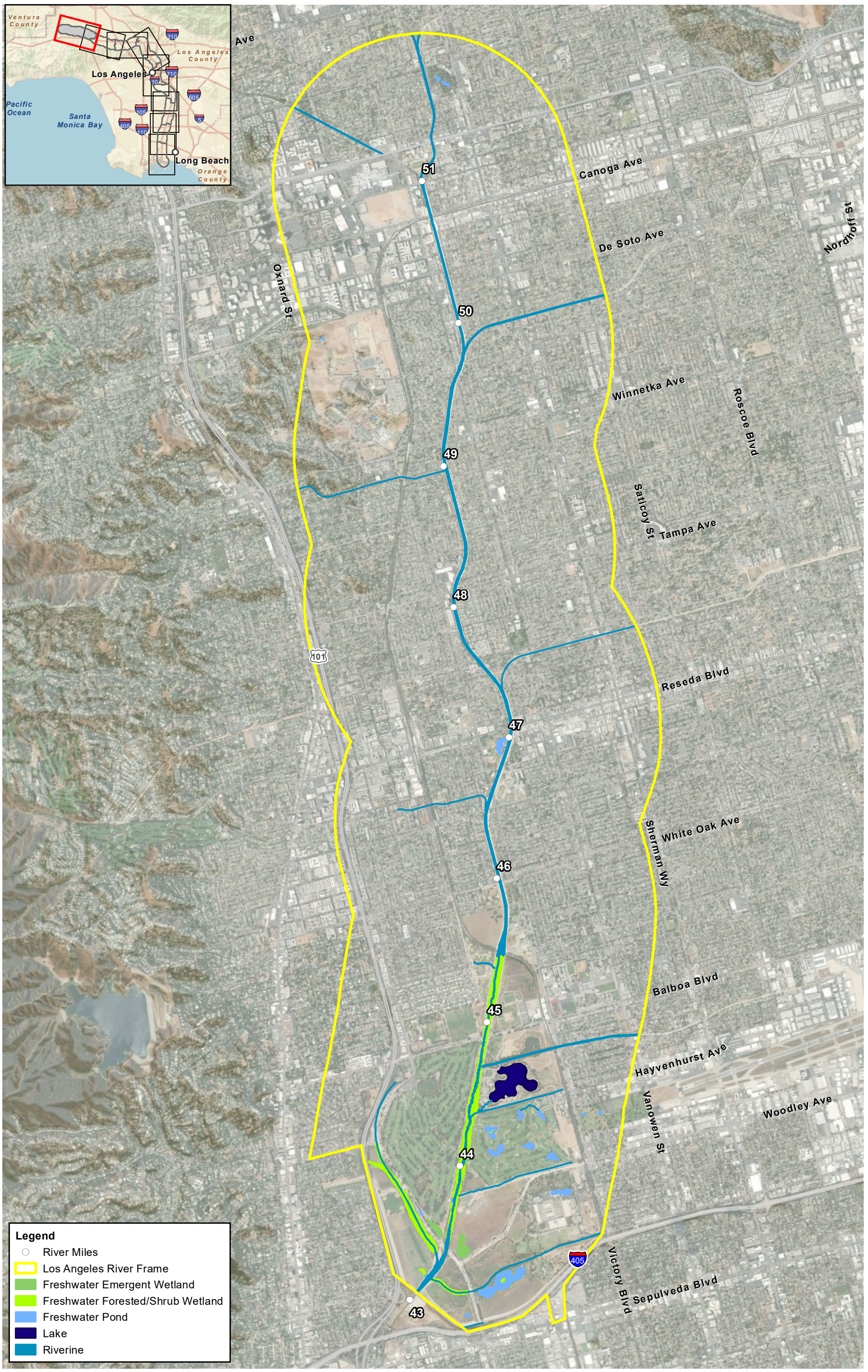

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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-43
National Wetland Inventory within Frame 9

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Frame 1

Aquatic resources within Frame 1 (Figure 3.3-13 and Figure 3.3-35) extend from the mouth of the LA River at the Port of Long Beach into urban Long Beach. The LA River channel is trapezoidal with an earthen (soft) bottom from the Port of Long Beach and transitions to a trapezoidal concrete-lined channel at approximately West Willow Street. The channel was built by the USACE and is maintained by LA County and/or USACE. There are areas of sediment accumulation within Frame 1 that have facilitated the establishment and growth of vegetation. The widths for the top of the channel within this frame range from approximately 400 feet to 585 feet (Los Angeles County Public Works 2021).

Frame 2

Within Frame 2, aquatic resources consist of the LA River, Compton Creek, and the Dominguez Gap Wetlands (Figure 3.3-14 and Figure 3.3-36). The LA River is concrete and trapezoidal for the entirety of Frame 2 and has an approximate top of channel width of 400 feet (Los Angeles County Public Works 2021). The channel was built by the USACE and is maintained by LA County and/or USACE.

Compton Creek is an approximately 220-foot-wide concrete trapezoidal tributary that enters the LA River from the west at river mile 5.4. The channel is a flood-management facility built by USACE and maintained by the Los Angeles County Flood Control District (LACFCD, now administered by Public Works). The Dominguez Gap Wetlands consist of three separate basins that are parallel to the LA River on the east side of the river. The Dominguez Gap Wetlands are maintained by the LACFCD/ Public Works.

Frame 3

Within Frame 3, aquatic resources consist of the LA River and the Rio Hondo (Figure 3.3-15 and Figure 3.3-37). The LA River is entirely concrete-lined and trapezoidal within Frame 3 and has a width ranging from 400 to 415 feet at the top of channel (Los Angeles County Public Works 2021). The channel was built by the USACE and is maintained by LA County and/or USACE.

The Rio Hondo is also a trapezoidal concrete-lined channel. Within Frame 3, its width is approximately 230 feet. The Rio Hondo reaches up to the Whittier Narrows reservoir and is entirely concrete-lined within the study area. The channel is a flood-management facility built by the USACE and maintained by the LACFCD/Public Works.

Frame 4

Within Frame 4, the major aquatic resource consists of the LA River (Figure 3.3-16 and Figure 3.3-38). The LA River is entirely concrete-lined and trapezoidal, with the exception of a short reach at the transition to Frame 4 that is concrete-lined and rectangular. The width at the top of the channel ranges approximately from 285 to 415 feet (Los Angeles County Public Works 2021). There are no major tributaries into the LA River within Frame 4. The channel was built by the USACE and is maintained by LA County and/or USACE.

Frame 5

Within Frame 5, major aquatic resources consist of the LA River and the Arroyo Seco (Figure 3.3-17 and Figure 3.3-39). Within Frame 5, the LA River is concrete-lined and trapezoidal until Frame 6,

where it transitions to soft bottom. The width at the top of the channel ranges approximately from 205 to 300 feet in width (Los Angeles County Public Works 2021). The channel was built by the USACE and is maintained by LA County and/or USACE.

The Arroyo Seco has a confluence with the LA River in Frame 5. Arroyo Seco is a concrete-lined channel that has a rectangular configuration at the confluence with the LA River but transitions to a trapezoidal channel at North San Fernando Road. It ranges in width at the top of the banks from approximately 60 feet at the rectangular configuration to approximately 100 feet at the trapezoidal configuration. The channel is a flood-management facility built by the LACFCD and maintained by the LACFCD/Public Works.

Frame 6

Within Frame 6, major aquatic resources consist of the LA River, Verdugo Wash, and Burbank Western Channel (Figure 3.3-18 and Figure 3.3-40). At the transition from Frame 5 to Frame 6, the LA River transitions to a trapezoidal, soft bottom channel. Within this reach, the bed of the channel is earthen (soft-bottom) and vegetated, and the banks are concrete. At the upper reach of Frame 6, the LA River re-transitions to a concrete-lined channel for approximately 1 mile and then re-transitions back to an earthen (soft-bottom) channel with concrete banks before it again transitions to a concrete rectangular channel at the downstream limit of Frame 7. Within Frame 6, the top of channel widths for the LA River range from 240 to 305 feet (Los Angeles County Public Works 2021). The channel was built by the USACE and is maintained by LA County and/or USACE.

Verdugo Wash enters the LA River from the east and is a concrete rectangular channel, with the exception of the immediate transition to the LA River. The immediate transition consists of a rectangular channel that contains heavy sediment accumulation and vegetation growth. It is thought that this portion of the channel also has a concrete bottom. The width of Verdugo Wash ranges from approximately 225 feet at the confluence with the LA River to 90 feet past the transition. Burbank Western Channel travels through Frame 6 but enters the LA River within Frame 7; therefore, it is discussed in more detail below. The channels were built by the USACE and are maintained by LACFCD/Public Works.

Frame 7

Within Frame 7, major aquatic resources consist of the LA River, Burbank Western Channel, Central Branch Tujunga Wash, and Tujunga Wash (Figure 3.3-19 and Figure 3.3-41). Within Frame 7, the LA River is entirely concrete-lined and rectangular. The approximate width of the top of the channel ranges from 55 to 130 feet (Los Angeles County Public Works 2021). The channel was built by the USACE and is maintained by LA County and/or USACE.

Burbank Western Channel enters the LA River at the downstream end of Frame 7 from the northwest and is a concrete rectangular channel with widths of approximately 60 feet. Central Branch Tujunga Wash enters the LA River as a concrete rectangular channel with an average width of approximately 30 feet. Tujunga Wash enters the LA River and upstream end of Frame 7 from the northwest and is a concrete rectangular channel with an average width of approximately 65 feet within the study area. The channels were built by the USACE and are maintained by LACFCD/Public Works.

Frame 8

Within Frame 8, major aquatic resources include the LA River, Tujunga Wash, and Encino Creek (Figure 3.3-20 and Figure 3.3-42). Within Frame 8, the LA River is a concrete rectangular feature with average widths of 55 feet (Los Angeles County Public Works 2021). The LA River transitions to a trapezoidal concrete wall and soft bottom feature at the upstream limit of Frame 8, at the Sepulveda Dam. The channel was built by the USACE and is maintained by LA County and/or USACE.

Tujunga Wash travels through Frame 8, but the confluence with the LA River is located within Frame 7. Therefore, Tujunga Wash is discussed under Frame 7, above. The channel was built by the USACE and is maintained by LA County and/or USACE.

Frame 9

Within Frame 9, major aquatic resources include the LA River; multiple creeks located within, or adjacent to, the Sepulveda Basin Recreation Area; Caballero Creek; Aliso Canyon Wash; Bell Creek; and Arroyo Calabasas (Figure 3.3-21 and Figure 3.3-43).

Within Frame 9, the LA River begins at the Sepulveda Dam and is an earthen (soft-bottom), trapezoidal feature that supports sediment accumulation and dense vegetation growth. The outer limits of the LA River within the vegetated reach range from 240 to 250 feet, including the tree canopy associated with the river. This soft bottom and vegetated reach of the LA River extends for approximately 2.3 miles upstream, where it transitions back to a concrete trapezoidal channel. The remainder of the LA River within Frame 9 consists of a concrete trapezoidal feature with widths at the top of the channel ranging from 125 to 200 feet (Los Angeles County Public Works 2021). The channel was built by the USACE and is maintained by LA County and/or USACE. At the most upstream limit is the confluence of Bell Creek and Arroyo Calabasas. These two channels are discussed in greater detail below.

At the downstream limit of Frame 9, Haskell, Encino Creek, Woodley, Hayvenhurst, and Bull Creeks are located in and adjacent to the Sepulveda Basin Recreation area and merge with the LA River. Haskell Creek enters the LA River from the east at the furthest downstream point in Frame 9. Haskell Creek is maintained by the City of Los Angeles and consists of a heavily vegetated channel. Immediately upstream from the confluence with the LA River, the top of bank width averages approximately 140 feet; the widths decrease to an approximate range of 50 to 150 feet upstream of Burbank Boulevard. In addition, a lake is immediately east of Haskell Creek.

Encino Creek connects to the LA River from the west approximately 600 feet upstream from Haskell Creek. Encino Creek is heavily vegetated and ranges from 180 to 275 feet in width; south of El Camino Real, the channel slopes are lined with riprap and the top of bank is approximately 55 feet wide.

Woodley Creek connects to the LA River from the east approximately 2,600 feet upstream from Encino Creek. Woodley Creek is a flood-management facility (Bond Issue Drain 469) maintained by the LACFCD (now administered by Public Works). Woodley Creek is a soft-bottom trapezoidal channel with small reaches of slope stabilization such as riprap or concrete. To maintain the channel's flow-carrying capacity and ensure the functional integrity of the entire BI469 storm drain system, the channel is largely unvegetated or vegetated with low-growing vegetation within and along the channel bed. The channel's width at the top of banks ranges from approximately 60 to 80 feet.

Hayvenhurst Creek connects to the LA River from the east approximately 3,000 feet upstream from Woodley Creek. Hayvenhurst Creek is a heavily vegetated channel that ranges from 40 to 115 feet wide. The channel transitions to riprap slopes with minimal vegetation to the north.

Bull Creek connects to the LA River from the east approximately 1,700 linear feet upstream from Hayvenhurst Creek. Bull Creek is an earth channel that is heavily vegetated. It supports an oxbow to the west of the channel and ranges from approximately 90 to 250 feet in width. At Victory Boulevard, Bull Creek transitions to a concrete trapezoidal channel that is approximately 70 feet wide. This trapezoidal channel is a flood-management facility maintained by the LACFCD/Public Works.

Caballero Creek connects to the LA River within Frame 9 approximately 4,000 feet upstream of the Sepulveda Basin Recreation Area. Caballero Creek is a concrete rectangular feature with an average width of 15 feet. This channel is a flood-management facility maintained by the LACFCD/Public Works.

Aliso Canyon Wash connects to the LA River from the northwest and consists of a concrete rectangular channel that is approximately 60 feet wide. Browns Canyon Wash connects to the LA River from the northwest, upstream of Aliso Canyon Wash. The channel is a concrete rectangular feature with an average width of 65 feet. These channels are flood-management facilities maintained by the LACFCD/Public Works.

Bell Creek joins Arroyo Calabasas (also known as Calabasas Creek) from the north at the most upstream point of the LA River. Bell Creek is a concrete rectangular channel that is approximately 50 feet wide. Arroyo Calabasas joins Bell Creek from the west and is a concrete trapezoidal feature that is between approximately 110 and 120 feet wide. These channels are flood-management facilities maintained by the LACFCD/Public Works.

Wildlife Movement and Connectivity

Wildlife Corridors, Linkages, and Local Connectivity Areas exist within the landscape in and around the LA River. Wildlife corridors and associated natural habitat areas (landscape blocks) in the region were mapped by the California Essential Habitat Connectivity Project (CEHC) (Spencer et al. 2010c). Linkages include those identified as part of the *Missing Linkages: Restoring Connectivity to the California Landscape* project (Penrod et al. 2001). Local Connectivity Areas include the LA River itself, local streams and tributaries, and local habitat areas and parks. These areas are mapped on Figure 3.3-25.

Frames 1 and 2

No modeled wildlife corridors or mapped linkages occur within this region, though areas identified by the CEHC (Spencer et al. 2010b) as Small Natural Areas (i.e., small landscape blocks less than 2,000 acres such as parks, fields, remnant habitat areas) occur throughout Frames 1 and 2 both within the riverbed and the surrounding urban matrix (Figure 3.3-25). CEHC Potential Riparian Connections also occur (i.e., named rivers and streams at least 50 miles long that contribute to ecological connectivity) and include the entire LA River.

In this region the river channel and mouth contain contiguous marine, estuarine, and riverine waters and associated wetland, beach (Alamitos Beach), and upland habitats. The river channel facilitates connectivity of these habitats for the species that use them, including fish, amphibians, bats, and resident and migratory birds. This interface of marine and freshwater systems provides

distinctive habitats that support a diversity of marine, estuarine, and freshwater plant and animal species adapted to their unique conditions (see Appendix D.2 for a list of special-status species with potential to occur). The confluence of Compton Creek and the LA River occurs in Frame 2. These areas may support habitat important for movement, migration, stopover, overwintering, and breeding of fish and wildlife species using them. Associated infrastructure such as bridges and culverts may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for species such as birds and bats. There are also a number of potential fish and wildlife movement barriers, such as drop structures, that were constructed to reduce high channel flow velocities and therefore reduce the potential of erosion to damage the integrity of the channel levees. Within the river channel there are five locations identified in the CDFW Fish Passage Assessment Database, which are classified as unassessed potential barriers to fish passage (CDFW 2020e).

In addition to the Wildlife Corridors, Linkages, and Local Connectivity Areas located within Frames 1 and 2, EFH also occurs in Frame 1 (Figure 3.3-11) within marine and estuarine waters for finfish and market squid, coastal pelagic species, groundfish, krill (*Euphausia pacifica*, *Thysanoessa spinifera*, and other krill species), common thresher shark, and dorado. The estuary habitat has an HAPC designation. HAPC are high priority conservation areas due to their important and fragile ecosystem function (NOAA 2020c).

Outside of the river channel, various areas contain habitat that may support species movement, migration, stopover, overwintering, and breeding, such as trees and vegetation in local parks, greenbelts, and landscaping; remnant habitat patches; sandy beach; and adjacent marine waters, freshwaters, and wetlands (such as the Dominguez Gap Wetlands). Additionally, the intertidal sandy beach habitat along Alamitos Beach may provide habitat for grunion reproduction.

Frames 3, 4, and 5

No modeled wildlife corridors or mapped linkages occur within this region, although areas identified by the CEHC (Spencer et al. 2010b) as Small Natural Areas occur throughout Frames 3, 4, and 5 both within the riverbed and the surrounding urban matrix. CEHC Potential Riparian Connections also occur and include the entire LA River (Figure 3.3-25).

Within this region, the river channel is highly developed; the entire channel is concrete-lined and lacks vegetation. Tributaries that converge with the LA River in these frames include the Rio Hondo and the Arroyo Seco, both of which are dammed in their upper watersheds (Whittier Narrows Dam and Devils Gate Dam, respectively). The Rio Hondo up to Whittier Narrows Dam is concrete-lined and lacks a natural bottom and vegetation dams. The Arroyo Seco, with the exception of a short reach from the 210 Freeway crossing to Devils Gate Dam, is concrete-lined with no natural bottom or vegetation. Within the LA River channel are five unassessed potential fish passage barriers that are documented in the CDFW Fish Passage Assessment Database (CDFW 2020e). Associated infrastructure such as bridges and culverts may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for species such as birds and bats. Although the riverbed is highly developed, it likely provides at least some connectivity for species moving or migrating through the region, particularly for aerial species such as bats and birds.

The area outside of the river channel is highly developed, although various areas contain habitat that may support species movement, migration, stopover, overwintering, and breeding, such as trees and vegetation in local parks, landscaping, and remnant habitat patches.

Frame 6

One mapped wildlife linkage documented in the *Missing Linkages: Restoring Connectivity to the California Landscape* project (Penrod et al. 2001) occurs within Frame 6—the "Griffith Park–Verdugo Hills" linkage. This linkage is composed of Verdugo Wash, which is an approximate 9.5-mile concrete-lined channel that starts in the Verdugo Hills and flows into the LA River near Griffith Park. Verdugo Wash is highly limited in wildlife connectivity function and value, especially for terrestrial and aquatic wildlife, because it lacks an earthen bottom, vegetation, and direct connectivity to surrounding habitats, and because of a dam (Verdugo Debris Basin, maintained by LACFCD) located in its upper reach just upstream of the Oakmont Country Club. However, at the confluence with the LA River, Verdugo Wash contains some refuge and breeding habitat within riparian vegetation.

One CEHC Large Natural Landscape Block (i.e., large landscape blocks greater than 10,000 acres with habitat and conservation value) is in Frame 6 at Griffith Park. Additionally, areas identified by the CEHC (Spencer et al. 2010b) as Small Natural Areas occur throughout Frame 6 both within the riverbed and the surrounding urban matrix. CEHC Potential Riparian Connections also occur and include the entire LA River. Note that no areas identified as CEHC Essential Connectivity Areas occur within Frame 6 (or anywhere in the LA River) (Figure 3.3-25).

In this region, the river channel is also concrete-lined, although it contains earthen bottom sufficient to support vegetated habitat (e.g., herbaceous vegetation and trees) within the riverbed. The river channel and associated vegetation facilitate connectivity of habitats for the species that use them, including fish (nonnative), bats, resident and migratory birds, and possibly reptiles and amphibians. Due to the existence of an earthen bottom and vegetation, the river in this frame contains higher quality connectivity function and value than other non-vegetated regions of the LA River. It supports habitats important for movement, migration, stopover, overwintering, and breeding of fish and wildlife species using them. Associated infrastructure such as bridges and culverts may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for species such as birds and bats.

Outside of the river channel, various areas contain habitat that support species movement, migration, stopover, overwintering, and breeding. These include trees and vegetation in local parks, greenbelts, and landscaping; remnant habitat patches; and larger habitat blocks such as within Elysian Park and Griffith Park.

Frame 7

One CEHC Large Natural Landscape Block occurs in Frame 7 at Griffith Park (Figure 3.3-25). Additionally, areas identified by the CEHC as Small Natural Areas occur throughout Frame 7 within the riverbed and the surrounding urban matrix. CEHC Potential Riparian Connections also occur and include the entire LA River. Note that no areas identified as CEHC Essential Connectivity Areas occur within Frame 7 (or anywhere in the LA River) (Figure 3.3-25).

In this region, the river channel is concrete-lined and largely lacks soft bottom and vegetation within the riverbed. Associated infrastructure such as bridges and culverts may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for species such as birds and bats. Although the riverbed is highly developed, it likely provides at least some connectivity for species moving or migrating through the region, particularly for aerial species such as bats and birds and urban-adapted species such as coyote and raccoon.

Outside of the river channel, various areas contain habitats that support species movement, migration, stopover, overwintering, and breeding. These include trees and vegetation in local parks, greenbelts, and landscaping; remnant habitat patches; and larger habitat areas in Griffith Park.

Frame 8

Areas identified by the CEHC (Spencer et al. 2010b) as Small Natural Areas occur throughout Frame 8 within the riverbed and the surrounding urban matrix. CEHC Potential Riparian Connections also occur and include the entire LA River. Note that no areas identified as CEHC Essential Connectivity Areas occur within Frame 8 (or anywhere in the LA River) (Figure 3.3-25).

In this region, the river channel is concrete-lined and lacks soft bottom and vegetation within the riverbed. Associated infrastructure such as bridges and culverts may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for species such as birds and bats. Although the riverbed is highly developed, it likely provides at least some connectivity for species moving or migrating through the region, particularly for aerial species such as bats and birds.

Outside of the river channel, various areas contain habitat that support species movement, migration, stopover, overwintering, and breeding such as trees and vegetation in remnant habitat patches and local parks, greenbelts, and landscaping.

Frame 9

Areas identified by the CEHC (Spencer et al. 2010b) as Small Natural Areas occur throughout Frame 9 within the riverbed and the surrounding urban matrix. CEHC Potential Riparian Connections also occur and include the entire LA River. Note that no areas identified as CEHC Essential Connectivity Areas occur within Frame 9 (or anywhere in the LA River) (Figure 3.3-25).

In this region the river channel is concrete-lined and lacks soft bottom and vegetation within the riverbed. Associated infrastructure such as bridges and culverts may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for species such as birds and bats. Although the riverbed is highly developed, it likely provides at least some connectivity for species moving or migrating through the region, particularly for aerial species such as bats and birds. Within the river channel there is one location that is identified in the CDFW Fish Passage Assessment Database (CDFW 2020e) and classified as a Total Barrier: a flood-management facility located at the Sepulveda Dam and maintained by the USACE.

Outside of the river channel, various areas contain habitats that support species movement, migration, stopover, overwintering, and breeding, such as trees and vegetation in local parks, greenbelts, and landscaping; remnant habitat patches; and larger habitat areas at the Sepulveda Basin, which contains a variety of upland, riparian, and aquatic habitats, including lacustrine waters, trees and woodlands, scrub, grasslands, and the Sepulveda Basin Wildlife Preserve.

3.3.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of biological resources in this PEIR.

Federal

Federal Endangered Species Act of 1973

Administered by the USFWS and NOAA National Marine Fisheries Service (NMFS), the FESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Pursuant to FESA (7 United States Code [USC] § 136, 16 USC § 1531 et seq.), USFWS and NMFS have regulatory authority over species listed as endangered or threatened as well as habitat of such species that has been designated as critical (i.e., critical habitat). Under FESA, authorization is required to "take" a listed species or adversely modify critical habitat. Take is defined under FESA Section 3 as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under federal regulation (50 CFR Sections 17.3, 222.102), "harm" is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Designated critical habitat for endangered and threatened species is defined as a specific geographic area that is essential for species recovery and conservation of a threatened or endangered species and that may require special management and protection. Critical habitat is designated when a species is listed pursuant to the FESA. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

Specifically, Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. FESA Section 7 outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat. Section 7(a)(2) and its implementing regulations require federal agencies to consult with USFWS and/or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. Critical habitat designations are not made for every species listed under FESA. The designation process also considers economic, national security, and other impacts and may result in the exclusion of some habitat areas from critical habitat designation (16 USC Section 1533(b)(2)). Military installations are generally excluded from critical habitat designations; however, they are required by the Sikes Act (16 USC Section 670a–670f, as amended) to prepare integrated natural resource management plans.

For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an Incidental Take Permit (ITP) under FESA Section 10(a). Section 10(a) allows issuance of permits for incidental take of endangered or threatened species. The term "incidental" applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and what steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) domestically implements a series of international treaties that provide for migratory bird protection (16 USC Section 703 et seq.). The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, "to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, […] any migratory bird, or any part, nest, or egg of any such bird" (16 USC

Section 703(a)). Species protected under the MBTA are listed in 50 CFR 10.13. Most native birds in the project region are protected under the MBTA. The USFWS issues permits under the MBTA to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, educational, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. USFWS does not issue permits for "incidental take" of migratory birds that results from otherwise lawful activities such as infrastructure, transportation projects, facility structures, or other activities.

Protection of Migratory Bird Populations (Executive Order 13186)

Executive Order (EO) 13186 (Federal Register, Volume 66, Number 11 [January 17, 2001], p. 4) requires federal agencies to develop a comprehensive strategy for the conservation of migratory birds by the federal government, thereby fulfilling the government's duty to lead in the protection of this international resource. Each federal agency is required to enter into a Memorandum of Understanding with USFWS outlining how the agency will promote conservation of migratory birds. The EO also requires federal agencies to incorporate migratory bird conservation measures into their agency activities. The EO does not affect federal-aid projects because actions delegated to or assumed by nonfederal entities, or carried out by nonfederal entities with federal assistance, are not subject to the EO, although such actions continue to be subject to the MBTA itself.

Bald and Golden Eagle Protection Act

The BGEPA is the primary law protecting eagles, including individuals, and their nests and eggs (16 USC Section 668 et seq.). It defines "take" to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb" (16 USC 668c). "Disturb" is defined by regulation at 50 CFR 22.3 in 2007 as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause… (1) injury to an eagle, (2) a decrease in productivity…, or (3) nest abandonment…" Under the BGEPA Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) protects all marine mammals within the United States and prohibits harassment, feeding, capture, collection, or killing of any marine mammals without a permit. The MMPA is managed by the federal government. NMFS is responsible for managing cetaceans, otariids, and phocids. USFWS is responsible for managing odobenids, sirenians, otters, and polar bears.

Invasive Species (Executive Order 13112)

EO 13112 requires federal agencies to "prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health effects that invasive species cause." An invasive species is defined by the EO as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." Alien species are defined, with respect to a particular ecosystem, as any species (including its seeds, eggs, spores, or other biological material capable of propagating that species) that is not native to that ecosystem.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) establishes a management system for national marine and estuarine fishery resources. This legislation requires that all federal agencies consult with NMFS regarding all actions or proposed actions permitted, funded, or undertaken that may adversely affect EFH. EFH is defined as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The legislation states that migratory routes to and from anadromous fish spawning grounds are considered EFH. The phrase "adversely affect" refers to the creation of any effect that reduces the quality or quantity of EFH. Federal activities that occur outside EFH but may nonetheless have an effect on EFH waters and substrate must also be considered in the consultation process.

Under the Magnuson-Stevens Act, effects on habitat managed under the Pacific Coast Salmon Fishery Management Plan must also be considered. The Magnuson-Stevens Act states that consultation regarding EFH should be consolidated, where appropriate, with the interagency consultation, coordination, and environmental review procedures required by other federal statutes, such as the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, Clean Water Act, and FESA. EFH consultation requirements can be satisfied through concurrent environmental compliance if the lead agency provides NMFS with timely notification of actions that may adversely affect EFH, and the notification meets requirements for EFH assessments.

Clean Water Act

The principal law that serves to protect the nation's waters is the 1948 Federal Water Pollution Control Act. This legislation, more commonly referred to as the CWA, underwent significant revision when Congress, in response to the public's growing concern of widespread water pollution, passed the Federal Water Pollution Control Act Amendments of 1972. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. for the conservation of the nation's potable water sources. Under the current regulatory definition, waters of the U.S. include navigable waters of the U.S., territorial seas, interstate waters, all other intermittent and perennial waters and adjacent wetlands (with some exceptions) where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries (33 CFR 328.3(a)).

On January 23, 2020, EPA and USACE signed and released the prepublication notice of the Navigable Waters Protection Rule, redefining waters of the U.S. (33 CFR 328). The Navigable Waters Protection Rule and revised definition of waters of the U.S. went into effect on June 23, 2020. The Navigable Waters Protection Rule outlines four clear categories of waters that are considered waters of the U.S.:

- Territorial seas and traditional navigable waters (TNWs)
- Tributaries to TNWs that are perennial or intermittent
- Lakes, ponds, and impoundments of jurisdictional waters
- Adjacent wetlands

The Navigable Waters Protection Rule also identified those waters that are not considered waters of the U.S., which include, but are not limited to, groundwater, ephemeral features, diffuse stormwater

and directional sheet flow over upland, ditches, artificially irrigated areas, and stormwater features excavated in uplands.

Clean Water Act, Section 401

Section 401 of the CWA requires a water quality certification or waiver thereof before any federal permit can be issued "to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge." Therefore, projects requiring authorization by the USACE pursuant to Section 404 or Section 408 of the CWA and/or Section 10 of the Rivers and Harbors Act may need to obtain water quality certification. The SWRCB, RWQCB, and EPA are responsible for issuing Section 401 Water Quality Certifications.

Clean Water Act, Section 402, National Pollutant Discharge Elimination System Program

Finally, under the CWA, the EPA has implemented pollution control programs and has developed national water quality criteria recommendations for pollutants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain NPDES permits if their discharges go directly to surface waters.

Clean Water Act, Section 404

Section 404 of the CWA (33 USC 401 et seq.; 33 USC 1344; USC 1413; and Department of Defense, Department of the Army, Corps of Engineers 33 CFR Part 323), as implemented by the USACE, requires authorization by the USACE for the discharge of dredged and/or fill material into waters of the U.S. (as defined at 33 CFR 328.3(a)). *Dredged material* means material that is excavated or dredged from waters of the U.S. *Fill material* means material placed in waters of the U.S. where the material has the effect of replacing any portion of a waters of the U.S. with dry land or changing the bottom elevation of waters of the U.S. Examples of fill material include rock, sand, soil, clay, plastics, woodchips, concrete, and materials used to create any structure or infrastructure in waters of the U.S.

Clean Water Act, Section 408

Section 14 of the Rivers and Harbors Appropriation Act of 1899, as amended, and codified in 33 USC 408 (Section 408) provides that the Secretary of the Army may, on the recommendation of the Chief of Engineers, grant permission to other entities for the permanent or temporary alteration or use of any USACE civil works project. An *alteration* refers to any action by any entity other than USACE that builds upon, alters, improves, moves, occupies, or otherwise affects the usefulness or the structural or ecological integrity of a USACE project. Section 408 permission requires a determination that the requested alteration is not injurious to the public interest and will not impair the usefulness of the project. This means USACE has the authority to review, evaluate, and approve all alterations to federally authorized civil works projects to make sure they are not harmful to the public and still meet the project's intended purposes mandated by congressional authorization. Routine operations and maintenance do not require 408 permissions.

Floodplain Management (Executive Order 11988)

EO 11988 requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. If triggered by a federal permit, this EO requires an eight-step process that agencies must carry out as part of their decision-making process for projects that have potential impacts on or within a floodplain.

Protection of Wetlands (Executive Order 11990)

Pursuant to EO 11990, each federal agency is responsible for preparing implementing procedures for carrying out the provisions of the EO. The purpose of this EO is to "minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands." If triggered by a federal permit, a federal agency, to the extent permitted by law, must avoid undertaking or providing assistance for any activity located in wetlands, unless the head of the agency finds that there is no practical alternative to such activity, and the proposed action includes all practical measures to minimize harm to wetlands that may result from such actions. In making this finding, the head of the agency may take into account economic, environmental, and other pertinent factors. Each agency must also provide opportunity for early public review of any plans or proposals for new construction in wetlands.

Rivers and Harbors Act (Section 10)

Pursuant to Section 10 of the Rivers and Harbors Act, the USACE is authorized to regulate any activity within or over any navigable waters of the U.S. Rivers and Harbors Act. Section 10 jurisdiction is defined as "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use, to transport interstate or foreign commerce" (33 Code of Federal Regulations [CFR] 322).

Rivers and Harbors Act (Section 14)

Authorized in Section 14 of the River and Harbors Appropriation Act of 1899, Section 408 (33 U.S. Code [USC] 408) provides that the Secretary of the Army may, on recommendation of the Chief of Engineers, grant permission for the alteration of a public work so long as that alteration is not injurious to the public interest and will not impair the usefulness of the work. *Alterations* or *alter* refers to any action by any entity other than USACE that builds upon, changes, improves, moves, occupies, or otherwise affects the usefulness, or the structural or ecological integrity, of a USACE project. Alterations also include actions approved as "encroachments" pursuant to 33 CFR 208.10.

State

California Endangered Species Act

The CESA provides a process by which plants and animals can be recognized as being endangered or threatened with extinction. Pursuant to the CESA, a permit from CDFW is required for projects that could result in the taking of a plant or animal species that is State-listed as threatened or endangered CFGC § 2050 et seq.). Under CESA, *take* means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (CFGC § 86). The CESA definition of take does not include "harm" or "harass," as the FESA definition does. As a result, the threshold for take is higher

under CESA than under FESA. Authorization for take of State-listed species may be obtained through a CFGC Section 2080.1 consistency determination (for applicants who have already obtained a federal incidental take statement or permit for the same species) or a Section 2081 ITP.

Natural Community Conservation Planning Act

California's NCCP program is a cooperative effort to protect habitats and species that began under the State's NCCP Act of 1991. The FESA Section 4(d) special rule for interim take of coastal California gnatcatchers was promulgated in response to the NCCP Act of 1991 and the initiation of NCCPs targeting coastal sage scrub (gnatcatcher habitat). The NCCP Act authorized the State to engage in regional multiple species conservation planning with local jurisdictions and property owners.

The NCCP Act and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003. The NCCP Act of 2003 provides for the preparation and approval of NCCPs. NCCPs identify and provide for the regional or area-wide protection of plants and animals, including their habitats, and are intended to preserve local and regional biological diversity, reconcile urban development and wildlife needs, "conserve" State-listed species to the point where they can be delisted, and maintain or enhance conditions for covered species such that listing will not become necessary (CFGC Section 2800 et seq.). The NCCP Act was amended again in 2011 to allow CDFW to authorize incidental take of "fully protected" species if they are "covered species" under an approved NCCP.

Lake or Streambed Alteration (California Fish and Game Code Section 1602)

The CDFW regulates alterations or impacts on streambeds or lakes under Section 1602 of the CFGC. Substantial diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under CFGC Section 1602. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do either of the following without first submitting a complete Notification of Lake or Streambed Alteration to CDFW and obtaining a Lake and Streambed Alteration Agreement:

- Substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake

The California Fish and Game Commission defines *stream* as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Protection of Birds, Nests, and Raptors (California Fish and Game Code Sections 3503 and 3503.5)

CFGC Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. CFGC Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs.

Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of CFGC Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. These code sections do not provide for the issuance of any type of ITP.

Fully Protected Species under the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515)

The State of California designated species as "fully protected" prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to species that were rare or facing possible extinction/extirpation. These statutes prohibit take or possession of fully protected species. Most fully protected species have since been State-listed as threatened or endangered species. Protection of fully protected species is described in CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish).

In September 2011, the NCCP Act was amended to permit the incidental take of 36 fully protected species, pursuant to the NCCP Act approved by CDFW (CFGC § 2835). The amendment gives fully protected species the same level of protection as endangered and threatened species under the NCCP Act. The NCCP Act authorizes the incidental take of species "whose conservation and management" is provided for in a conservation plan approved by CDFW.

California Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (CFGC § 1900 et seq.) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take.

Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)

The SWRCB and RWQCBs, as appropriate, have the responsibility to implement and enforce the Porter-Cologne Water Quality Control Act (Porter-Cologne), which regulates waste discharge into waters of the State. In the Porter-Cologne Act, the legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of waters of the State from degradation" (California Water Code Section 13000). The Porter-Cologne Act grants the regional water boards the authority to implement and enforce the water quality laws, regulations, policies, and plans to protect the groundwater and surface waters of the State. The RWQCB regulates the "discharge of waste" to waters of the State. The term "discharge of waste" is also broadly defined in the Porter-Cologne Act, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may result in direct or indirect impacts on waters of the State relative to implementation of Section 401 of the CWA.

Specifically, Porter-Cologne requires each RWQCB to formulate and adopt water quality plans for all areas within their region (also referred to as "Basin Plans"). Basin Plans establish beneficial uses, water quality standards, and water quality objectives for major watershed areas (i.e., RWQCB boundaries) throughout the state. Under Porter-Cologne, all parties proposing to discharge waste that could affect the quality of waters of the State, other than into a community sewer system, are required to file with the appropriate RWQCB a Report of Waste Discharge (ROWD) containing such information and data as may be required by the RWQCB. The RWQCB will then respond to the

ROWD by issuing a waste discharge requirement (WDR) in a public hearing, or by waiving WDRs (with or without conditions) for that proposed discharge. The RWQCB has a statutory obligation to prescribe WDRs except where the RWQCB finds that a waiver of WDRs for a specific type of discharge is in the public interest. Therefore, all parties proposing to discharge waste that could affect waters of the State, but do not affect federal waters (which requires a CWA Section 404 permit and CWA Section 401 Certification) must file an ROWD with the appropriate RWQCB.

The RWQCB collaborates with other agencies on the enforcement of the act, such as CDFW and USACE. Although 401 certification is typically issued by RWQCB staff, WDRs must be issued by the RWQCB. Generally, when staff issue or waive 401 certification, WDRs are simultaneously waived. However, for large or multiyear projects that are being reviewed under Section 401 of the CWA, staff may determine that WDRs should also be issued, whereby additional review by the RWQCB and a public hearing would be necessary.

California Coastal Act of 1976

The California Coastal Act of 1976 declares that the California coastal zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem. The State of California's basic goals (Coastal Act Section 30001.5) for the coastal zone are to (a) protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources; (b) assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the State; (c) maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners; (d) ensure priority for coastal-dependent and coastal-related development over other development on the coast; and (e) encourage State and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

The California Coastal Act outlines standards for development within the coastal zone that seek to balance the right to develop with strong environmental policies aimed to protect coastal resources. It includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the Coastal Commission and by local governments, pursuant to the Coastal Act. The Coastal Commission plans and regulates the use of land and water in the coastal zone. If the proposed Project would result in an impact within the coastal zone, the impacts are subject to the provisions of California Coastal Act and the authority of the Coastal Commission. The California Coastal Act of 1976 is discussed in further detail in Section 3.10, *Land Use and Planning*.

The California Coastal Act Section 30240 provides protections for *environmentally sensitive habitat areas* (ESHAs), defined as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or be degraded by human activities and developments. The California Coastal Act requires that such areas be protected and that development projects within or adjacent to such areas be planned and sited to prevent degradation of ESHAs.

Tidelands Trust

In the early 1900s, the State of California conveyed the tidelands now occupied by the Port of Los Angeles and Port of Long Beach (the Ports) to the Cities of Los Angeles and Long Beach, respectively, as trustees for the people of the State of California, to accommodate and promote harbor commerce, navigation, and fisheries. The cities, in turn, established Harbor Commissions to manage those portions of the tidelands devoted to maritime commerce, i.e., Los Angeles/Long Beach Harbor. The Ports are landlord ports—they own most of the land and water in their districts, build terminal facilities on that land and water, lease those terminals to shipping lines and stevedoring companies, and build and maintain the supporting infrastructure. The Ports do not own or operate the ships, yard equipment, trucks, or trains that move the cargo. The Ports also support non-cargo-related uses such as manufacturing, fishing, oil extraction, waterfront recreation, and recreational boating.

Under the Tidelands Trust, the Ports have an obligation to protect the natural resources within their jurisdiction in order to ensure the integrity of those resources for future generations of Californians.

Regional

Los Angeles County General Plan

The Conservation and Natural Resources Element of the *Los Angeles County 2035 General Plan* (Los Angeles County 2015) contains policies that are relevant to the preservation of biological resources and are listed here.

Conservation and Natural Resources Element

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County.

- **Policy C/NR 1.1:** Implement programs and policies that enforce the responsible stewardship and preservation of dedicated open space areas.
- **Policy C/NR 1.2:** Protect and conserve natural resources, natural areas, and available open spaces.
- **Policy C/NR 1.3:** Support the acquisition of new available open space areas. Augment this strategy by leveraging County resources in concert with the compatible open space stewardship actions of other agencies, as feasible and appropriate.
- **Policy C/NR 1.4:** Create, support and protect an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the southwestern extent of the Mojave Desert to Puente Hills and Chino Hills.
- **Policy C/NR 1.5:** Provide and improve access to dedicated open space and natural areas for all users that considers sensitive biological resources.
- **Policy C/NR 1.6:** Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds, habitat types and/or offer linkages that enhance wildlife movements and genetic diversity.

Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and SEAs.

- **Policy C/NR 3.1:** Conserve and enhance the ecological function of diverse natural habitats and biological resources.
- **Policy C/NR 3.2:** Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.

- **Policy C/NR 3.3:** Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function—acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.
- **Policy C/NR 3.4:** Conserve and sustainably manage forests and woodlands.
- **Policy C/NR 3.5:** Ensure compatibility of development in the National Forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.
- **Policy C/NR 3.6:** Assist State and federal agencies and other agencies, as appropriate, with the preservation of special status species and their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.
- **Policy C/NR 3.7:** Participate in inter-jurisdictional collaborative strategies that protect biological resources.
- **Policy C/NR 3.8:** Discourage development in areas with identified significant biological resources, such as SEAs.
- **Policy C/NR 3.9:** Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible:
    - Preservation of biologically valuable habitats, species, wildlife corridors and linkages;
    - Protection of sensitive resources on the site within open space;
    - Protection of water sources from hydromodification in order to maintain the ecological function of riparian habitats;
    - Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite);
    - Design required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain regional connectivity;
    - Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site; and
    - Consideration of the continuity of onsite open space with adjacent open space in project design.
- **Policy C/NR 3.10:** Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.
- **Policy C/NR 3.11:** Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

Goal C/NR 4: Conserved and sustainably managed woodlands.

- **Policy C/NR 4.1:** Preserve and restore oak woodlands and other native woodlands that are conserved in perpetuity with a goal of no net loss of existing woodlands.

Los Angeles County Code

Title 12. Environmental Protection, Chapter 12.28. Brush and Vegetation

Section 12.28.020. Definitions: As used in this chapter:

- "Natural vegetation" means the native plants, grasses, shrubs and trees and roots thereof having the characteristic of intercepting, holding and more slowly releasing rainfall than bare earth surfaces.

Section 12.28.030. Removal or Destruction of Natural Vegetation Prohibited: No person shall remove or destroy, or cause the removal or destruction of natural vegetation on sloping terrain within the unincorporated territory of Los Angeles County without first obtaining written approval from the county engineer of the county so to do.

Title 17. Parks, Beaches and Other Public Areas, Chapter 17.04. Parks and Recreation Areas

Section 17.04.340. Park Property and Vegetation–Damaging or Removing Prohibited: A person, other than a duly authorized park employee in the performance of his duties, would not:

- Dig, remove, destroy, injure, mutilate or cut any tree, plant, shrub, grass, fruit or flower, or any portion thereof, growing in the park.
- Remove any wood, turf, grass, soil, rock, sand or gravel from any park.

Section 17.04.470. Animals–Injuring or Killing Prohibited: A person would not molest, hunt, disturb, injure, shoot at, take, net, poison, wound, harm, kill or remove from any park or riding and hiking trail any kind of animal except:

- When necessary to avoid bodily harm.
- When fishing or hunting are permitted by the director.
- If requested by the administrative head of a park containing a nature museum, he may capture such an animal and deliver it unharmed to the administrative head.
- If a person is a duly authorized park employee and is doing so in the performance of his duties.

Title 22. Planning and Zoning, Chapter 22.46. Specific Plans

Section 22.46.2100. Oak Tree Regulations: States that no person would cut, destroy, remove, relocate, inflict damage, or encroach into a protected zone of any tree in the oak genus that is 8 inches in diameter or greater measured at 4.5 feet above mean natural grade. See Subsections A–G for details.

Title 22. Planning and Zoning, Chapter 22.102. Significant Ecological Areas

Section 22.102.010. Purpose. The ordinance establishes regulations to conserve the unique biological and physical diversity of the natural communities found within SEAs by requiring development to be designed to avoid and minimize impacts on SEA resources.

Los Angeles County Tree Ordinance

The Los Angeles County Oak Tree Ordinance (Los Angeles County Code 22.176.010 and 22.176.030) applies to all of the unincorporated County areas and recognizes oak trees as significant historical, aesthetic, and ecological resources. The goal of the ordinance is to create favorable conditions for the preservation and propagation of healthy oak trees. Under the ordinance, a person would not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus (*Quercus*) that is 8 inches or more in diameter (measured at 4.5 feet above mean natural grade) or, in the case of oaks with multiple trunks, a combined diameter of 12 inches or more of the two largest trunks, without first obtaining a permit.

Oak Woodlands Conservation Management Plan

The main goal of the Oak Woodlands Conservation Management Plan is to preserve and restore oak woodlands so that they are conserved in perpetuity with no net loss of existing woodlands (Los Angeles County 2014). The plan requires that any project within Los Angeles County that is being assessed under CEQA must determine whether that project "may result in a conversion of oak woodlands that will have a significant effect on the environment" (California Public Resources Code

(PRC) § 21083.4 (2004 Senate Bill 1334)). If such effects (either individual impacts or cumulative) are identified, then mitigation is required (Los Angeles County 2014). Mitigation may include, but is not limited to, conservation of other oak woodlands through the use of conservation easements and planting replacement trees.

Under the Oak Woodlands Conservation Management Plan, oak trees are defined as all native trees of the genus *Quercus* with a diameter at breast height that is greater than 5 inches (California PRC § 21083.4a). Oak woodlands are defined as "an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover" (California PRC § 21083.4).

Local

General Plans

Goals and policies for other natural resources (e.g., water quality, water conservation, soil protection, pollution) that are related to biological resources are described in other resource sections of this PEIR.

Frame 1

Frame 1 includes the following cities with their applicable regulations.

City of Long Beach

The *Long Beach General Plan Program, Conservation Element* (City of Long Beach 1973) and the *Open Space and Recreation Element of the General Plan* (City of Long Beach 2002) contain policies that are relevant to the preservation of biological resources and are listed below. See the general plan for details on issues and specific programs.

Long Beach General Plan Conservation Element

Overall Goals of the City

Goal 1. To conserve the natural resources of Long Beach through wise management and well-planned utilization of water, vegetation, wildlife, minerals, and other resources.

Goal 2. To create and maintain a productive harmony between man and his environment through conservation of natural resources and protection of significant areas having environmental and aesthetic value.

Goal 3. To revitalize and enhance areas where inadequate conservation measures occurred in the past.

Goal 4. To improve and preserve the unique and fine qualities of Long Beach and to eliminate undesirable or harmful elements.

Goals for Management of Vegetation

Goal 1. To provide protective controls for lands supporting distinctive native vegetation, wildlife species which can be used for ecologic, scientific and educational purposes.

Goal 2. To perpetuate the ecological preserve in El Dorado Park.

Goal 3. To locate, define, and protect other beneficial natural habitats in and about the City.

Wildlife Management Goals

Goal 1. To promote measures and plans which protect and preserve distinctive types of wildlife including mammals, birds, marine organisms and especially endangered species.

Long Beach General Plan Open Space and Recreation Element

Issue 1. Open Space for the Preservation of Natural Resources

Goal 1.1. Develop well-managed, viable ecosystems that support the preservation and enhancement of natural and wildlife habitats.

Goal 1.2. Preserve, keep clean and upgrade beaches, bluffs, water bodies and natural habitats, including the ecological preserves at El Dorado Nature Center and the DeForest Nature Area.

Goal 1.3. Improve appropriate access to natural environments.

Goal 1.4. Design and manage natural habitats to achieve environmental sustainability.

Goal 1.5. Remediate contaminated sites.

- **Policy 1.1.** Promote the creation of new and reestablished natural habitats and ecological preserves including wetlands, woodlands, native plant communities and artificial reefs.
- **Policy 1.2.** Protect and improve the community's natural resources, amenities and scenic values including nature centers, beaches, bluffs, wetlands and water bodies.
- **Policy 1.3.** Incorporate environmentally sustainable practices in City programs and projects.
- **Policy 1.4.** Promote and assist with the remediation of contaminated sites

Issue 2. Open Space for the Managed Production of Resources

Goal 2.1. Maintain a sufficient quantity and quality of open space in Long Beach to produce and manage natural resources.

- **Policy 2.4.** Preserve, enhance and manage open areas to sustain and support marine life habitats (Issue addressed: 2.4).

City of Los Angeles

The *Conservation Element of the City of Los Angeles General Plan* (City of Los Angeles 2001a) contains policies that are relevant to the preservation of biological resources and are listed below. See the general plan for details on specific programs and responsibilities.

City of Los Angeles General Plan Conservation Element

Endangered Species Objectives and Policies

Objective 1. Protect and promote the restoration, to the greatest extent practical, of sensitive plant and animal species and their habitats.

- **Policy 1.** Continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities.
- **Policy 2.** Continue to administer city-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent.
- **Policy 3.** Continue to support legislation that encourages and facilitates protection of endangered, threatened, sensitive and rare species and their habitats and habitat corridors.

Fisheries Objectives and Policies

Objective 1. Protect and restore ocean fisheries (habitats).

- **Policies.** See the Ocean section (below).

Objective 2. Protect fisheries and enhance, restore or create fisheries for native fish populations and for sport fishing or harvesting in city managed waters.

- **Policy 1.** Continue to implement and to cooperate with lake fish stocking or enhancement programs.
- **Policy 2.** Continue to consider and implement measures that will mitigate potential damage to and will encourage maintenance or restoration of fisheries.

Forest Objectives and Policies

Objective 1. Retain the forests as primary watershed, open space and recreational resources for the region.

- **Policy 1.** Continue to support the preservation and protection of Angeles Forest and Santa Clarita Woodlands.

Habitats/Ecological Areas Objectives and Policies

Objective 1. Preserve, protect, restore and enhance natural plant and wildlife diversity, habitats, corridors and linkages so as to enable the healthy propagation and survival of native species, especially those species that are endangered, sensitive, threatened or species of special concern.

- **Policy 1.** Continue to identify significant habitat areas, corridors and buffers and to take measures to protect, enhance and/or restore them.
- **Policy 2.** Continue to protect, restore and/or enhance habitat areas, linkages and corridor segments, to the greatest extent practical, within city owned or managed sites.
- **Policy 3.** Continue to work cooperatively with other agencies and entities in protecting local habitats and endangered, threatened, sensitive and rare species.
- **Policy 4.** Continue to support legislation that encourages and facilitates protection of local native plant and animal habitats.

Ocean Objectives and Policies

Objective 1. Protect and enhance the diversity and sustainability of the natural ecologies of the Santa Monica and San Pedro bays, including the bay fishery populations.

- **Policy 1.** Continue to reduce pollutant discharge into the bays from both natural and human sources.
- **Policy 2.** Continue to support legislation and to seek funding and legislation intended for bay and coastal protection, enhancement and habitat restoration.
- **Policy 3.** Continue to support and/or participate in programs to clean bay sediments and/or mitigate potentially harmful effects of contaminants in the sediments and waters of the bays.

Frame 2

City of Long Beach

Applicable regulations are described above under *Frame 1*.

City of Carson

There are no goals or policies specific to biological resources for the City of Carson (City of Carson 2004).

City of Compton

The Conservation, Open Space, and Recreation Element of the *Draft Compton General Plan 2030* (City of Compton 2011) contains policies that are relevant to the preservation of biological resources and are listed here.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory setting.

Frame 3

City of Compton

Applicable regulations are described above under *Frame 2*.

City of Cudahy

There are no goals or policies specific to biological resources for the City of Cudahy (City of Cudahy 2018a).

City of Downey

The Conservation Element of the *Downey Vision 2025 General Plan* (City of Downey 2005) contains policies that are relevant to the preservation of biological resources and are listed below. See the general plan for details on specific programs.

City of Downey Conservation Element

Issue 4.4. The removal of trees may have a negative impact on the quality of life in the City.

Goal 4.4. Preserve trees wherever possible.

- **Policy 4.4.1.** Preserve trees on private and public property.

City of Lynwood

There are no goals or policies specific to biological resources for the City of Lynwood (City of Lynwood 2003).

City of Paramount

There are no goals or policies specific to biological resources for the City of Paramount (City of Paramount 2007).

City of South Gate

The Green City Element of the *South Gate General Plan 2035* (City of South Gate 2009) contains policies that are relevant to the preservation of biological resources and are listed below.

City of South Gate General Plan Green City Element

Parks, Plazas, Trails, and Open Space

Goal GC 3. Enhanced utilization of the Los Angeles River and the Rio Hondo Channel as open space.

Objective GC 3.1. Improve access to and use of the Los Angeles River and Rio Hondo Channel.

- **Policy 4.** New development, redevelopment, landscaping, and infrastructure along the Los Angeles River and the Rio Hondo Channel should utilize xeriscaping and native plants and enhance riparian habitat, wherever feasible.
- **Policy 6.** The City may support regional or multi-jurisdictional efforts to improve the riverfront and to naturalize the river in a manner that restores the ecological functioning of the area.

Conservation and Enhancement of Natural and Biological Resources

Goal GC 5. The protection of local and global natural resources

Objective GC 5.1. Preserve and enhance the City's plants and wildlife.

- **Policy 1.** The City should encourage property owners to landscape their property, and will encourage native plants, tree planting, and xeriscaping.
- **Policy 2.** The City should protect any rare or endangered plants or wildlife that may be found in the City in the future.

Objective GC 5.2. Preserve and enhance the City's urban forest.

- **Policy 1**. The City will preserve and expand the urban forest in accordance with the Street Tree Master Plan.
- **Policy 4.** The City should consider native and drought resistant species of street trees whenever possible.
- **Policy 5.** The City should use integrated pest management to avoid the unnecessary use of pesticides.
- **Policy 6.** As needed, new non-residential and multifamily development will be required to incorporate the new tree planting or landscape improvements in the public rights-of-way along the property boundary consistent with the Tree Master Plan.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory setting.

Frame 4

City of Bell

There are no goals or policies specific to biological resources for the City of Bell (City of Bell 2018).

City of Bell Gardens

There are no goals or policies specific to biological resources for the City of Bell Gardens (City of Bell Gardens 1995).

City of Commerce

There are no goals or policies specific to biological resources for the City of Commerce (City of Commerce 2008).

City of Huntington Park

There are no goals or policies specific to biological resources for the City of Huntington Park (City of Huntington Park 2017).

City of Maywood

The Conservation Element of the *City of Maywood General Plan* (City of Maywood 2008) contains policies that are relevant to the preservation of biological resources and are listed below.

City of Maywood General Plan Conservation Element

Issue 1. Preserving Natural Resources

Goal 1. Provide a sensitive integration of natural and urban environments.

- **Policies 1.1.** Require landscaping and vegetative cover for its own value and for its value as wildlife habitat.

City of Vernon

There are no goals or policies specific to biological resources for the City of Vernon (City of Vernon 2015).

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory setting.

Frame 5

City of Los Angeles

Applicable regulations are described above under *Frame 1*.

Frame 6

City of Los Angeles

Applicable regulations are described above under *Frame 1*.

City of Glendale

The Open Space and Conservation Element of the *Envision Glendale 2040 General Plan* (City of Glendale 1993) contains policies that are relevant to the preservation of biological resources and are listed below.

City of Glendale's General Plan Open Space and Conservation Element

Goal I. Continue identification, acquisition and protection of open space land vital to ensure enhancement of the quality of life within the city.

- **Objective 1.** Prioritize acquisition of open space land according to its environmental sensitivity, ecological, historic or cultural value, impact on surrounding areas, development potential, traffic impacts and its uniqueness or relationship to other open space areas.
- **Objective 5.** During the environmental and development review processes, on- and off-site impacts of development on open space and related biological and geological systems should be evaluated. Mitigation measures should be applied to alleviate specific impacts through site planning and design modifications that will protect the integrity of valuable open spaces.

Goal 2. Protect vital or sensitive open space areas including ridgelines, canyons, streams, geologic formations, watersheds and historic, cultural, aesthetic and ecologically significant areas from the negative impacts of development and urbanization.

- **Objective 1.** Regulate public access for the protection of sensitive land and habitats and regulate uses in hazard zones.
- **Objective 2.** Provide buffer transition areas between sensitive open space and development.
- **Objective 3.** Continue to apply and monitor open space protection measures as part of the environmental and development review processes.
- **Objective 4.** Provide incentives to defer development that is inconsistent with future acquisition priorities or other objectives of this plan.
- **Objective 5.** Prohibit incompatible recreational activities which may damage sensitive open space areas or be inconsistent with other recreational pursuits.

Goal 4. Develop a program that sustains the quality of Glendale's natural communities.

- **Objective 1.** Develop a program for the on-going monitoring of those natural resources identified by the California Department of Fish and Game Natural Diversity Data Base and those sensitive habitats identified in the Element's biological assessment report.
- **Objective 2.** Prevent development that jeopardizes or diminishes the integrity and value of native plant and animal communities.
- **Objective 3.** Encourage acquisition of parcels integral to the integrity of the larger ecosystem.
- **Objective 4.** Naturalize, through native revegetation programs, disturbed areas, and prevent the invasion of exotic plant materials.
- **Objective 5.** Encourage the development of landscape plans that incorporate native species in those areas adjoining open space land.
- **Objective 6.** Evaluate and monitor the impact of public access on habitat.
- **Objective 7.** Encourage the continuation of hazard management and safety programs to reduce impacts from wildland fires, floods, mud slides and soil subsidence.

Goal 7. Continue programs which enhance community design and protect environmental resource quality.

- **Objective 5.** Review and revise hillside development standards to minimize the environmental impacts of new hillside development and to ensure preservation of important natural resources.
    - **Policy 1.** Natural resources, including open spaces, biological habitats and native plant communities should be maintained and, where necessary, restored. Natural resources contribute to the quality of community life by improving the environment and providing visual character and identity for the city.
    - **Policy 4.** Natural and man-made aesthetic features should be recognized and identified as important natural resources to the community that require proper management. The contribution of aesthetics and design to environmental quality is an important principle. Such community enhancement can be achieved through preservation of natural or scenic resources and through the recognition of urban form and the context in which the built environment has evolved.
    - **Policy 8.** Important open space and conservation resources should be protected and preserved through acquisition, development agreements, easements, development exactions and other regulatory strategies. Ridgelines, canyon and stream areas and ecological habitats identified as significant must be protected in accordance with State law in order to meet the policies, goals and objectives of this element. Future generations need to have aesthetic, ecological and open space resources available to them.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory setting.

Frame 7

City of Los Angeles

Applicable regulations are described above under *Frame 1*.

City of Burbank

The Open Space and Conservation Element of the *Burbank2035 General Plan* (City of Burbank 2013) contains policies that are relevant to the preservation of biological resources and are listed below.

City of Burbank General Plan Open Space and Conservation Element

Goal 6. Open Space Resources: Burbank's open space areas and mountain ranges are protected spaces supporting important habitat, recreation, and resource conservation.

- **Policy 6.2.** Protect the ecological integrity of open spaces and maintain and restore natural habitats and native plant communities.
- **Policy 6.4.** Promote the acquisition, conservation, and preservation of land in the Verdugo Mountains.

Goal 8. Biological Resources: Burbank's high-quality natural biological communities are sustained.

- **Policy 8.1.** Prohibit development that jeopardizes or diminishes the integrity of sensitive or protected plant and animal communities.
- **Policy 8.2.** Improve ecological and biological conditions in urban and natural environments when reviewing proposals for site development, as well as when making public improvements.
- **Policy 8.3.** Support public acquisition of parcels key to the integrity of ecosystems.
- **Policy 8.4.** Naturalize disturbed areas and prevent the invasion of exotic plants.
- **Policy 8.5.** Encourage landscaping that incorporates native plant species.

Goal 9. Water Resources: Adequate sources of high-quality water provide for various uses within Burbank.

- **Policy 9.5.** Require on-site drainage improvements using native vegetation to capture and clean stormwater runoff.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory setting.

Frame 8

City of Los Angeles

Applicable regulations are described above under *Frame 1*.

Frame 9

City of Los Angeles

Applicable regulations are described above under *Frame 1*.

City Municipal Codes

Applicable city municipal code ordinances are described in Table 3.3-11 below.

Table 3.3-11. Applicable City Municipal Code Ordinances for Biological Resources

Municipal Code[1]	Summary	Frames
City of Bell		
Title 12. Streets, Sidewalks, and Public Places Chapter 12.36. Park Use Regulations Section 12.36.050 Flora	No person, other than an employee of the city, shall remove, destroy, injure, mutilate or cut any tree, plant, shrub, bloom or flower or any portion thereof growing in any public park.	Frame 4
City of Burbank		
Title 10 Zoning Regulations Article 24. Rancho Master Plan Zones Property Development Standards, (C) Yards, (3) Landscaping	Californian native plants and California sycamore trees are required within landscaped areas. California sycamore trees would be used as the required street trees. Division 3 (Section 10-1-2417), Division 4 (Section 10-1-2425), Division 5 (Section 10-1-243), Division 6 (Section 10-1-2441), and Division 7, Section 10-1-2450).	Frame 7
City of Carson		
Article 3. Public Safety Chapter 6. Watercourses Section 3600. Interference with Natural Watercourses	It shall be unlawful for any person, firm, corporation, municipality or district to place or cause to be placed in the channel or bed or bank of any river, stream, wash or arroyo in the City of Carson, any wires, fence, building or other structure, or any refuse, rubbish, tin cans or other matter that may impede, retard or change the normal direction of the flow of the flood, storm or other waters in such river, stream, wash or arroyo, or that may catch or collect debris carried by such waters to the damage and detriment of either private or public property within or adjacent to said river, stream, wash or arroyo, nor shall any material, either solid or liquid, be placed in said river, stream, wash or arroyo that will deteriorate the quality of water flowing or stored therein or that which is stored within the water bearing zones underground.	Frame 2
Article 5. Sanitation and Health Chapter 8. Storm Water and Urban Runoff Pollution Control Section 5810(c). Enforcement	Civil actions. The City of Carson may seek, as appropriate, compensatory damages for loss or destruction to water quality, wildlife, fish, and aquatic life.	

Municipal Code[1]	Summary	Frames
City of Commerce		
Title 6. Health and Sanitation Chapter 6.17. Stormwater and Runoff Pollution Control Section 6.17.120(e). Violations	Civil actions. The City of Commerce may seek, as appropriate, compensatory damages for loss or destruction to water quality, wildlife, fish, and aquatic life.	Frame 4
City of Downey		
Article 4. Public Welfare, Morals, and Policy Chapter 12. Feeding Wildlife Sections 4980–4983	Feeding of wildlife is prohibited within the City of Downey to protect public and environmental health, safety and welfare, except as described under the Exceptions (Section 4983). Penalties will be prescribed for failure to comply. • No person shall purposely or knowingly feed wildlife in the City of Downey, on lands either publicly or privately owned. • No person shall leave or store any refuse, garbage, pet food, seed or bird seed, fruit, meat, dairy, vegetable, grain, or other food in a negligent manner likely to feed wildlife. • No person shall fail to take remedial action to cease contact or conflict with wildlife, including to secure or remove outdoor refuse, cooking grills, pet food, or any other similar food source or attractant, after being advised by a City of Downey Code Enforcement Officer to undertake such remedial action. "Feed" means to give, distribute, place, expose, deposit, or scatter any edible material on any public or private property that results in or would likely result in the feeding, attracting, enticing, or domesticating wildlife. "Wildlife" means coyotes, foxes, skunks, raccoons, opossums, squirrels, ducks, geese, crows, feral cats, and gulls.	Frame 3
Article 5. Sanitation Chapter 7. Storm Water and Urban Runoff Pollution and Conveyance Controls Section 5703(d). Illicit Connection and Illicit Discharge Prohibition	Illicit discharges that are prohibited from entering the MS4 shall include, but are not limited to, dumping or disposal of materials into the MS4, other than storm water. This includes material that may have an adverse impact on water quality, wildlife, or receiving water habitat value.	
Article 5. Sanitation Chapter 7. Storm Water and Urban Runoff Pollution and Conveyance Controls Section 5710. Enforcement	Persons, and entities, discharging runoff or pollutants will be made accountable for their actions. Violations may be enforced by civil action brought by the City of Downey. During such action, the City of Downey may seek compensatory damages for loss or destruction to water quality, wildlife, fish, and aquatic life.	
Article 10. Parks, Playgrounds, and Recreation	No person, other than a member of the park personnel acting as such, shall molest, hunt, disturb, injure, take, net, poison, harm, kill, or	

Municipal Code[1]	Summary	Frames
Chapter 1. Public Parks Section 10119. Molesting Animals	remove from any park any kind of animal or fowl except when necessary to avoid bodily harm or for a purpose approved by the Director.	
City of Glendale		
Title 16 Subdivisions Chapter 16.08 Design Standards Section 16.08.030 Blue-line Streams –Preservation	Blue-line streams are significant stream channels either with or without year-round running water as mapped on the most recently published U.S. Geological Survey 7.5-minute series topographic maps. Blue-line stream areas provide surface and/or groundwater for vegetation and wildlife, as well as a natural corridor for wildlife movement. Blue-line steam courses are an important defining characteristic of the hillsides and are worthy of preservation for the welfare of all the citizens of Glendale. No grading, engineered slopes, housing construction, streets, utilities, or other manmade features shall be permitted within thirty (30) feet of the centerline of any identified blue-line stream. Grading may be allowed between thirty (30) and one hundred (100) feet from the centerline of any identified blue-line stream, provided that any riparian habitat shall be fully preserved. When no feasible alternative to crossing a blue-line stream with a public street or fire road is available, a plan to preserve the stream course and wildlife corridor shall be developed which provides sufficient mitigation to allow the stream and wildlife corridor to pass underneath the road.	Frame 6
Title 16 Subdivisions Chapter 16.16. New Condominiums Section 16.16.030 Site Requirements	The location and orientation of all buildings shall, whenever feasible and desirable in the opinion of the planning commission or city council where appropriate, be designed and arranged to preserve natural features by minimizing the disturbance to the physical environment. Natural features such as trees, waterways, historic landmarks or slopes shall be delineated in the development plan and considered when planning the location and orientation of buildings, open spaces, underground services, walks, paved areas, play areas, parking areas and finished grade elevations.	
Title 16 Subdivisions Chapter 16.24 Tentative Maps Section 16.24.010 Authority of Planning Commission, Director of Community Development and Council	The planning commission, director of community development and council shall have the authority to recommend the disapproval of the development of any subdivision or disapprove any subdivision where it determines that such subdivision will create an adverse environmental effect on a neighborhood or the	

Municipal Code[1]	Summary	Frames
	community as a whole. The planning commission, director of community development and council shall take into consideration preservation of habitat, ridgeline area, and blue-line streams. The planning commission, director of community development and council shall recommend the disapproval of the development of any subdivision or disapprove any subdivision where it determines that the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.	
Title 30 Zoning Chapter 30.11 Residential Districts Section 30.11.040. Residential District Additional ROS and R1R Development Standards	In the ROS and R1R zones, per the Hillside Development Review Policy, every discretionary decision made by the city council, along with city boards, commissions and administrators shall consider that site plans show preservation of prominent natural features, native vegetation and open space in a manner compatible with the surrounding neighborhood, minimizing the alteration of terrain necessary for development.	
City of Long Beach		
Title 2. Administration and Personnel Chapter 2.63. Cultural Heritage Commission Sections 2.63.010(a) & 2.63.020	It is declared that the recognition, preservation, protection and use of cultural resources are necessary to the health, property, social and cultural enrichment and general welfare of the people. The purpose of Chapter 2.63 is to protect, enhance and perpetuate districts, buildings, structures, natural features, works of art, signs and other similar objects that are reminders of past eras, events and persons important in local, State, or national history, or that provide significant examples of architectural styles of the past, or that are unique and irreplaceable assets to the City of Long Beach and its neighborhoods, or that provide for this and future generations significant examples of the physical surroundings in which past generations lived. "Cultural resource" means district, building, structure, natural feature, work of art, sign or other similar objects having a special historical, cultural, archaeological, architectural or aesthetic value. "Natural feature" means any tree, plant life or geological element subject to provisions of Chapter 2.63.	Frames 1 & 2
Title 16. Public Facilities and Historical Landmarks	No person shall cut, break, injure, deface, remove, or disturb any tree, shrub, plant,	

Municipal Code[1]	Summary	Frames
Chapter 16.16. Parks and Beaches Section 16.16.010. Prohibited Acts	flower, fence, monument, or other structure, or store personal belongings in areas designated by the Director of Parks, Recreation and Marine within the limits of any public park, public beach, beach area parking lot, bicycle path, public building or enclosure, or public amphitheater or plaza.	
Title 16. Public Facilities and Historical Landmarks Chapter 16.16. Parks and Beaches Section 16.16.130. Biological Reserve –Acts Prohibited	No person, except employees of the City of Long Beach in the performance of their duties, shall do any of the following acts in any biological reserve located within the City of Long Beach: • Cut, break, injure, deface, remove or disturb any plant, or capture, trap, injure, remove or kill any animal. • Plant, water, or nourish any plant, or release any animal, or feed or provide water for any animal except with the permission of the Director of Parks, Recreation and Marine. • Lead, walk, or turn loose any animal. This Subsection shall not apply to dogs when led by a leash no more than 8 feet long if there is a sign posted that permits this activity. • Make or kindle any fire except under the supervision of the Fire Department. • Walk off established trails. • Ride or drive a bicycle, skateboard, roller skates, in-line skates, scooters, razors, or any other wheeled vehicles, motorized or nonmotorized, on or off trails, unless there is a sign posted to allow such activities. • Enter, except during the hours posted for public access.	
Title 20. Subdivisions Chapter 20.12. Tentative Maps Section 20.12.100(e). Planning Commission	Requirements for Approval. The Planning Commission shall approve a tentative map if the map complies with State and local regulations and if it is found that the design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantial and avoidable injury to fish and wildlife or their habitat.	
Title 21. Zoning Chapter 21.42. Landscaping Standards Sections 21.42.010 & 21.42.030	Landscapes are intended to improve the physical appearance of the City of Long Beach by providing visual, ecological, and psychological relief in the urban environment. All required yards and setback areas shall be attractively landscaped primarily with drought tolerant and native plant materials. All landscape areas shall be completely planted or covered. "Landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation; it does	

Municipal Code[1]	Summary	Frames
	not include open spaces and existing native vegetation. The use of invasive plant species, such as those listed by the California Invasive Plant Council, would be prohibited in the Coastal Zone.	
City of Los Angeles		
Chapter 1. General Provisions and Zoning Article 2. Specific Planning–Zoning Comprehensive Zoning Plan Section 12.04.05. "OS" Open Space Zone	No building, structure or land shall be used and no building or structure shall be erected, moved onto the site, structurally altered, enlarged or maintained on publicly owned land classified in the "OS" Open Space Zone, except for: • Natural resource preserves for the managed production of resources, including, but not limited to, forest lands, waterways and watersheds used for commercial fisheries; agricultural lands used for food and plant production; areas containing major mineral deposits and other similar uses. • Marine and ecological preserves, sanctuaries and habitat protection sites.	Frames 1, 5, 6, 7, 8, & 9
Chapter 1. General Provisions and Zoning Article 3. Specific Plan–Zoning Supplemental Use Districts Section 13.17. "Rio" River Improvement Overlay District	The purpose of the River Improvement Overlay district is to: • Support the goals of the LA River Revitalization Master Plan • Contribute to the environmental and ecological health of the City of Los Angeles' watersheds • Establish a positive interface between river-adjacent property and river parks and/or greenways • Promote pedestrian, bicycle, and other multimodal connections between the river and its surrounding neighborhoods • Provide native habitat and support local species • Provide an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area • Provide safe, convenient access to and circulation along the river • Promote the river identity of river-adjacent communities • Support the Low Impact Development Ordinance, the City of Los Angeles' Irrigation Guidelines, and the Standard Urban Stormwater Maintenance Program.	
City of Lynwood		
Chapter 14. Public Utilities and City Services	Any violation of Chapter 14-12 may be enforced by civil action brought by the City of Lynwood, including compensatory damages for the loss of	Frame 3

Municipal Code[1]	Summary	Frames
14-12. Stormwater and Urban Runoff Pollution Control Section 14-12.10(c) Enforcement	or destruction to water quality, wildlife, and fish and aquatic life.	
Chapter 14. Public Utilities and City Services 14-13. Stormwater and Urban Runoff Pollution and Conveyance Controls Section 14-13.3(c)	**Standard Urban Stormwater Mitigation Plan and Low Impact Development Requirements for New Development and Redevelopment Projects**. Projects located in or directly adjacent to, or discharging directly to a SEA, where the development will discharge stormwater runoff that is likely to impact a sensitive biological species or habitat shall be designated as planning priority projects, which are subject to city conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution prior to completion of the projects.	
Chapter 25. Zoning Article 45. Water Efficient Landscaping Section 25-45-11 Landscape Design Plan	For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the design criteria shall be submitted as part of the landscape documentation package. To encourage the efficient use of water, protection and preservation of native species and natural vegetation is highly recommended.	
Chapter 25. Zoning Article 93. Erosion and Sediment Control Sections 25-93-1 through 25-93-14	The purpose of Article 93 is to eliminate and prevent accelerated erosion that has led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil and vegetation cover, disruption of water supply, increased danger from flooding and the deposition of sediments and associated nutrients. Land clearing shall be kept to a minimum. Vegetation removal shall be limited to that amount necessary for building, access, fire protection and construction as shown on the approved soil erosion and sediment control plan or as allowed by the director of public works through a soil erosion and sediment control permit. All disturbed surfaces shall be prepared and maintained to control erosion and to establish vegetative growth compatible with the area. This control shall consist of any one or a combination of the following: • Effective temporary planting such as rye grass, or some other fast germinating native	

Municipal Code[1]	Summary	Frames
	seed, and/or mulching with straw, chippings or other slope stabilization material. • Permanent planting of compatible drought resistant species of ground cover, shrubs, trees, or other vegetation. • Mulching, fertilizing, watering or other methods necessary to establish new vegetation.	
City of Maywood		
Title 6. Sanitation and Health Chapter 8. Water-Efficient Landscape Requirements Section 6-8.03(c). Provisions for New or Rehabilitated Landscapes	A landscape design plan conforming to plant selection and grouping requirements shall be submitted as part of the landscape/irrigation plan package. Plants shall be selected appropriately based upon their adaptability to the climatic, geological and topographical conditions of the site. Protection and preservation of native species and natural areas is encouraged wherever it is consistent with the other provisions of Chapter 8.	Frame 4
Title 6. Sanitation and Health Chapter 9. Storm Water and Urban Runoff Pollution Section 6-9.08(c) Enforcement	Violation of Chapter 9 may be enforced by civil action brought by the City of Maywood. In any such action, the City of Maywood may seek, as appropriate, compensatory damages for loss or destruction to water quality, wildlife, fish and aquatic life pursuant to applicable law.	
Title 6. Sanitation and Health Chapter 12. Sewer System Protection Regulation Sections 6-12.010 & 6-12.020	The overall goal of Chapter 12 and the City of Maywood's water quality control program is to prevent and control pollution and protect and foster human health and the environment. "Pollutants" shall include any material potentially harmful to stormwater quality or wildlife or which threatens to contribute to a violation of applicable water quality standards.	
City of Paramount		
Title 16. Subdivisions and Other Divisions of Land Chapter 16.08. Tentative Maps Section 16.08.140. Grounds for Rejection by City Council or Advisory Agency	The advisory agency or the City Council shall deny approval of a final or tentative subdivision map if it finds that the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.	Frame 3
City of South Gate		
Title 4. Animals Chapter 4.05. Miscellaneous Regulations Section 4.05.020 Feeding of Certain Predator Animals	Providing food for certain rodents or predator animals is prohibited. No person shall feed or in any manner provide food to a nondomesticated rodent or a nondomesticated mammalian predator. "Rodent" includes ground squirrels, and "mammalian predators" includes coyotes, raccoons, foxes and opossums.	Frame 3

Municipal Code[1]	Summary	Frames
Title 7. Public Safety and Morals Chapter 7.49 Park Section 7.49.060 Park Property and Vegetation	A person, other than a duly authorized park employee in the performance of his duties, shall not: • Dig, remove, destroy, injure, mutilate or cut any tree, plant, shrub, grass, fruit or flower, or any portion thereof, growing in the park. • Remove any wood, turf, grass, soil, rock, sand or gravel from any park.	
Cities of Carson, Los Angeles, and Lynwood		
Carson: Article 5. Sanitation and Health Chapter 8. Storm Water and Urban Runoff Pollution Control Section 5803. Definitions **Los Angeles:** Chapter 6. Public Works and Property Article 4.4. Stormwater and Urban Runoff Pollution Control **Lynwood:** Chapter 14. Public Utilities and City Services 14-13. Stormwater and Urban Runoff Pollution and Conveyance Controls Section 14-13.2 Definitions	"Environmentally sensitive area (ESA)" means an area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments (California PRC § 30107.5). Areas subject to storm water mitigation requirements are areas designated as SEAs by the Los Angeles County (Los Angeles County Significant Areas Study, Los Angeles County Department of Regional Planning (1976) and amendments); an area designated as a significant natural area by the California Department of Fish and Game's Significant Natural Areas Program, provided that area has been field verified by the Department of Fish and Game; an area listed in the Basin Plan as supporting the Rare, Threatened, or Endangered Species (RARE) beneficial use; and an area identified by the Cities of Carson, Los Angeles, or Lynwood as environmentally sensitive.	**Carson:** Frame 2 **Los Angeles:** Frames 1, 5, 6, 7, 8, & 9 **Lynwood:** Frame 3
Cities of Commerce, Downey, Lynwood and Paramount		
Commerce: Title 6. Health and Sanitation Chapter. 6.17. Stormwater and Runoff Pollution Control Section 6.17.030 Definitions **Downey:** Article 5. Sanitation Chapter 7. Storm Water and Urban Runoff Pollution and Conveyance Controls Section 5700. Definitions **Lynwood:** Chapter 14. Public Utilities and City Services 14-13. Stormwater and Urban Runoff Pollution and Conveyance Controls Section 14-13.2 Definitions **Paramount:** Chapter 48. Urban Storm Water Management	An SEA is an area that is determined to possess an example of biotic resources that cumulatively represents biological diversity, for the purposes of protecting biotic diversity, as part of the *Los Angeles County 2035 General Plan*. Areas are designated as SEAs if they possess one or more of the following criteria: • The habitat of rare, endangered, and threatened plant and animal species. • Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis. • Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County. • Habitat that at some point in the lifecycle of a species or group of species, serves as a	**Commerce:** Frame 4 **Downey:** Frame 3 **Lynwood:** Frame 3 **Paramount:** Frame 3

Municipal Code[1]	Summary	Frames
Article I. Definitions Section 48-1 Definitions	concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County. • Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community. • Areas important as game species habitat or as fisheries. • Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County. • Special areas.	

[1] Municipal Codes pertaining to tree protections are provided in Table 3.3-12.
Sources: City of Bell 2020; City of Burbank 2020; City of Carson 2020; City of Commerce 2019; City of Downey 2017; City of Glendale 2019; City of Long Beach 2020; City of Los Angeles 2020; City of Lynwood 2018; City of Maywood 2019; City of Paramount 2017; City of South Gate 2020.

City Tree Ordinances

Applicable city tree ordinances are described in Table 3.3-12 below.

Table 3.3-12. City Tree Ordinances

Ordinance or Law	Protected Trees	Guidelines	Frames
City of Bell			
Municipal Code Title 12, Chapter 12.24 Section 12.24.070	All trees in any public area or parkway	**Injuring Street Trees Prohibited.** No person shall remove, trim, prune or cut any tree located in a public area or a parkway except as provided in this chapter. No person shall injure or destroy any such tree by any means, including but not limited to, the following: • By constructing a concrete, asphalt, brick or gravel sidewalk or otherwise filling up the ground area around any such tree so as to shut off its air, light or water from its roots. • By piling building material and equipment or other substance and materials around any such tree or shrub so as to cause injury thereto. • By pouring any deleterious matter on or around any tree or shrub or on the surrounding ground, lawn or sidewalk. • By posting any sign, poster or notice on any such tree, tree stake or guard	Frame 4

Ordinance or Law	Protected Trees	Guidelines	Frames
		or by fastening guide wires, cables, ropes, nails, screws or other devices to any tree, tree stake or guard. • By causing or encouraging any fire near or around any such tree.	
Municipal Code Title 12, Chapter 12.24 Section 12.24.060	Trees on public or private lands	**Tree Removal.** Request for Removal. Whenever the owner or person in possession of a lot desires to have a tree removed from an abutting parkway, he or she will file a written request therefor for approval by the city council. If the tree is found to be in good condition and the request is granted solely for the convenience of the applicant, then the full cost of such removal and replanting as necessary, shall be borne by the person making such request and the estimated amount, as determined by the director, shall be paid to the recreation and parks department before removal shall take place. Removal of Trees by City. Notwithstanding any other provision of this chapter, the chief administrative officer shall order the removal of any tree where such is necessary to eliminate a hazard to person or property. No other tree shall be removed except with the consent of the city council. (Prior code §§ 3506, 3508).	
Municipal Code Title 12, Chapter 12.36 Section 12.36.050	All trees in public parks	**Flora.** No person, other than an employee of the city, shall remove, destroy, injure, mutilate, or cut any tree, plant, shrub, bloom or flower or any portion thereof growing in any public park.	
City of Bell Gardens			
Municipal Code Title 9, Chapter 9.96 Section 9.96.070	All trees in any public ROWs or parkway lands	**Parkway Trees.** Parkway trees shall be installed along all streets and highways. The trees shall be installed in the manner and shall conform to the size and species specified by the city engineer. In full-width sidewalks, tree wells shall be provided as required for the trees. On streets adjacent to industrial, manufacturing, or planned residential zones, parkway trees may not be required, provided they are replaced by trees or other suitable landscaping planted on adjacent properties in conjunction with on-site landscaping.	Frame 4

Ordinance or Law	Protected Trees	Guidelines	Frames
Municipal Code Title 9, Chapter 9.78 Section 9.78.040	Trees on public or private lands	**Tentative Tract Maps.** Tentative tract maps shall be prepared in a manner acceptable to the community development director and city engineer and shall be prepared by a registered civil engineer or licensed land surveyor. Any trees proposed for removal shall be indicated on the tentative tract maps, including type, circumference, and dripline of existing trees, as well as existing topography of the proposed site and at least 100 feet beyond its boundary.	
City of Burbank			
Municipal Code Title 7, Chapter 4 Section 7-4-103	All trees in any public ROWs or on public lands	**Master Street Tree Plan.** The [Park, Recreation and Community Services] Director would have the authority to formulate a Master Street Tree Plan, which would specify the species, spacing and locations of trees to be planted on each of the streets or other public areas of the City. From and after the effective date of the Master Street Tree Plan, or any amendment thereof, all planting would conform thereto. Trees would be selected on the basis of their desirable characteristics of growth and beauty with reference to their root structure and adaptability to local climate, soil, and street conditions. The Director would also have the authority to amend or add to the Master Street Tree Plan at any time that circumstances make it advisable.	Frame 7
Municipal Code Title 7, Chapter 4 Section 7-4-104 (A–F)	Trees in the public area and/or public ROW	**Maintenance of Street Trees (abbreviated).** It shall be unlawful for any person to alter, or otherwise perform maintenance or root pruning, on a tree within a public area and/or public right-of-way without a written permit. Applications for a tree maintenance permit shall be made in writing in a form provided by the City [of Burbank] and be filed with the [Park, Recreation and Community Services] Department. Permits shall be issued pursuant to written guidelines as established by the [Park, Recreation and Community Services] Director and the Director, or his designee, may impose any condition(s) of approval determined to be necessary. Any violation of this section shall constitute a misdemeanor pursuant to Section 1-1-105	

Ordinance or Law	Protected Trees	Guidelines	Frames
		of this code, and may also result in the revocation of a permit subject to any right of appeal pursuant to Section 2-1-1501.	
Municipal Code Title 7, Chapter 4 Section 7-4-105	All city trees	**Determination of Tree Values.** In the case of any tree removed or destroyed, as provided for in Section 7-4-111 of this article, or as a result of a violation of Sections 7-4-113, 7-4-115, or 7-4-117 of this article, but not replaced, the City [of Burbank] shall be reimbursed the value of the tree, as determined by the most current valuation table established by the International Shade Tree Conference.	
Municipal Code Title 7, Chapter 4 Section 7-4-106	Trees on private property	**Planting Undertaken by City at Request of Property Owner; Charges.** No tree shall be planted by the City [of Burbank] at the request of any owner, occupant, or agent of real property unless such owner, occupant, or agent shall have first paid the City for the cost of such work, and any additional costs as may be required by the provisions of Sections 7-4-105 and 7-4-111 of this article as fixed by the [Park, Recreation and Community Services] Director, or such costs are otherwise funded by a source other than the Park and Recreation Fund.	
Municipal Code Title 7, Chapter 4 Section 7-4-107	Street trees	**Removal of Trees, Shrubs, and Plants Generally (abbreviated).** The [Park, Recreation and Community Services] Department may remove trees, shrubs, and plants situated in the streets whenever: A) the City [of Burbank] owns the tree, shrub, or plant; or B) the City owns the underlying fee; or C) regardless of ownership: 1) removal is necessitated by infection or infestation; 2) the tree, shrub, or plant is actually or potentially defective, dangerous, or an obstruction to public travel; 3) removal is necessary because of potential or actual damage to a sidewalk, parkway, curb, gutter, pavement, sewer line, underground utility, or other municipal improvement lying within the boundaries of the street; or 4) removal is necessary to conform to the Master Street Tree Plan.	
Municipal Code Title 7, Chapter 4 Section 7-4-108	Trees on public or private lands	**Restricted Removal of Certain Trees.** The [Park, Recreation and Community Services] Director shall have the authority and responsibility to develop and	

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		maintain a restricted list of trees in the City [of Burbank]. This list shall include landmark trees, trees of outstanding size and beauty, dedicated trees, etc. These trees shall be identified, mapped, and recorded. Subsequent to this they shall be given all types of special treatment mutually approved by the [Park, Recreation and Community Services] Department and the Public Works Department to retain and protect them.	
Municipal Code Title 7, Chapter 4 Section 7-4-111	Trees on public or private lands	**Removal for the Purpose of Construction.** Street Trees: Any street tree requested by any person or property owner to be removed for the purpose of any type of construction shall be replaced with a tree of the nearest size available, of a species and in the location to be determined by the [Park, Recreation and Community Services] Director. The person or property owner shall pay the total cost to the City [of Burbank] of removal prior to any such action being undertaken. If such tree, or trees, are not replaced, the City shall be reimbursed the value of the tree as established in Section 7-4-105 of this article, in addition to the cost to the City of removal. The provisions of this section requiring payment of the cost of removal and replacement or reimbursement to the City shall not apply to property located in an R-1 single-family residential zone. Private Trees: Any tree removed for the purpose of any type of construction in accordance with subsection 10-1-1113S of this code shall be replaced with a tree of equal size, of the same species or an appropriate alternative, and in a location to be approved by the Park, Recreation and Community Services Director and the Community Development Director. Alternately, the City shall be reimbursed the value of the trees, pursuant to this section and Section 7-4-105 of this article; or, the project's landscaping shall be improved above what is required by subsection 10-1-1113E of this code, and in an amount equal to the value of the removed trees, or if the excess landscaping does not equal the value of the removed trees, then a fee for the	

Ordinance or Law	Protected Trees	Guidelines	Frames
		shortfall shall be paid to the City; or, the tree(s) shall be moved elsewhere to the satisfaction of the Park, Recreation and Community Services Director; or a combination of moving or replacing the trees pursuant to Section 7-4-105 and this section shall be followed. The fees obtained from private development will be placed in the Urban Reforestation Fund which will be devoted to the replacement of City trees.	
Municipal Code Title 7, Chapter 4 Section 7-4-113	All trees in any public ROWs	**Unlawful to Destroy, Deface, or Injure Tree.** It shall be unlawful for any person to destroy, injure, or deface, by any means, any tree in the street, including, but not limited to, the following: • Pouring any toxic material on any tree or on the ground near any tree. • Attaching any sign, poster, notice, or other object on any tree, or fastening any guy wire, cable, rope, nails, screws, or other device to any tree; except that the City [of Burbank] may tie temporary "no parking" signs to trees when necessary in conjunction with street improvement work, tree maintenance work, parades, etc. • Causing or encouraging any fire or burning near or around any tree.	
Municipal Code Title 7, Chapter 4 Section 7-4-115	All trees in any public ROWs or on public lands	**Protection of Trees.** All trees on any street or other publicly owned property near any excavation or construction of any building, structure, or street work, shall be sufficiently guarded and protected by those responsible for such work so as to prevent any injury to said trees. No person shall excavate any ditches, tunnels, trenches, or install pavement within a radius of ten feet (10') from any public tree without prior notification to the [Park, Recreation and Community Services] Director.	
Municipal Code Title 7, Chapter 4 Section 7-4-116	Trees on public lands	**Placing Materials on Public Property.** No person shall install, deposit, place, store, or maintain upon any public place of the City [of Burbank], any stone, brick, sand, concrete, or other materials which may impede the free, unobstructed growth or passage of water, air, and fertilizer to the roots of any tree therein,	

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		without first obtaining required written permits from the City.	
Municipal Code Title 7, Chapter 4 Section 7-4-117 (A–C)	Trees on public lands	**Cooperation between City Department and Agencies (abbreviated).** There shall be close cooperation between the [Park, Recreation and Community Services] Department and other City [of Burbank] departments and agencies in the enforcement of the provisions of this article which shall include, but not be limited to, the following: A. All building or other permits covering work which would in any way result in injury to or removal of public trees shall be first submitted to the [Park, Recreation and Community Services] Department for approval. B. The Public Works Department shall notify the [Park, Recreation and Community Services] Department of any applications for new paving, curb, gutter, sidewalk or driveway installation, or other improvement which might require the removal of or cause injury to any street tree, or interfere with the fulfillment of the Master Street Tree Plan. C. Any public utility installing or maintaining any overhead wires or underground lines, conduits, or pipes shall first obtain the approval of its plans and procedures from the [Park, Recreation and Community Services] Director, or his representative, before performing any such installation or maintenance if, in the opinion of the Director, such work would grossly deform or cause injury to street trees.	
Municipal Code Title 7, Chapter 4 Section 7-4-118	All trees in any public ROWs or on public lands	**Tree Well Covers.** Whenever any parkway or planting strip is paved, openings at intervals and sizes designated by the [Park, Recreation and Community Services] Director, or his representative, shall be left unpaved, but covered in a manner acceptable to the Director.	
City of Carson			
Municipal Code Article III, Chapter 9 Sections 3900–3935	All trees in any public ROWs or on public lands	**City Tree Preservation and Protection (abbreviated).** The purpose of this Chapter is to preserve and protect the parkway trees of this City [of Carson] that are of aesthetic importance and to provide for the replacement of trees in order to	Frame 2

Ordinance or Law	Protected Trees	Guidelines	Frames
		maintain the community's natural environment. Trees are an important natural resource, and it is essential to the public peace, health, and welfare that such trees be protected from random removal, trimming, or damage. All person(s), firm(s), partnership(s), or corporation(s) shall comply with all of the requirements of Chapter 9, Section 3900–3935, including, but not limited to, criteria for allowed trees, pruning, clearance, removal, and protective measures during construction.	
City of Commerce			
Municipal Code Title 19, Chapter 19.23 Section 19.23.060 (A–G)	All trees in any public ROWs or on public lands	**Street Trees (abbreviated).** No person shall plant, trim, or remove any tree or shrub on any public street or right-of-way without approval of a permit by the department of public services. Street trees may be required as a condition of approval for any subdivision, lot split, or other permit issued in compliance with Title 19 or other applicable city regulation. Street trees shall be planted in accordance with the requirements of the master street tree plan. The following acts in planting strips or parkway areas are prohibited: • Construction of a treewell with diameter less than four feet or otherwise filling the ground area around a tree so as to shut off light, air, or water from the roots. • Piling of any building material, equipment, or other substance around any tree so as to cause injury. • Pouring of any deleterious matter on or around any tree or on the ground or on any lawn in such a manner as to damage the tree. • Cutting, breaking, defacing or damaging a tree in any manner whatsoever. • Placing or allowing to remain in any parkway area any vegetation (other than an approved tree) or structure exceeding eighteen inches in height. • Posting or affixing to any city tree any bill, poster, picture, placard, announcement, notice, advertisement, or sign.	Frame 4

Ordinance or Law	Protected Trees	Guidelines	Frames
Municipal Code Title 19, Chapter 19.23 Section 19.23.070	Street trees and trees in parking areas	**Trees.** In addition to any trees required within parking areas and required street trees, an additional one tree shall be provided for every three hundred square feet of landscaped area. Of the total trees provided, a minimum of 35 percent would be 24-inch box size or larger.	
City of Compton			
Municipal Code Chapter 20, 20-4 Sections 20-4.1–20-4.9	All trees in any public ROWs or on public lands	**Street Trees (abbreviated).** It shall be unlawful, a public nuisance, and an infraction punishable by a $100.00 fine for any person to plant, remove, prune, injure or destroy any street trees, as hereinafter defined, except in conformance with the provisions of this section. All person(s) (i.e., individuals, corporations, associations, partnerships and to the extent of the City [of Compton]'s jurisdiction, public entities) must comply with all of the requirements of Chapter 20, Section 20-4.1–20-4.9, including, but not limited to, criteria for removal, pruning, and planting.	Frames 2 & 3
City of Cudahy			
Municipal Code Title 9, Chapter 9.04 Section 9.04.140	All trees in any public ROWs or on public lands	**Damaging Public Property.** Prohibited. No person would mar, injure, damage, destroy, or deface, or aid in marring, injuring, damaging, destroying, or defacing, any public building, structure, or property, or cause to be posted or stuck any handbill or placard upon any public building, or mar, injure, damage, destroy, or deface, or cause to be marred, damaged, destroyed, injured, or defaced, any bridge, fence, tree, street sign, lamp post, electric light post, or apparatus, or any other public property.	Frame 3
Municipal Code Title 3, Chapter 3.44 Section 3.44.020	Trees on public or private lands	**Cultural Resources.** Preserve and protect historic structures, landmarks, heritage trees, and archaeological resources as provided by state law and this code.	
City of Downey			
Downey Vision 2025 General Plan	Trees on public or private lands.	Preserve trees wherever possible.	Frame 3
Municipal Code Article VII, Chapter 6 Section 7600	All trees in any public ROWs or on public lands	**Supervision of Director of Public Works.** The Director of Public Works shall have exclusive authority to inspect,	

Ordinance or Law	Protected Trees	Guidelines	Frames
		maintain, plant, remove, prune, root prune, or otherwise alter street trees.	
Municipal Code Article VII, Chapter 6 Section 7605	All trees in any public ROWs or on public lands	**Street Tree Replacement Plan.** Any street tree removed shall be replaced if a replacement is deemed appropriate and if it is mutually agreed to by both the City and the property owner. The replacement tree shall be selected in accordance with the official Tree Species List and Master Street Tree Plan. No public street tree will be removed/planted without having obtained a permit from the Public Works Department. In addition to replacing all removed street trees whenever possible, it is the responsibility of the Director of Public Works to implement a program to insure all vacant tree locations are planted within the City of Downey. Such vacancies are to be planted in accordance with the Official Tree Species List and Master Street Tree Plan.	
Municipal Code Article VII, Chapter 6 Section 7606	All trees in any public ROWs or on public lands	**Interference with Street Trees.** No person, firm, partnership, or corporation shall cut, trim, prune, plant, remove, spray, injure or in any manner interfere with any street tree or maintenance crew performing tree maintenance activities within the City of Downey without first having secured a permit from the Public Works Department. If the City is required to remove a tree placed in violation of this section or replace a tree damaged or removed in violation hereof, the responsible party will be billed for the costs incurred by the City.	
Municipal Code Article VII, Chapter 6 Section 7608	All trees in any public ROWs or on public lands	**Damaging City Trees.** No person shall post or affix to any City tree any bill, poster, placard, picture, announcement, notice, advertisement or sign, or cut, paint, print or make any of the same upon such tree or affix or attach in any manner any other thing whatsoever, including any guy wire or rope or chain to any such tree except for the purpose of protecting it or other purpose authorized by the City.	
Municipal Code Article VII, Chapter 6 Section 7609	All trees in any public ROWs or on public lands	**Dumping Harmful Substance on City Trees.** No person shall dump, pour or spill any oil, salt, salt water or other deleterious matter upon any City tree or City tree space, or maintain within ten	

Ordinance or Law	Protected Trees	Guidelines	Frames
		(10) feet of any such tree or tree space any receptacle from which such matter leaks or drips.	
Municipal Code Article VII, Chapter 6 Section 7611	All trees in any public ROWs or on public lands	**Penalties.** It shall be unlawful for any person, firm, partnership, or corporation to violate any provision or to fail to comply with any of the requirements of this Ordinance or the Chapter hereby adopted. Any person, firm, partnership, or corporation violating any provisions of the Ordinance of the Chapter hereby adopted or failing to comply with any of its requirements and thus causing damage or death to any tree shall be assessed all costs for the replacement of the tree. Costs shall be established using the guidelines set forth by the Council of Tree and Landscape Appraisers using either the replacement or trunk method.	
City of Glendale			
Municipal Code Title 12, Chapter 12.40 Sections 12.40.005–12.40.170	All trees in any public ROWs or on public lands	**City Street Trees (abbreviated).** See Sections 12.40.005–12.40.170 for details, including permits, duties, and prohibitions. City Street Trees – Permit Required. No person shall plant, remove, relocate, destroy, cut, prune, apply pesticides, disturb, deface or in any manner injure any city street tree without first obtaining a permit to do so from the director of public works. Replacement of City Street Trees. As a condition to any permit to remove or destroy any city street tree, the director may require that the permittee plant a replacement city street tree in place of the one to be destroyed or removed. Whenever any such tree has been destroyed or removed pursuant to any permit, it shall be a misdemeanor for the permittee to fail, refuse or neglect to plant a replacement city street tree of the type and size specified in the permit in place of the one destroyed or removed, within 40 days from the date of the issuance of the permit. Duties and Prohibitions. It is unlawful for any person to do or cause to do the following acts: • Cut, damage, carve, transplant, prune, root prune or remove any city street	Frame 6

Ordinance or Law	Protected Trees	Guidelines	Frames
		tree, except as permitted by permit issued pursuant to this chapter. Tree topping, heading back, stubbing and pollarding of city street trees is strictly prohibited. • Attach or keep attached to any city street tree or to any guard or stakes intended for the protection thereof, any rope, wire, nails, tacks, staples, advertising posters or any other device or artificial arrangement. • Cause or allow: ○ Any substances harmful to trees to lie, leak, pour, flow or drip upon or into the soil within the dripline of any city street tree; ○ Fire or heat to be set to any city street tree so as to injure any portion of said tree; ○ The operation of any equipment, such as mechanical weeding devices, in such a manner as to cause damage to a city street tree; ○ The injury to any city street tree neglecting to provide the necessary amount of water, as determined by the director, for said tree's continued good health and viability. ○ Without written permission of the director, apply or maintain any paving or storage of any materials in such a manner as to damage or interfere with the root system of any city street tree. ○ Pile building material or other material about any city street tree in any manner that will in any way injure such tree. • As a condition of any permit for construction, repair, alteration, relocation or removal of any building, structure or any other type of construction, a permittee shall provide such sufficient safeguards and protections as determined by the director, so as to prevent injury to any affected city street trees.	
Municipal Code Title 12, Chapter 12.44	Oak (*Quercus agrifolia*, *Q. berberidifolia*, *Q. lobata*, *Q.*	**Indigenous Trees (abbreviated).** The indigenous oak, bay, and sycamore trees within the City are natural aesthetic resources and are worthy of protection in	

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Sections 12.44.010–12.44.150	*engelmannii*), California bay, and California sycamore trees	order to preserve the natural environment and to protect the City's native plant life heritage for the benefit of all residents. It is pertinent to the public interest, health and welfare that these trees be protected from mutilation, indiscriminate cutting, damage, destruction or removal. It is the intent of this ordinance to create favorable conditions for the preservation of indigenous trees in the community, while respecting individual rights to develop, maintain and enjoy private property to the fullest possible extent consistent with the public interest, health and welfare. **Definitions.** "Protected indigenous tree" or "tree" means any tree with a trunk which is six (6) inches or more in diameter as measured at a height of fifty-four (54) inches above the lowest point where the trunk meets the soil; or in case of a tree with more than one (1) trunk, whose combined diameter of any two (2) trunks is at least eight (8) inches in diameter as measured at a height of fifty-four (54) inches above the lowest point where each trunk meets the soil, which is one (1) of the following Southern California native tree species: California Live Oak (*Quercus agrifolia*), Scrub Oak (*Quercus berberidifolia*), Valley Oak (*Quercus lobata*), Mesa Oak (*Quercus engelmannii*), California Bay (*Umbellularia californica*), and the California Sycamore (*Platanus racemosa*).	
City of Huntington Park			
Municipal Code Title 7, Chapter 5, Article 2 Sections 7-5.201–7-5.215	All trees in any public ROWs or on public lands	**Trees, Shrubs, and Plants.** No person shall plant or remove any City tree, shrub, or plant without first obtaining a permit to do so from the Director of Field Services and/or a duly authorized designee. The Director shall further have the authority to impose any conditions on the approval of such permits as are deemed necessary by the Director to fulfill the purpose and intent of this chapter. It is unlawful for any person to perform or cause any of the following actions: • Damage, cut, carve, etch, hew or engrave, poison or injure the bark or	Frame 4

Ordinance or Law	Protected Trees	Guidelines	Frames
		root system of any City tree, shrub, or plant. • Post or affix to any City tree, shrub, or plant any bill, poster, placard, picture, announcement, notice, advertisement or sign, or cut, paint, print or make any of the same upon such tree, shrub, or plant or affix or attach in any manner any other thing whatsoever, including any guy wire or rope. • Top or prune any City tree, shrub, or plant in a manner that threatens the health of the tree, shrub, or plant. • Allow any gaseous, liquid or solid substance harmful to trees, shrubs, or plants to come in contact with any part of any City tree, shrub, or plant, including, but not limited to, over watering. • Deposit, place, store or maintain upon the ground surrounding any City tree, shrub, or plant any stone, brick, concrete or other material which may impede the free passage or air, water and fertilizer to the roots of the tree, shrub, or plant. • Remove, damage, or tamper with any guard or device placed to protect any City tree, shrub, or plant.	
City of Long Beach			
Municipal Code Title 14, Chapter 14.28 Sections 14.28.010–14.28.120	All trees in any public ROWs or on public lands	**Trees and Shrubs.** See Sections 14.28.010–14.28.120 for details, including permits, protection, and prohibitions. <u>Planting or Removing—Conformance and Permit Required.</u> No person shall plant, cut, trim, mutilate, prune, injure, remove, or in any way impair the natural growth of any tree growing in, on, or along any City street, or cause or permit the same to be done, except as provided in this Chapter, without having first obtained a permit from the Director of Public Works to do such work. <u>Open Space around Trunk.</u> No person shall place, or cause to be placed, any stone, cement or other substance about any tree planted along any street or on other City-owned property which shall impede the free entrance of water or air to the roots of the tree without leaving any open space of ground around the trunk of the tree of	Frames 1 & 2

Ordinance or Law	Protected Trees	Guidelines	Frames
		not less than eighteen inches (18") clearance all around. Harmful Substances Prohibited. No person shall deface, mutilate or attach or place any rope, wire, sign, poster, handbill or other thing to or on any tree growing along any City street or public place, or to cause any wire charged with electricity to come in contact with such tree; provided further, no person shall allow any brine, oil, liquid dye, salt or other substances injurious or harmful to plant life to lie, leak, flow, drip into or onto, or to come into contact with, the tree or the soil about the base of such plant. Protection during Construction. In the erection, alteration, construction or repairing of any building or structure, the owner thereof shall place, or cause to be placed, such guards around all nearby trees located along the street, alley, court or other public place as would effectively prevent injury to them.	
City of Los Angeles			
Protected Tree Code Amendment Ordinance 177404	Oaks (other than scrub oak), Southern California black walnut, western sycamore, California bay	**Preservation of Protected Trees.** Protection of four native trees. Individual plants must also measure 4 inches or more in cumulative diameter at 4.5 feet above the ground level at the base of the tree. No protected tree may be relocated or removed except as provided in Article 7 of Chapter 1 or Article 6 of Chapter 4 of the City of Los Angeles Municipal Code. The term "removed" or "removal" includes any act that will cause a protected tree to die, including but not limited to, acts that inflict damage upon the root system or other part of the tree by fire, application of toxic substances, operation of equipment or machinery, or by changing the natural grade of land by excavation or filling the drip line area around the trunk.	Frames 1, 5, 6, 7, 8, & 9
Administrative Code Division 6, Chapter 6, Article 2	Street trees	**Street Tree Improvements.** All existing protected trees and relocation and replacement trees specified by the advisory agency in accordance with Sections 17.02, 17.05, 17.06, 17.51, and 17.52 of this code shall be indicated on a plot plan attached to the building permit issued pursuant to this code. In addition,	

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		the trees shall be identified and described by map and documentation as required by the advisory agency. A Certificate of Occupancy may be issued by the Department of Building and Safety, provided the owner of the property or authorized person representing the owner of the property (licensed contractor) obtains from the advisory agency, in consultation with the city's chief forester, a written or electronic document certifying that all the conditions set forth by the advisory agency relative to protected trees have been met prior to the final inspection for the construction.	
Municipal Code Chapter 4, Article 1 Section 41.14i	All trees in any public ROWs or on public lands	**Injury to Public Property**. Prohibits any person from cutting, breaking, destroying, removing, defacing, tampering with, marring, injuring, disfiguring, interfering with, damaging, tearing, or altering any tree, shrub, tree stake, or guard in any public street, or affix or attach in any manner any other thing whatsoever, including any guy wire or rope, to any tree, shrub, tree stake, or guard except for the purpose of protecting it.	
Municipal Code Chapter 6, Article 2 Sections 62.161–62.171	All trees in any public ROWs or on public lands	**Street Trees (abbreviated).** See Sections 62.161–62.171 for details, including permits, protection, and prohibitions. Permit Required to Plant in Streets. No person shall plant, remove, destroy, cut, prune or deface or in any manner injure any tree, shrub or plant in any street in the City, without first obtaining a permit to do so from the Board. Conditional Permit to Remove or Destroy Trees. The Board may require, as a condition to any permit to remove or destroy a tree, that the permittee plant another tree of the type and size specified in the permit, within forty (40) days from the date of the issuance of the permit, in place of the tree to be destroyed or removed pursuant to the permit. It shall be a misdemeanor for a permittee to fail, refuse to comply with, or to willfully violate any condition or requirement imposed in such a permit.	

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City of Lynwood			
Municipal Code Chapter 13, 13-2 Sections 13-2.1–13-2.23	Trees on public or private lands	**Planting or Removing Trees in Parkways (abbreviated).** See Sections 13-2.1–13-2.23 for details, including permits, protection, and prohibitions. The protection of city trees shall apply as follows, unless excepted by provisions of this section: • Native and specimen trees located in the city parkways, established front yard, required side yard, established corner yard, or required rear yard of all property located in a single-family residential or multifamily residential zone, and in all areas of all other zoning districts within the city. • Landmark tree located at all places within the city. • Public trees located at all places within the city. *Landmark tree* means a tree designated as a landmark under Subsection 13-2.10 as a tree of historic or cultural significance and of importance to the community due to any of the following factors: (1) it is one of the largest or oldest trees of the species located in the city; (2) it has historical significance due to an association with a historic building, site, street, person or event; or (3) it is a defining landmark or significant outstanding feature of a neighborhood. *Native tree* means any tree with a trunk more than eight (8) inches in diameter at a height of four and one half (4-1/2) feet above natural grade that is one of the following species: (1) *Quercus agrifolia* (coast live oak), (2) *Quercus chrysolepis* (canyon oak), (3) *Quercus engelmannii* (Engelmann oak), (4) *Juglans californica* (California walnut), or (5) *Tristania conferta* (Brisbane box). All trees meeting the definition of native or specimen trees shall be subject to protection. Any person or city agency may propose to the public safety, traffic, and parking commission to designate a tree that meets the criteria as a landmark tree. <u>Protection Policy.</u> It shall be the policy of the city to protect and maintain mature and healthy trees. Special consideration	Frame 3

Ordinance or Law	Protected Trees	Guidelines	Frames
		would be afforded public, landmark, native and specimen trees as set forth in this section. Protection of Trees During Improvements. During the construction, repair, alteration, relocation or removal of any building, structure or accessory structure in the city, no person in control of such work shall leave any landmark, native, specimen or public tree without sufficient guards or protections to prevent injury to the landmark, native, specimen or public tree, in connection with such construction, repair, alteration, relocation, or removal and it shall be unlawful and a violation of this section to do so. Prohibited Acts. The following are prohibited acts under this section unless expressly exempted: • To prune, or to remove without a permit, a landmark tree located anywhere in the city. • To injure or remove, without a permit, any native tree located in the established front yard, required side yard, established corner yard, or required rear yard of all property located in a single-family residential and in all areas of all other zoning districts anywhere in the city. • To prune, to injure or to remove a public tree located anywhere in the city. • To injure, or to remove without a permit, any specimen tree located in the established front yard, required side yard, established corner yard, or required rear yard of all property located in a single-family residential zone, and in all areas of all other zoning districts anywhere in the city. • To plant a tree of a species other than an official street tree designated in the master street tree plan in a parkway, median or traffic island, and a violator would be subject to a civil penalty. • To fail to adhere to the terms and conditions of any permit issued under this section. • To fail to adhere to the terms of any tree protection plan imposed as a condition of any discretionary land use	

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		approval or development agreement with the city.	
City of Maywood			
Municipal Code Title 10, Chapter 2 Sections 10-2.01–10-2.05	All trees in any public ROWs or on public lands	**Street Trees.** Permits Required to Remove or Destroy. No person shall plant, remove, destroy, cut, prune, deface, or in any manner injure any tree or shrub on any street in the City without first obtaining a permit to do so from the Street Superintendent. As a condition to any permit to remove or destroy any tree, the Street Superintendent may require that the permittee plant another tree in place of the one to be destroyed or removed. Whenever any such tree has been destroyed or removed pursuant to any such conditional permit, it shall be a misdemeanor for the permittee to fail, refuse, or neglect to plant another tree of the type and size specified in the permit in place of the one destroyed or removed within forty (40) days from the date of the issuance of the permit. Injuring. No person shall pile building materials or other materials around any tree, plant, or shrub on a street in any manner which would in any way injure such tree, plant, or shrub.	Frame 4
Municipal Code Title 10, Chapter 3 Section 10-3.01(d)	All trees in public parks	**Public Parks, Unlawful Acts.** It is unlawful for any person to damage and/or remove park property. This includes cutting, defacing, removing, or damaging any tree, shrub, plant, wood, turf, bench, table, rock, sand, gravel, or earth or picking any flowers except in connection with and in the course of actual duties being performed as an employee of the City.	
City of Paramount			
Municipal Code Chapter 38, Article 7 Sections 38-154–38-158	All trees in any public ROWs or on public lands	**Trees and Parkway Landscaping (abbreviated).** See Sections 38-154–38-158 for details, including permits, protection, and prohibitions. No person shall remove, cut, trim, or prune, injure or interfere with any parkway tree, public right-of-way tree, or park tree without the proper permits. The city representative may cause to be removed, any tree or part thereof which is in an unsafe condition or which by reason	Frame 3

Ordinance or Law	Protected Trees	Guidelines	Frames
		of its nature is damaging to sewers, electric power lines, gas lines, water lines, or other public improvements, or is affected with any fungus, disease, insect, or other pest.	
City of South Gate			
Municipal Code Title 5, Chapter 5.33 Sections 5.33.010–5.33.100	All trees in any public ROWs or on public lands	**Tree Preservation and Protection (abbreviated).** See Sections 5.33.010–5.33.100 for details, including permits, protection, prohibitions, and licensing. No person, but for a person undertaking official business for the city of South Gate, shall plant, remove, relocate, damage, excessively prune or cut or encroach into the protected zone or any public tree within the city of South Gate without first obtaining a permit from the director of public works and paying the required fee. No such permit shall be valid for a period greater than ninety days after the date of its issuance and shall thereafter be null and void unless extended in writing by the director of public works. Tree Protection During Development and Construction. The following activities require a permit from the director of public works prior to commencement: compaction of the soil within the dripline of any public tree; construction, including structures and walls, that disrupts the root system of any public tree; cutting roots within the dripline of a public tree; and all other grading, construction or construction-related activities occurring within the dripline of a public tree. Trees covered in this chapter shall be shielded from damage during construction with an appropriate construction barrier enclosing the entire dripline area. Tree protection guidelines in the street tree master plan and this code shall apply unless otherwise permitted by the director of public works, who in his/her sole discretion may impose additional conditions necessary to preserve or protect any public tree which is located in a construction or development zone.	Frame 3
City of Vernon			
Municipal Code Chapter 22, Article 9	All trees in any public ROWs or on public lands	**Tree Ordinance (abbreviated).** See Sections 5.33.010–5.33.100 for details,	Frame 4

Ordinance or Law	Protected Trees	Guidelines	Frames
Sections 22.132–22.152		including permits, protection, and prohibitions. Permit Required. No person shall cut, trim, prune, plant, remove, injure or interfere with any City-owned tree, without a permit from the Director. The Director is authorized to grant a permit in accordance with the street encroachment permit procedures, but no such permit shall be valid for a period longer than 90 days after its date of issuance. Before a permit is issued pursuant to this article, a permit fee shall be paid to the City in accordance with the amount set forth by resolution of the City Council. Permit Issuance to Persons Maintaining Wires, Pipes or Conduits. Any person maintaining any overhead wires, poles or construction or any pipes, conduits or services underground, along or across any public property in the City or owning any property abutting upon any public property in the City desiring to have any City-owned tree cut, trimmed, pruned or removed shall file with the Director a written request for the applicant to perform such work. Protection during Construction. Care shall be exercised by all individuals, developers and contractors working near preserved trees so that no damage occurs to such trees. All construction shall preserve and protect the health of trees to remain, relocated trees, and new trees planted to replace those removed in accordance with the following measures: • All trees to be saved shall be enclosed/delineated by an appropriate construction barrier, such as fencing or other mechanism, prior to commencement of work. Barriers are to remain in place during all phases of construction and may not be removed without the written consent of the Director. • Such barrier(s) must be located a distance from the trunk base of two times the trunk diameter, up to a	

Ordinance or Law	Protected Trees	Guidelines	Frames
		maximum of 15 feet, unless otherwise approved in writing by the Director. • No fill material shall be placed within three feet from the outer trunk circumference of any tree. • No fill materials shall be placed within the drip line of any tree in excess of 18 inches in depth. This guideline is subject to modification to meet the needs of an individual tree species, as determined by a certified arborist or licensed landscape architect. • No substantial compaction of the soil within the drip line of any tree shall be undertaken. • No construction, including structures and walls, that disrupts the root system shall be permitted. As a guideline, no cutting of roots should occur within a distance equal to 3 1/2 times the trunk diameter, as measured at ground level. Actual setback may vary to meet the needs of individual tree species as determined by a certified arborist or licensed landscaped architect. When some root removal is necessary, the tree crown may require thinning to prevent wind damage.	

Sources: City of Bell 2020; City of Bell Gardens 2020; City of Burbank 2020; City of Carson 2020; City of Commerce 2019; City of Compton 1985; City of Cudahy 2018b; City of Downey 2017; City of Glendale 2019; City of Huntington Park 2020; City of Long Beach 2020; City of Los Angeles 2020; City of Lynwood 2018; City of Maywood 2019; City of Paramount 2017; City of South Gate 2020; City of Vernon 2020.

Other City Regulations

Other applicable city regulations are described in Table 3.3-13 below.

Table 3.3-13. Applicable City Community Plans, Master Plans, and Other Regulations for Biological Resources

Plan/Regulation	Summary	Frame
City of Long Beach		
Port of Long Beach	In January 2005, the Long Beach Board of Harbor Commissioners adopted the Green Port Policy that would serve as a guide for decision making and establish a framework for environmentally friendly port operations at the Port of Long Beach. The Green Port Program includes six basic program elements, each with an overall goal:	Frames 1 & 2

Plan/Regulation	Summary	Frame
	• **Wildlife**. Protect, maintain, or restore aquatic ecosystems and marine habitats. • **Air**. Reduce air emissions from port activities. • **Water**. Improve the quality of Long Beach Harbor waters. • **Soil/Sediment**. Remove, treat, or render suitable for beneficial reuse contaminated soils and sediments in the Harbor District. • **Community Engagement.** Interact with and educate the community regarding port operations and environmental programs. • **Sustainability**. Implement sustainable practices in design and construction, operations, and administrative practices throughout Port of Long Beach.	
City of Los Angeles		
Los Angeles River Revitalization Master Plan	The LA River Revitalization Master Plan, finalized in 2007, provides a 20-year conceptual framework for development and management of the LA River within the City of Los Angeles. This is a regional plan with the expectation of enhancing and rehabilitating the LA River from the confluence of Sepulveda Basin in the San Fernando Valley south to the City of Los Angeles (at Washington Boulevard south of Interstate 10). The LA River Revitalization Master Plan includes a proposal to restore floodplain functions and create recreation, open space, and residential elements within the 125-acre Burlington Northern Santa Fe Railroad's Piggyback Yard (City of Los Angeles 2007).	Frames 1, 5, 6, 7, 8, & 9
Los Angeles River Ecosystem Restoration Project	The City of Los Angeles, in conjunction with the USACE, has prepared a Final Integrated Feasibility Report and EIS/EIR for the proposed LA River Ecosystem Restoration Project. This project involves restoring 11 miles of the LA River from approximately Griffith Park to downtown Los Angeles, while maintaining existing levels of flood risk management. The restoration efforts will include: • Creation and establishment of historic riparian strand and freshwater marsh habitat to support increased populations of wildlife and enhance habitat connectivity • Provide opportunities for connectivity to ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains Restoration efforts will include: • Reintroduction of ecological and physical processes, such as more natural hydrologic and hydraulic regimes that reconnects the river to historic floodplains and tributaries • Reduced flow velocities • Increased infiltration • Improved natural sediment processes • Improved water quality • Opportunities for passive recreation compatible with the restored environment	

Plan/Regulation	Summary	Frame
Significant Ecological Areas, incorporated city	The Los Angeles County SEA was established by the *Los Angeles County General Plan* and additionally in the Hillside Management and SEAs Ordinance in 1982. SEA designation is given to land that contains irreplaceable biological resources. The SEA is intended to aid applicants and staff with the implementation of the general plan goals and policies, zoning code regulations, and Department of Regional Planning procedures. The general plan establishes the location of the SEAs, the description of SEA (habitat types, unique resources, etc.), and program policies. The SEA Ordinance, a component of the county zoning code ("Title 22") is the implementation tool of the SEA Program, which establishes the permitting standards and process for development within SEAs. The general plan has identified 21 SEAs and 7 Coastal Resource Areas that represent a wide range of biotic communities and have stringent development standards. Only one SEA is within the study area, within Griffith Park in Frame 6, and there are no Coastal Resource Areas within the study area.	
Draft Boyle Heights Community Plan	**Public Realm and Open Space Goals and Policies** Community Connections to the LA River **PR Goal 4.** The Los Angeles Riverside serves as a natural and recreational public amenity that is well-connected to surrounding neighborhoods. • **PR Policy 4.2.** Design riverside spaces using pervious paving and native, drought-tolerant, and watershed friendly landscaping to encourage biodiversity and maximize water recapture.	
Northeast Los Angeles Community Plan	**Open Space** **Goal 4.** Sufficient open space, in balance with development, to serve the recreational, environmental, and health needs of the community and to protect environmental and aesthetic resources. • **Objective 4-2.** To preserve existing open space resources and, where possible, encourage acquisition of new open space. • **Policy 4-2.1.** Accommodate and promote active use of parklands and open space and promote and preserve greenways. Specific programs are detailed in the Community Plan.	
Ventura/Cahuenga Boulevard Corridor Specific Plan	The corridor for the Ventura/Cahuenga Boulevard Corridor Specific Plan extends along Ventura Boulevard/Cahuenga Boulevard from Dry Canyon-Calabasas Flood Control Channel west of Woodlake Avenue to Woodrow Wilson Drive. Portions of Frames 7, 8, and 9 of the proposed Project occur within the boundaries of this specific plan. **Section 7. Land Use Regulations, A. Yards and Setbacks, 1(d). General:** Owners of all lots which have a coterminous lot line with the Los Angeles County Flood Control District	

Plan/Regulation	Summary	Frame
	(the Los Angeles River), shall … provide a landscaped area of ten feet in width for all rear yards adjacent to the river's edge. Landscaping shall be compatible with riparian plantings.	
Mulholland Scenic Parkway Specific Plan	The corridor for the Mulholland Scenic Parkway Specific Plan extends along Mulholland Drive from Mulholland Highway to Highway 101. Small sections of Frames 7 and 8 of the proposed Project occur within the boundaries of this specific plan. **Section 2. Purposes.** The purposes of the Specific Plan include preserving the existing ecological balance and protecting prominent ridges, streams, and environmentally sensitive areas; and the aquatic, biologic, geologic, and topographic features therein. **Section 5. Inner Corridor Regulations, A. Uses, 2(vii– ix). Discretionary Uses** • The use preserves the natural topography, prevents erosion and protects native vegetation. • The use preserves the ecological balance. • The use protects the prominent ridges, streams and environmentally sensitive areas, and the aquatic, biologic and topographic features therein. **Sections 5 and 6. Inner Corridor and Outer Corridor Regulations, B. Environmental Protection Measures** Streams. No project shall be constructed and no more than 100 cubic yards of earth shall be moved within 100 feet of either stream bank without the prior written approval of the Director pursuant to Section 11. In granting an approval, the Director shall make the following findings: • The applicant has employed a biologist to prepare a report which contains the following: the location(s) of the stream's banks, an assessment of the riparian resources, an evaluation of the project's impact on the riparian resources and a recommendation of feasible mitigation measures. • The applicant has submitted to the Director for his approval, a copy of the biologist's report and a covenant and agreement which runs with the land and which states that the mitigation measures recommended by the biologist and approved by the Director will be incorporated in the project and maintained. The covenant and agreement shall be recorded by the applicant. • The project preserves the natural vegetation and the existing ecological balance. • The project protects prominent ridges, streams, and environmentally sensitive areas and the aquatic, biologic geologic and topographic features therein. • The project will not damage the integrity of a stream. Oak Trees. No oak tree (*Quercus agrifolia*, *Q. lobata*, *Q. virginiana*) shall be removed, cut down or moved without the prior written approval of the Director. The Director may	

Plan/Regulation	Summary	Frame
	approve the removal, cutting down or moving of an oak tree after making the following findings: • The removal, cutting down or moving of an oak tree will not result in an undesirable, irreversible soil erosion through diversion or increased flow of surface waters. • The oak tree is not located with reference to other trees or monuments in such a way as to acquire a distinctive significance at said location. **Section 7. Mulholland Drive and Right-of-Way Regulations, B. Alignment and Design** Plant Material. Existing fire resistant, native-type plants and trees shall be preserved and maintained to enhance the natural scenic character of the parkway. No oak trees shall be removed, cut down, or moved without the prior recommendation of the Director using the criteria set forth in Section 5 B 4 of this Specific Plan. Rock Formations and Outcroppings. All natural rock formations and/or outcroppings, known or discovered during grading, should be preserved on-site and incorporated into the street design. **Section 10. Landscaping, A. Standards** Type. Landscaping would predominantly consist of native-type fire resistant plant materials. Oak Trees. Oak trees would not be removed except as set forth in Sections 5 B 4 or 7 B 9 of the specific plan. Replacement Trees. Native trees, including oak trees, which are removed would be replaced with the same type of tree according to the following replacement schedule: (1) *Quercus agrifolia*, *Q. lobata*, *Q. virginiana*: 36-inch box at 2:1 replacement; (2) All other native tree species: 15-gallon at 2:1 replacement. **Section 10. Landscaping, B. Prohibited Plant Material.** The plant material listed in Section 10 of the specific plan would not be planted in the scenic corridor parkway on or after the effective date of the specific plan. **Section 11. Design Review Procedures, I. Procedure, 3. Board Action.** The Board shall consider compliance with the following criteria: • Whether the landscape design has a variety and quantity of native-type, fire-resistant plant materials throughout the project which are compatible with the scenic parkway. • Whether the landscape design representation of the plant materials accurately reflects their growth habit at maturity. • Whether the grading is designed so as to create slopes with a natural appearance compatible with the characteristics of the Santa Monica Mountains. • Whether the site layout is designed so as to require a minimum of grading and retaining walls and protects prominent ridges, streams and environmentally sensitive areas.	

Plan/Regulation	Summary	Frame
Universal City Specific Plan	The Universal City Specific Plan is composed of four plan areas. It is adjacent to Universal Studios north of Highway 101, south of the LA River, west of Barham Boulevard, and east of Lankershim Boulevard. The entire specific plan area occurs within Frame 7. **Section 2. Universal City Specific Plan Overview, Section 2.3 Definitions** Protected Tree. Any of the following Southern California native tree species, which measures four inches or more in cumulative diameter, four- and one-half feet above the ground level at the base of the tree: • Oak tree including Valley Oak (*Quercus lobata*) and Coast Live Oak (*Q. agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Q. dumosa*). • Southern California Black Walnut (*Juglans californica* var. *californica*). • California Sycamore (*Platanus racemosa*). • California Bay Laurel (*Umbellularia californica*). This definition shall not include any tree grown or held for sale by a licensed nursery, or trees planted or grown as a part of a tree planting program. **Section 11 (A–C). Protected Trees.** Removal of protected trees may be requested by filing a Substantial Compliance Analysis application in accordance with the procedures set forth in Section 15 of this Specific Plan. Removal of protected trees shall include any cutting, destroying, removing, relocating, inflicting damage or encroaching into the root zone or filling the drip line area of a protected tree. The applicant shall provide an equivalent amount of replacement canopy area based on the tree sizes and canopy areas set forth in Table 2, Section 11.C.1 of the specific plan. The applicant shall either provide and plant replacement trees at an on-site location, provide and plant replacement trees at an off-site location, or pay an in-lieu fee of $700.00 for each removed protected tree, pursuant to the requirements set forth in the specific plan Sections 11.C.1–1.C.3.	

Sources: Long Beach Harbor Department 2005; City of Los Angeles 1998, 1999, 2001b, 2007, 2010, 2016; Los Angeles County 2015.

3.3.3 Impact Analysis

3.3.3.1 Methods

Study Area

LA River Study Area

The LA River study corridor (1 mile on each side of the 51-mile-long river) is equivalent to the study area. This includes the LA River channel center line, with an approximately 5,000-foot-wide buffer on both sides. The analysis within the study area includes the gathering of known biological information, including vegetation mapping, special-status species records of occurrence (e.g., USFWS IPaC, CNPS Rare Plant Inventory, CDFW CNDDB), and a cursory review of wetland resources. The study area was used to assess potential impacts on biological resources as a result of kit of parts (KOP) categories because these category types could be located anywhere within the *2020 LA River Master Plan* boundary, including in-channel and off-channel, and individual project location details were not available at the time of this assessment. This is in contrast to the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, which have been assumed to occur generally at or near the fenceline adjacent to the LA River.

Frame Analysis

The evaluation of impacts on biological resources within the study area was divided into frames (either individual or grouped). These groupings were based on the evaluation conducted to determine the likelihood of the presence or absence of biological resources. Based on this evaluation, frames or groups of frames were evaluated together because of the presence of similar resources.

Direct impacts were analyzed within the permanent and temporary impact areas of the two Typical Projects—the Common Elements Typical Project and the Multi-use Trails and Access Gateways Typical Projects—and the KOP categories.

Project impacts that are considered permanent are construction activities that may have permanent effects on biological resources, such as the removal of existing vegetation, grading and soil disturbance, and loss of resources (e.g., mortality of plants or wildlife, reduction or removal of aquatic resources or movement corridors). *Temporary impacts* are those that are temporary in nature and whose effects would cease following the completion of construction, such as noise and vibration disturbances, equipment staging, and temporary clearing of vegetation that would be replaced in-kind once the project is complete.

Common Elements Typical Project

The Common Elements Typical Project would be up to 3 acres in size and up to 1 mile long, giving it an average width of approximately 25 feet; however, a Typical Project may vary in dimensions. For the purposes of this evaluation, it is assumed that the width of a Common Elements Typical Project footprint would be approximately 150 feet for both permanent and temporary impacts and approximately 1 mile long and would occur generally at or near the fenceline (see Chapter 2, *Project Description*, for details).

Multi-use Trails and Access Gateways Typical Project

The Multi-use Trails and Access Gateways Typical Project would include a 40-foot maximum width and 5-mile-long project footprint. For the purposes of this evaluation, it is assumed that the width of Multi-use Trails and Access Gateways Typical Project footprint would be approximately 100 feet for both permanent and temporary direct impacts and approximately 5 miles long and would occur generally at or near the fenceline (see Chapter 2, *Project Description*, for details).

Kit of Parts

The *2020 LA River Master Plan* includes KOP categories, composed of the six categories described in Chapter 2. Each of these is a recommended collection of multi-benefit design components that would help achieve one or more project goals. The functions, characteristics, and complexity of the KOP categories and their design components were evaluated with respect to the biological resources available within the study area.

The study area surrounding each frame was used for the analysis of indirect impacts. The LA River is divided into nine river frames for the *2020 LA River Master Plan* analysis. The study area surrounds each frame by approximately 5,000 feet on either side. In addition, in order to gather sufficient biological species occurrence data within the region, a nine-USGS-quad search was conducted.

Special-status Species

For the Common Element and Multi-use Trails and Access Gateway Typical Projects, KOP categories, and overall *2020 LA River Master Plan* implementation, direct impacts for construction and operations were evaluated based on the current and future potential for special-status species (i.e., plants, wildlife) to be present based on the evaluation of biological resources available. Indirect impacts from the Typical Projects and KOP categories were evaluated based on the potential presence of suitable habitat for special-status species in the vicinity or region of the Typical Projects and KOP categories, including those resources within the channel that could be affected.

The assessments of a special-status species potential to occur within the *2020 LA River Master Plan* area in this PEIR were conducted through a high-level, qualitative analysis and are not a final project-level determination. Each individual project will need to include site-specific desktop and/or field reviews and analyses to conclusively determine if suitable habitat is present or absent for all special-status species potentially occurring within the *2020 LA River Master Plan* area.

Habitats of Concern

Habitats of concern within this PEIR include sensitive natural communities, marine preserves, and refuges, EFH, and USFWS critical habitat. For the Common Element and Multi-use Trails and Access Gateway Typical Projects, KOP categories, and the overall *2020 LA River Master Plan*, direct impacts for construction and operations were evaluated based on the current and future potential for habitats of concern to be present based on the evaluation of biological resources available. Indirect impacts from the Typical Projects and KOP categories were evaluated based on the potential presence of suitable habitat for habitats of concern in the vicinity or region of the Typical Projects and KOP categories, including those resources within the channel that could be affected.

Wetland Resources

For both the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, direct impacts for construction and operations were evaluated based on the current and future potential for a wetland and/or potentially jurisdictional aquatic resource to be present within the landside area of the LA River, consisting of the area from top of bank outward to the ROW limit, using National Wetland Inventory (NWI) data and the results of a desktop jurisdictional delineation that ICF conducted in March 2020 (NWI 2020; ICF 2020). Indirect impacts from the Typical Projects were evaluated based on the potential presence of wetlands and/or potentially jurisdictional aquatic resources in the vicinity or region of the Typical Projects, including those resources within the channel that could be affected.

For the KOP categories and the overall *2020 LA River Master Plan*, direct and indirect impacts were evaluated for the landside as described above. Using the general description of the KOP category, in-channel impacts were evaluated as to whether those projects and/or activities generally could be expected to need to take place within the limits of a wetland or jurisdictional aquatic resource and therefore could potentially have significant impacts on the resources.

Wildlife Movement and Connectivity

For the Common Element and Multi-use Trails and Access Gateway Typical Projects and the KOP categories, direct impacts of construction and operations were evaluated based on project descriptions and the potential presence of 1) documented fish or wildlife corridor or linkage; 2) habitat and/or structural features (e.g., culverts, river channel) facilitating local or regional species movement and/or migration; and 3) habitat and/or structural features (e.g., bridge or culvert crevices) that may support wildlife reproduction to be present within the landside area of the LA River, consisting of the area from top of bank outward to the fenceline. Indirect impacts from the Typical Projects and all impacts from KOP categories and the overall *2020 LA River Master Plan* were evaluated based on the potential presence of these resources within all frames (i.e., study area), including those resources within and outside of the LA River channel that could be affected.

Local Policies and Ordinances

Local laws, regulations, and ordinances that are relevant to the impact analysis of biological resources in this PEIR, including general plans, municipal codes, tree ordinances, and community plans (see Section 3.3.2.2, *Regulatory*) were reviewed to determine if the Common Elements and Multi-use Trails and Access Gateways Typical Projects or the KOP categories would conflict with any local policies or ordinances that protect biological resources.

Habitat Conservation Plans and Natural Community Conservation Plans

A database search and literature review were performed to determine if the Typical Projects, the KOP categories, or the overall *2020 LA River Master Plan* would conflict with any HCPs, NCCPs, or any other approved local, regional, or state HCP.

Impacts Discussion Streamlining Approach

Impacts between frames and action types (i.e., construction and operation actions), and/or projects (i.e., projects within Typical Projects, KOP categories) may, for some resources and in some locations/cases, be equivalent or very similar in nature. Such similarities may be due to:

Equivalent or similar project types, areas of potential effect, or context between areas of potential effect

Equivalent or similar activities, equipment use, types of potentially effected resources, and severity of impacts

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six KOP categories, and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.3.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.3(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS.

3.3(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

3.3(c) Have a substantial adverse effect on federally or state-protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means.

3.3(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

3.3(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

3.3(f) Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

3.3.3.3 Impacts and Mitigation Measures

Impact 3.3(a): Would the proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Because the analysis of impacts on special-status plant and animal species for the Common Elements and Multi-use Trails and Access Gateways Typical Projects is similar, the evaluation of impacts for these Typical Projects is combined. The Common Elements Typical Project is smaller in size than the Multi-Use Trails and Access Gateways Typical Project and functions as a hub of human activity, whereas the Multi-Use Trails and Access Gateways Typical Project serves as a linkage between hubs.

The construction of the Common Elements Typical Project would include cafés, pavilions, restrooms, and art/performance spaces (see Chapter 2, *Project Description*). The construction of Multi-use Trails and Access Gateways Typical Projects would include a continuous path for multiple uses, bike trails, equestrian trails, vegetated buffers, and pedestrian trails, with access gateways for access to the river (see Chapter 2). These activities could result in direct and indirect impacts on special-status plant and animal species, as described below. Special-status plant and animal species and their habitat requirements, regulatory status, and potential for occurrence within each frame are described are detailed in Appendix D.2.

Construction

The direct and indirect effects of construction of the Multi-Use Trails and Access Gateways Typical Project would be similar in type and intensity, consisting of the removal and replacement of existing vegetation within the project area. The Multi-use Trails and Access Gateways Typical Project would be more expansive in scope than the Common Elements Typical Project, but the construction impacts would be similar, except the Multi-Use Trails and Access Gateways Typical Project consists of long linear trails rather than smaller, discrete footprints.

Frame 1

Special-status plant and animal species have a potential to occur in Frame 1, within the red brome and Mediterranean grass herbaceous seminatural alliance, upland mustards and other ruderal forbs herbaceous seminatural alliance, yellow sand verbena, silver beachweed herbaceous alliance, nonnative/ornamental conifer, estuary, pickleweed mats herbaceous alliance, and water habitats (Figure 3.3-2 and Table 3.3-6). Special-status species that may occur are detailed in Appendix D.2, with wildlife species listed above in Table 3.3-3.

Special-Status Plant Species

During the desktop analysis of Frame 1, 17 special-status plant species were noted to have some potential to occur within the frame (see Appendix D.2). The discussion of impacts is based on an evaluation of the proposed Project and the biology of these species. As noted throughout this

document, this list is not exhaustive. A site evaluation would need to be conducted to determine the specific potential for special-status species to occur.

Direct impacts on special-status plant species are not anticipated as a result of Common Elements or Multi-use Trails and Access Gateways Typical Projects construction within Frame 1. Although special-status plant species were determined to have a potential to occur within Frame 1, these are salt marsh species, and Frame 1 mainly consists of fresh to brackish water with marine conditions only at the furthest extent of the frame within Los Angeles Harbor. Common Typical Projects would be located at the top of bank and landside portions of the LA River ROW, not in-channel, where potentially suitable pickleweed mats herbaceous alliance habitat is present. As such, it is unlikely that these special-status plant species would occur within the project footprint of Common Elements or Multi-use Trails and Access Gateways Typical Projects and, thus, are unlikely to be directly affected. Species that have a potential to occur within the soft-bottom portion of the river channel potentially could be affected indirectly by nearby construction activities on the top of bank and landside portion of the LA River ROW, but would not be expected to experience any direct impacts (e.g., removal of suitable habitat or direct injury and/or mortality).

Indirect impacts may consist of dust, erosion, chemical spills, trash and debris, and introduction of invasive species. Exposure of special-status plant species to dust from construction activities (e.g., ground disturbance, movement of heavy equipment and vehicles) could potentially decrease the ability of plants to photosynthesize. Construction equipment, vehicles, or imported materials used during vegetation clearing and Common Elements and Multi-use Trails and Access Gateways Typical Projects facilities construction could introduce and spread nonnative invasive plant species within Frame 1 via mud and other debris tracked in from other sites that may contain invasive plants and/or seeds. Invasive plant species could out-compete special-status plant species for resources like water and space, which could either reduce their reproductive productivity (i.e., reduce the amount of flowers and/or seeds produced) or displace them from the area. These indirect impacts could alter plant community structures, and suitable habitat could become degraded and monotypic, thereby reducing the quality and diversity of native vegetation communities within the *2020 LA River Master Plan* area. Sites that are degraded due to exposure to indirect stressors may no longer provide the habitat features required by special-status plant species, preventing or reducing colonization of the area by these species.

Negative physiological stressors resulting from reduced photosynthesis or competition with invasive plant species could lead to energetic losses and increased stressors to special-status plants, potentially resulting in lowered reproductive performance, increased susceptibility to diseases, and death.

Special-Status Wildlife Species

During the desktop analysis, the special-status wildlife species in Table 3.3-3, above, were noted to have some potential to occur within the frames, as detailed below.

Federally Listed Marine Species

Within Frame 1, seven federally listed marine species were identified as having potential to occur: white abalone, black abalone, loggerhead sea turtle, green turtle, leatherback sea turtle, olive Ridley sea turtle, and Guadalupe fur seal. All of these species are federally listed, with white abalone, black abalone, and loggerhead sea turtle listed as endangered; green turtle, leatherback sea turtle, olive Ridley sea turtle, and Guadalupe fur seal listed as threatened; and Guadalupe fur seal as fully protected (Table 3.3-3).

Direct construction impacts on federally listed marine species in Frame 1 are not anticipated as a result of the construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects. These projects are located along the LA River in upland areas and would not be within or adjacent to marine environments, where these species could be directly affected by construction.

Indirect impacts on federally listed marine species in Frame 1 from construction may consist of dust, erosion, trash, and chemical spills. Dust can lead to increased levels of sediment and turbidity in the water, which can reduce biological productivity of aquatic systems. Increased sediment and turbidity can reduce aquatic plant growth and production in marine species. This can reduce secondary productivity for organisms that feed on plant material, which often provide food for fish and, therefore, marine mammals. Increased sediment can also cause lethal and sublethal effects on fish and their habitat, often an important food source for marine mammals. Suspended sediment can kill fish directly or over short periods of time. Chemical spills from construction equipment could be lethal or sublethal to special-status marine species. Trash can enter watercourses and entangle special-status marine species, leading to death or the reduced ability to function. Special-status marine species may also ingest trash, leading to lethal or sublethal effects.

Special-Status Fish Species

Within Frame 1, one special-status fish species was identified as having potential to occur: tidewater goby (Table 3.3-3). Direct construction impacts on tidewater goby in Frame 1 are not anticipated to result from the construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects because these projects are along the LA River in upland areas and would not be within or aquatic environments where this species could be directly affected by construction.

Indirect impacts on special-status fish from construction may consist of dust, erosion, trash, and chemical spills. Dust can lead to increased levels of sediment and turbidity in the water, which can reduce biological productivity of aquatic systems. Increased sediment and turbidity can reduce aquatic plant growth, which can reduce secondary productivity for organisms that feed on plant material, which often provides food for fish. Increased sediment can also cause lethal and sublethal effects on fish and their habitat. Suspended sediment can kill fish directly or over short periods of time. Sublethal effects can occur due to effects on feeding and growth, cover and risk of predation, avoidance and displacement, egg development and survival, and primary and secondary productivity. Chemical spills from construction equipment could also be lethal or sublethal to special-status fish populations. Trash can enter watercourses and entangle special-status fish, leading to death or the reduced ability to function. Special-status fish may also ingest trash, leading to lethal or sublethal effects.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 1, 10 special-status bird species were identified as having potential to occur: bald eagle, western snowy plover, light-footed Ridgway's rail, California least tern, Belding's savannah sparrow, burrowing owl, yellow rail, American peregrine falcon, California brown pelican, and black skimmer. All are State species of concern or fully protected (i.e., American peregrine falcon and California brown pelican), with the exception of western snowy plover, which is federally threatened and a State species of special concern, light-footed Ridgway's Rail, which is federally and State endangered, California least tern, which is federally and State endangered and a State species of special concern, Belding's savannah sparrow, which is State endangered and a bald eagle, which is State endangered, fully protected, and protected under the BGEPA (Table 3.3-3). California least

tern, American peregrine falcon, California brown pelican, and black skimmer have all been well documented within Frame 1. American peregrine falcon is known to have an active nest site on the Gerald Desmond Bridge, located approximately 0.8 mile to the west. Within Southern California, bald eagle nest sites that have been inactive for decades are now showing activity. A bald eagle nest was observed to be active in 2011 in Irvine Lake in Orange County (27 miles east of Frame 1). Successful fledging of bald eagles continues at Santa Catalina Island (25 miles southwest of Frame 1). There is potential for bald eagles to nest or forage within Frame 1 if high perches are present (Table 3.3-3). Golden eagles tend to avoid developed areas, and Frame 1 is highly developed. This species is closely tied to populations of jackrabbit; because of a lack of habitat for jackrabbits within this frame, golden eagles are not expected within Frame 1 (Table 3.3-3).

Direct construction impacts on special-status birds, raptors, and migratory birds include the potential to disturb the lifecycle of avian species and migratory birds. Temporary construction impacts on avian species could result from 1) construction-vehicle traffic damaging vegetation, affecting foraging, roosting, and nesting areas; 2) the temporary use of land for construction staging and access; 3) disturbance of nesting, roosting, and foraging due to construction noise and vibration; and 4) the disruption of local movement and migratory patterns due to construction night lighting. Permanent direct impacts could include the permanent removal of habitat—through grubbing, grading, excavation, construction access, and conversion of the site into the project elements, including cafés, pavilions, restrooms, and art/performance spaces—as well as bird mortality or injury (including nest loss or failure) during construction. The alteration of movement and migration patterns due to project lighting and habitat fragmentation through the widening of the urban corridor exists in areas where intact vegetation had previously been present; however, because of the existing constrained nature of the Typical Projects (the Common Elements Typical Project being approximately 25 feet wide and the Multi-use Trails and Access Gateways Typical Project being approximately 40 feet wide) and generally low habitat quality, the impact of habitat fragmentation is expected to be minimal. The permanent or temporary loss of habitat occupied by federally or State-listed avian species would be a potentially significant direct impact.

Expected direct construction impacts on special-status birds, raptors, or migratory birds include the following.

- If construction occurs during the breeding season (February 1 to August 31 for passerine birds, and January 1 to September 1 for raptors), active passerine and raptor nests could be disturbed by visual, aural, or vibratory sources, potentially causing the loss of eggs or developing young (i.e., flushing adults off the nest or nest abandonment during the incubation, nestling, or fledgling stages).
- Burrowing owl extensively use open landscapes with suitable natural or artificial burrows. Suitable habitat exists in some areas within this frame. Vibration from construction equipment, along with vehicular traffic, could collapse inhabited burrows, and clearing/grubbing activities could remove or bury burrows.
- Construction night lighting could disrupt local movement and migration patterns of avian species.

Indirect construction impacts would include night lighting during construction, which could lead to increased predation or disturbance of roosting sites. Other indirect impacts could include removal or alteration of nearby suitable habitat, mortality of avian species due to entering uncapped poles, the loss of avian species within poles, and the introduction of invasive (i.e., noxious) weeds during

construction, which could reduce habitat suitability and foraging success. Trash from construction may increase populations of deleterious avian or other species that may compete with or could be predators for special-status avian species. Avian species may also become entangled in or consume inedible trash, leading to lethal or sublethal effects.

Special-Status Mammals

Within Frame 1, seven special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, and big free-tailed bat; all are State species of special concern (Table 3.3-3).

Direct impacts on bats due to the construction of Common Elements and Multi-Use Trails and Access Gateways Typical Projects could include mortality of individuals during construction through tree and crevice removal, as well as collisions or entrapment in construction areas/equipment, such as water tanks. Direct effects could also include the permanent conversion of occupied roosting and foraging habitat. In addition, direct effects could include fragmentation of habitats and landscapes, which could interfere with seasonal movement and dispersal of special-status bats.

Removal or disturbance of roost sites could cause the direct mortality of bats during construction or could cause the bats to be displaced. Bats require roost sites for stable temperatures and predator avoidance; if suitable alternate roost sites are not available, then bats may be predated or die from exposure.

Bats may be particularly sensitive to noise pollution because they use echolocation for orientation and to hunt insect prey, and it has been shown that bats avoid foraging in proximity to loud noise and that foraging efficiency declines in proximity to traffic noise (Schaub et al. 2008, Siemers and Schaub 2011).

Temporary direct impacts on bats due to the construction of Typical Projects could include noise, dust, and vibration disturbances, which would affect roosting behavior. Construction activities could also attract raptors and other opportunistic predators, such as raccoons and feral cats, that could increase predation risk on bats. Permanent direct impacts on bats could include higher mortality due to the effects of night lighting associated with construction, leading to disorientation.

Indirect construction impacts could include temporary alterations in traffic and pedestrian patterns, which could temporarily displace and disrupt foraging and roosting bats. Bats may also become entrapped in uncapped poles. Temporary night lighting could also disrupt local movement and migration patterns because bats exhibit phototaxis in response to night lighting; this response varies dependent on if it is associated with foraging or migration. For migration, bats exhibited the highest positive phototaxis in response to green light (Spoelstra et al. 2017), with positive phototaxis noted for some species in response to red and warm-white LED lighting (Voigt et al. 2017). The movement of bats toward red lights does not appear to be related to foraging, whereas the movement towards white lights does (Voigt et al. 2017). Thus, construction lighting could inhibit or alter phototaxis by bats. Trash from construction may increase populations of deleterious species that may compete with or are predators on special-status bats. Bat species may also become entangled in trash, leading to lethal or sublethal effects.

Indirect construction effects could include increases in pedestrian and vehicle traffic. Changes in the patterns of human activity as a result of construction may affect the levels of human disturbance, noise, and lighting within adjacent habitat areas, which could result in the permanent disruption of foraging and roosting areas.

Special-Status Reptiles

One special-status reptile was determined to have potential to occur in Frame 1: western pond turtle, a State species of special-concern (Table 3.3-3). Temporary direct effects could include the temporary destruction of suitable vegetation within temporary disturbance areas and increased mortality as a result of increased temporary construction traffic. Construction may also result in the temporary destruction, degradation, or pollution of habitat and the temporary loss of nesting areas, burrows, or other refugia. Reptiles may also be affected if they enter uncapped construction pipes and fall into excavations.

Direct permanent impacts due to the construction of Common Elements and Multi-use Trails and Access Gateways Typical Projects on special-status reptiles could include mortality, injury, or harassment of adults, eggs, or juveniles as a result of the destruction, degradation, fill, pollution, or permanent conversion of suitable habitat. Individuals may also become trapped in open, excavated areas, which could result in mortality or injury. Monofilament netting used in erosion control measures can trap reptiles, leading to mortality or injury. Changes in the type or frequency of vegetative cover could reduce the amount and quality of refugia.

Indirect temporary construction impacts on special-status reptiles could include an increase in invasive plant species, which could reduce habitat suitability. Temporary soil compaction or fill storage in temporary work areas could prohibit burrowing, which would prevent reptiles from being able to seek refuge. Attraction of opportunistic predators (e.g., raccoons, coyotes) to construction activities could increase predation of reptiles. Temporary construction components, such as security fencing, could attract raptors and provide additional perch sites, potentially increasing predation on reptiles (no special-status amphibians are expected). Trash from construction may increase populations of deleterious species that may compete with or predate on special-status reptiles. Special-status reptiles may also become entangled in trash or consume inedible trash, leading to lethal or sublethal effects.

Indirect permanent impacts on special-status reptiles may include the inadvertent introduction of invasive (i.e., noxious) weeds, which can reduce habitat suitability. Soil compaction may indirectly affect special-status reptiles by prohibiting burrowing or changing the frequency of vegetative cover.

Frame 2

Special-status plant and animal species have a potential to occur in Frame 2 in broom and other shrubland seminatural alliance, nonnative/ornamental conifer, red brome, or Mediterranean grass herbaceous seminatural alliance, upland mustards and other ruderal forbs herbaceous seminatural alliance, and water. Although mapping and acreages provided here do not include freshwater wetland and Southern sycamore riparian woodlands, these habitat types are assumed to be present in Frame 2 associated with the Dominguez Gap Wetlands (Figure 3.3-3 and Table 3.3-3). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frame 2, 19 special-status plant species were noted to have some potential to occur within the frame (see Appendix D.2). Several populations of smooth tarplant (*Centromadia pungens* ssp. *laevis*), a CRPR list 1B.1 species, are recorded in areas associated with the Caltrans I-710 ROW.

Common Elements and Multi-use Trails and Access Gateways Typical Projects under the *2020 LA River Master Plan* could directly affect special-status plant species that have a potential to occur within Frame 2 through the permanent and temporary construction removal of suitable habitat, including wetland, riparian, and shrubland natural communities, should they be present within the top of bank and/or landside portion of the LA River ROW. Loss of suitable and occupied habitat could result in less available habitat to support special-status plant species in the region. If areas that are temporarily disturbed are not successfully restored, and suitable habitat does not reestablish, then individuals and populations of special-status plant species may not occur in areas that they had previously occupied.

Direct effects on special-status plant species from project construction, including grading, excavating, soil stockpiling, or other earth-disturbing activities, could also include direct mortality of individual plants, plant injury, and alteration of plant community structure. The use of construction equipment, machinery, and vehicles within areas supporting special-status plant species could result in individual plants being run over during construction work, leading to either injury or mortality. The increased human presence during new construction activities could also increase the potential for trampling of individual plants. Plants that are damaged may not produce as many flowers or seeds due to injury-induced physiological stressors. Clearing and grading activities could disturb and compress soils, potentially damaging and destroying seed banks and preventing or reducing future utilization of the area by these species by inhibiting root penetration of the soil surface. Plant injury and mortality and damage to seed banks could result in direct take of federally or State-listed plants, should they be present. In addition, construction could increase the potential for fire in the area, which could directly and indirectly affect any special-status plant species present. These effects could be both short- and long-term in nature, depending on the construction duration.

Temporary disturbances from construction activities as a result of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects could result in indirect impacts on special-status plant species, should they be present in the area surrounding the project footprint. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, similar to those as described in detail in Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 2, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee, a State candidate endangered species (Table 3.3-3). Direct impacts on this species as a result of construction of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects could include permanent or temporary loss of occupied Crotch's bumble bee habitat and the crushing of nest and overwintering sites. The direct loss of floral resources could cause mortality or reduce population success. Construction site traffic and activity could lead to mortality through collisions.

Indirect impacts on this species as a result of construction could include the use of pesticides and herbicides and increases in invasive plant species. Herbicide use can degrade habitat and remove floral resources. Although the use of herbicides is no longer a practice by the LACPW or the LACFCD, the use of herbicides is still a practice in general. Pesticide use can cause bee mortality and sublethal effects. Neonicotinoids are more likely to directly harm bumble bees because they are broadly toxic to insects. Fungicides can also lead to increased susceptibility to pathogens and parasites. Invasive

plant species may be introduced during construction, outcompeting native plant species that provide nectar sources for bumble bees.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 2, 10 special-status bird species were identified as having potential to occur: bald eagle, western snowy plover, light-footed Ridgway's rail, California least tern, tricolored blackbird, burrowing owl, yellow rail, American peregrine falcon, yellow-breasted chat, and black skimmer (Table 3.3-3). Direct and indirect construction impacts for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects on special-status birds, raptors, and migratory birds in Frame 2 are similar to those as described above in Frame 1.

Special-Status Mammals

Within Frame 2, eight special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, big free-tailed bat, and San Diego black-tailed jackrabbit; all are State species of special concern (Table 3.3-3). Construction impacts within Frame 2 for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be similar to those discussed above for Frame 1, with the exception of impacts on San Diego black-tailed jackrabbit. Direct construction impacts on this species could include mortality due to crushing within pallets under vegetation and the conversion of suitable habitat to unsuitable habitat. San Diego black-tailed jackrabbit may also become trapped in uncapped pipes and excavations. Indirect construction impacts could consist of changes in foraging, reproductive, or resting behavior due to construction lighting, noise, vibrations, and construction dust.

Special-Status Reptiles

Within Frame 2, five special-status reptiles have potential to occur: Southern California legless lizard, California glossy snake, coastal whiptail, western pond turtle, and two-striped garter snake (Table 3.3-3). Construction-related impacts for special-status reptiles the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects for Frame 2 would be similar to those as discussed in Frame 1.

Frames 3 and 4

Special-status plant and animal species have a potential to occur in Frames 3 and 4 within the red brome or Mediterranean grass herbaceous seminatural alliance, the upland mustards and other ruderal forbs herbaceous seminatural alliance, the nonnative/ornamental conifer, the broom and others shrubland seminatural alliance, open areas associated with I-710, and open water habitats (Figure 3.3-4 and Figure 3.3-5 and Table 3.3-7). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frames 3 and 4, one special-status plant species was noted to have some potential to occur within these frames (see Appendix D.2). Several populations of smooth tarplant, a CRPR list 1B.1 species, are recorded in areas associated with the Caltrans I-710 ROW.

Special-status plant species that have a potential to occur within the red brome or Mediterranean grass herbaceous seminatural alliances located along the top of levee and landside portions of the river channel could be directly affected by construction of Common Elements Typical Projects and

Multi-use Trails and Access Gateways Typical Projects, including the permanent and/or temporary loss and degradation of occupied and suitable vegetation communities and injury and mortality to individual plants from vegetation clearing and ground-disturbing activities, similar to those as described in Frame 2. The significance of direct impacts would depend on the severity of the impacts on the special-status population, as well as the rarity of the species.

Temporary disturbances from construction activities could result in indirect impacts on special-status plant species, should they be present in the area surrounding the project footprint. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, similar to those as described in detail in Frame 1.

Special-Status Wildlife Species

Special-Status Birds, Raptors, and Migratory Birds

Within Frames 3 and 4, three special-status bird species were identified as having potential to occur: bald eagle, burrowing owl, and American peregrine falcon (Table 3.3-3). Direct construction impacts for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects on special-status birds, raptors, and migratory birds for Frames 3 and 4 would be similar to those as described for Frame 1.

Special-Status Mammals

Within Frames 3 and 4, seven special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, and big free-tailed bat; all are State species of special concern (Table 3.3-3). Construction-related impacts on special-status mammals for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects within Frames 3 and 4 would be similar to those discussed for Frame 1.

Special-Status Reptiles

Within Frames 3 and 4, one special-status reptile has potential to occur: western pond turtle (Table 3.3-3). Construction-related impacts on special-status reptiles for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects within Frames 3 and 4 would be similar to those discussed in Frame 1.

Frame 5

Special-status plant and animal species have a potential to occur in Frame 5 within the coast live oak woodland and forest alliance, red brome or Mediterranean grass herbaceous seminatural alliance, upland mustards and other ruderal forbs herbaceous seminatural alliance, eucalyptus–tree of heaven–black locust groves woodland seminatural alliance, and open water habitats (Figure 3.3-6 and Table 3.3-7). The mapped California sagebrush vegetation community within Frame 5 was determined to be an error in the mapping; the correct land cover type is urban/developed and is not suitable habitat (see Section 3.3.3.1, *Methods*, above). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frame 5, 24 special-status plant species were noted to have some potential to occur within the frame (see Appendix D.2). Special-status plant species that have a potential to occur within the red brome or Mediterranean grass herbaceous seminatural alliance

and upland mustards and other ruderal forbs herbaceous seminatural alliance located along the top of levee and landside portions of the river channel could be directly affected by construction of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects, including the permanent and/or temporary loss and degradation of occupied and suitable vegetation communities, and injury and mortality to individual plants from vegetation clearing and ground-disturbing activities, as described in Frame 2.

Temporary disturbances from construction activities could result in indirect impacts on special-status plant species, should they be present in the area surrounding the project footprint. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, similar to those as described in detail in Frame 1.

Special-status plant species that have a potential to occur within coast live oak woodland and forest alliance and red brome or Mediterranean grass herbaceous seminatural alliance habitat associated with the Glendale Narrows foothills would not be affected because this vegetation community occurs at the eastern edge of the frame, well outside of the LA River ROW. The river channel is concrete throughout Frame 5, and the open water habitat is not expected to support special-status plant species.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 5, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee. Direct and indirect impacts on this species in Frame 5 as a result of construction for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be similar to those described in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 5, four special-status bird species were identified as having potential to occur: bald eagle, golden eagle, burrowing owl, and American peregrine falcon (Table 3.3-3). Direct and indirect construction impacts for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects on special-status birds, raptors, and migratory birds for Frame 5 would be similar to those as described above in Frame 1.

Special-Status Mammals

Within Frame 5, 12 special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, big free-tailed bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger. All are State species of special concern.

Construction impacts for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects to special-status bats within Frame 5 would be similar to those discussed above for Frame 1. Construction impacts on San Diego black-tailed jackrabbit would be similar to those described above for Frame 2.

Because San Diego desert woodrat, southern grasshopper mouse, and Los Angeles pocket mouse have similar habitat requirements, construction-related direct impacts on these species would be similar in type and kind for these three species; therefore, impacts for all three species are discussed together. Temporary construction-related impacts on these special-status rodents could result from

construction vehicle traffic removing or damaging vegetation, affecting foraging and burrowing areas, the temporary use of land for construction staging and access, disturbance of burrowing and foraging due to construction noise and vibration, and the disruption of local movement patterns due to construction night lighting. Permanent direct impacts could include the permanent removal of habitat (through grubbing, grading, excavation, construction access, and conversion of the site into the project elements), and rodent mortality or injury (including burrow loss) during construction. Direct mortality could occur due to burrow crushing and collapse from construction equipment and the unintentional poisoning through the use of rodenticides. These small mammals may also become entrapped in uncovered pipes and may fall into and become trapped in trenches or pits.

Due to the large home range size of American badgers and the low probability of badgers occurring, construction-related direct impacts are not expected to occur, but could include the disturbance and collapse of dens. Other direct and indirect impacts on this species would be expected to be negligible.

Special-Status Reptiles and Amphibians

Within Frame 5, six special-status reptiles have potential to occur: Southern California legless lizard, California glossy snake, coastal whiptail, western pond turtle, coast horned lizard, and two-striped garter snake. All are State species of special concern. Within Frame 5, one special-status amphibian has potential to occur: western spadefoot, a State species of special concern. Construction-related impacts on special-status reptiles and amphibians within Frame 5 for the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be similar to those discussed for special-status reptiles in Frame 1.

Frame 6

Special-status plant and animal species have a potential to occur in Frame 6 within the bigpod ceanothus shrubland alliance, California sagebrush scrub shrubland alliance, California walnut groves forest and woodland alliance, chamise–black sage chaparral shrubland alliance, coast live oak woodland and forest alliance, coyote brush shrub shrubland alliance, eucalyptus–tree of heaven–black locust groves woodland seminatural alliance, Gooding's black willow–red willow riparian forest and woodland alliance, laurel sumac scrub shrubland alliance, nonnative/ornamental conifer, pepper tree–myoporum forest and woodland seminatural alliance, red brome or Mediterranean grass herbaceous seminatural alliance, upland mustards and other ruderal forbs herbaceous seminatural alliance, and open water habitats (Figure 3.3-7 and Table 3.3-8). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frame 6, 80 special-status plant species were noted to have some potential to occur within the frame (see Appendix D.2).

Although special-status plant species were determined to have a potential to occur within Frame 6, many of these are California sagebrush scrub, chaparral, and/or woodland species. The LA River Frame 6 study area extends 1 mile on each side of the LA River, which includes the higher elevations of the Santa Monica Mountains and Glendale Narrows. However, Common Element Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be located within the top of levee and landside portions of the LA River ROW. As such, it is unlikely that many of these special-status plant species would occur within the project footprints of the Common Elements Typical Project or Multi-use Trails and Access Gateways Typical Project; therefore, they are unlikely to be affected. A

detailed impact analysis at a project-level basis would identify which specific special-status plant species may be potentially affected by each individual Common Elements and Multi-use Trails and Access Gateways Typical Project.

Special-status plant species that have a potential to occur within the riparian habitats located along the top of levee and landside portions of the river channel could be directly affected by construction of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects, including the permanent and/or temporary loss and degradation of occupied and suitable vegetation communities, and injury and mortality to individual plants from vegetation clearing and ground-disturbing activities, as described in Frame 2. Special-status plant species that have a potential to occur within the soft bottom portion of the river channel could potentially be indirectly affected by nearby construction activities on the top of bank and landside portion of the LA River ROW, but would not be expected to experience any direct impacts (e.g., removal of suitable habitat or direct injury and/or mortality).

Temporary disturbances from construction activities could result in indirect impacts on special-status plant species, should they be present in the area surrounding the project footprint. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, as described in detail in Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 6, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee. Impacts on this species as a result of construction in Frame 6 of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be similar to those described in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 6, 11 special-status bird species were identified as having potential to occur: southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, bald eagle, golden eagle, tricolored blackbird, burrowing owl, American peregrine falcon, yellow rail, yellow-breasted chat, and yellow warbler. Impacts on special-status birds, raptors, and migratory birds as a result of construction in Frame 6 of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be similar to those described in Frame 1.

Special-Status Mammals

Within Frame 6, 12 special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, big free-tailed bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger. All are State species of special concern.

Construction impacts on special-status bats within Frame 6 of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be similar to those discussed for Frame 1. Construction impacts on San Diego black-tailed jackrabbit would be similar to those described for Frame 2. Construction-related impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described for Frame 5.

Special-Status Reptiles and Amphibians

Within Frame 6, six special-status reptiles have potential to occur: Southern California legless lizard, California glossy snake, coastal whiptail, western pond turtle, coast horned lizard, and two-striped garter snake. Within Frame 6, two special-status amphibians have potential to occur, western spadefoot and coast range newt, both State species of special concern.

Construction-related impacts for special-status reptiles and amphibians of Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects in Frame 6 to these species would be similar to those discussed in Frame 1 for special-status reptiles.

Frame 7

Special-status plant and animal species have a potential to occur in Frame 7 within the bigpod ceanothus shrubland alliance, broom and other shrubland seminatural alliance, California sagebrush scrub shrubland alliance, California walnut groves forest and woodland alliance, chamise–black sage chaparral shrubland alliance, coast live oak woodland and forest alliance, Gooding's black willow–red willow riparian forest and woodland alliance, laurel sumac scrub shrubland alliance, nonnative/ornamental conifer, pepper tree–myoporum forest and woodland seminatural alliance, red brome or Mediterranean grass herbaceous seminatural alliance, upland mustards and other ruderal forbs herbaceous seminatural alliance, and open water habitats (Figure 3.3-8 and Table 3.3-8). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frame 7, 70 special-status plant species were noted to have some potential to occur within Frame 7 (see Appendix D.2).

Although special-status plant species were determined to have a potential to occur within Frame 7, many of these are California sagebrush shrub, chaparral, and/or woodland species. The *2020 LA River Master Plan* area for Frame 7 extends 1 mile on each side of the LA River, which extends to the higher elevations of the Santa Monica Mountains. However, Typical Projects would be located within the top of levee and landside portions of the LA River ROW. As such, it is unlikely that many of these special-status plant species would occur within the project footprints of the Common Elements Typical Projects and Multi-use Trails and Access Gateways Typical Projects; therefore, they are unlikely to be affected. A detailed impact analysis at a project-level basis would identify which specific special-status plant species may be potentially affected by each individual Typical Project.

The river channel is concrete and unvegetated throughout Frame 7, and no riparian habitat is present adjacent to the river. Thus, direct impacts on special-status plant species are not anticipated as a result of Typical Projects construction within Frame 7.

Temporary disturbances from construction activities could result in indirect impacts on special-status plant species that could potentially occur in the areas surrounding the project footprint, should they be present. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, as described in detail in the Frame 1 subsection above.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 7, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee.

Impacts on this species as a result of construction of Typical Projects within Frame 7 would be similar to those described in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 7, 10 special-status bird species were identified as having potential to occur: southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, bald eagle, golden eagle, tricolored blackbird, burrowing owl, American peregrine falcon, yellow-breasted chat, and yellow warbler.

Impacts on special-status birds, raptors, and migratory birds as a result of construction of Typical Projects in Frame 7 are similar to those described in Frame 1.

Special-Status Mammals

Within Frame 7, 12 special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, big free-tailed bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger. All are State species of special concern.

Construction-related impacts on special-status bats for Typical Projects within Frame 7 would be similar to those discussed above for Frame 1. Construction impacts on San Diego black-tailed jackrabbit would be similar to those described above for Frame 2. Construction-related impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described in Frame 5.

Special-Status Reptiles and Amphibians

Within Frame 7, six special-status reptiles have potential to occur: Southern California legless lizard, California glossy snake, coastal whiptail, western pond turtle, coast horned lizard, and two-striped garter snake. Within Frame 7, two special-status amphibians have potential to occur: western spadefoot and coast range newt, both State species of special concern.

Construction-related impacts on special-status reptiles and amphibians for Typical Projects within Frame 7 would be similar to those discussed for special-status reptiles in Frame 1.

Frame 8

Special-status plant and animal species have a potential to occur in Frame 8 within the bigpod ceanothus shrubland alliance, California sagebrush scrub shrubland alliance, California walnut groves forest and woodland alliance, chamise-black sage chaparral shrubland alliance, coast live oak woodland and forest alliance, laurel sumac scrub shrubland alliance, mulefat thickets shrubland alliance, nonnative/ornamental conifer, pepper tree–myoporum forest and woodland seminatural alliance, red brome or Mediterranean grass herbaceous seminatural alliance, and upland mustards and other ruderal forbs herbaceous seminatural alliance habitats (Figure 3.3-9 and Table 3.3-8). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frame 8, 68 special-status plant species were noted to have some potential to occur within the frame (see Appendix D.2).

Although special-status plant species were determined to have a potential to occur within Frame 8, many are California sagebrush scrub, chaparral, and/or woodland species. The *2020 LA River Master Plan* area for Frame 8 extends 1 mile on each side of the LA River, which stretches to the higher elevations of the Santa Monica Mountains. However, Common Element Typical Projects and Multi-use Trails and Access Gateways Typical Projects would be located within the top of levee and landside portions of the LA River ROW. As such, it is unlikely that many of these special-status plant species would occur within the project footprints of a Typical Project; thus, they are unlikely to be affected. A detailed impact analysis at a project-level basis would identify which specific special-status plant species may be potentially affected by each individual Common Elements Typical Project and Multi-use Trails and Access Gateways Typical Project.

The river channel is concrete and unvegetated throughout Frame 8, and no riparian habitat is present adjacent to the river. Thus, direct impacts on special-status plant species are not anticipated as a result of Typical Project construction within Frame 8.

Temporary disturbances from construction activities could result in indirect impacts on special-status plant species, should they be present in the area surrounding the project footprint. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, as described in detail in Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 8, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee.

Direct and indirect impacts on this species as a result of construction of Typical Projects in Frame 8 would be similar to those described in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 8, 10 special-status bird species were identified as having potential to occur: southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, bald eagle, golden eagle, tricolored blackbird, burrowing owl, American peregrine falcon, yellow-breasted chat, and yellow warbler.

Direct and indirect impacts on special-status birds, raptors, and migratory birds as a result of construction of Typical Projects in Frame 8 are described above in Frame 1.

Special-Status Mammals

Within Frame 8, 12 special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, big free-tailed bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger. All are State species of special concern.

Construction-related direct and indirect impacts for the Typical Projects to special-status bats within Frame 8 would be similar to those discussed above for Frame 1. Construction impacts on San Diego black-tailed jackrabbit would be similar to those described for Frame 2. Construction-related impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described in Frame 5.

Special-Status Reptiles and Amphibians

Within Frame 8, five special-status reptiles have potential to occur: Southern California legless lizard, California glossy snake, coastal whiptail, western pond turtle, and coast horned lizard. One special-status amphibian has potential to occur within Frame 8: western spadefoot, a State species of special concern.

Construction-related direct and indirect impacts for the Typical Projects to special-status reptiles and amphibians would be similar to those discussed for special-status reptiles in Frame 1.

Frame 9

Special-status plant and animal species have a potential to occur in Frame 9 within the coast live oak woodland and forest alliance, Fremont cottonwood forest and woodland alliance, Gooding's black willow–red willow riparian forest and woodland alliance, mulefat thickets shrubland alliance, nonnative/ornamental conifer, red brome or Mediterranean grass herbaceous seminatural alliance, uplands mustards and other ruderal forbs herbaceous seminatural alliance, and open water habitats (Figure 3.3-10 and Table 3.3-9). Special-status species that may occur are detailed in Appendix D.2.

Special-Status Plant Species

During the desktop analysis of Frame 9, 44 special-status plant species were noted to have some potential to occur within the frame (see Appendix D.2).

Typical Projects could directly affect special-status plant species that have a potential to occur in Frame 9. Special-status plant species with a potential to occur in the riparian habitats located along the top of levee and landside portions of the river channel could be directly affected by construction of the Typical Projects, including the permanent and/or temporary loss and degradation of occupied and suitable vegetation communities and injury and mortality to individual plants from vegetation clearing and ground-disturbing activities, as described in Frame 2. Coast live oak woodland and forest alliance habitat occurs within the study area, but does not occur within the Typical Projects footprint (i.e., at the top of levee and landside portions of the LA River ROW); thus, direct impacts on special-status plant species associated with this community are not anticipated. Special-status plant species that have a potential to occur within the soft bottom portion of the river channel could potentially be indirectly affected by nearby construction activities on the top of bank and landside portion of the LA River ROW, but would not be expected to experience any direct impacts (e.g., removal of suitable habitat or direct injury and/or mortality).

Temporary disturbances from construction activities could result in indirect impacts on special-status plant species, should they be present in the area surrounding the project footprint. Indirect impacts could include dust, introduction of invasive species, erosion, sedimentation, and chemical spills, as described in detail in Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 9, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee.

Construction-related direct and indirect impacts on this species for the Typical Projects would be similar to those described in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Within Frame 9, 10 special-status bird species were identified as having potential to occur: southwestern willow flycatcher, least Bell's vireo, bald eagle, golden eagle, tricolored blackbird, burrowing owl, American peregrine falcon, yellow rail, yellow-breasted chat, and yellow warbler.

Direct and indirect impacts on special-status birds, raptors, and migratory birds as a result of construction for the for the Common Elements and Multi-use Trails and Access Gateways Typical Projects would be similar to those described in Frame 1.

Special-Status Mammals

Within Frame 9, 12 special-status mammals were found to have potential to occur: pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, western yellow bat, big free-tailed bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger. All are State species of special concern.

Construction-related direct and indirect impacts for the Typical Projects to special-status bats within Frame 9 would be similar to those discussed for Frame 1. Construction-related direct and indirect impacts on San Diego black-tailed jackrabbit would be similar to those described for Frame 2. Construction-related direct and indirect impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described for Frame 5.

Special-Status Reptiles and Amphibians

Within Frame 9, six special-status reptiles have potential to occur: Southern California legless lizard, California glossy snake, coastal whiptail, western pond turtle, coast horned lizard, and two-striped garter snake. Within Frames 9, two special-status amphibians have potential to occur: western spadefoot and coast range newt, both State species of special concern.

Construction-related direct and indirect impacts for the Typical Projects on special-status reptiles and amphibians would be similar to those discussed for special-status reptiles in Frame 1.

Impact Determination

Impacts would be potentially significant.

The construction of the Typical Projects could have a substantial adverse impact—either directly or indirectly through habitat modifications—on sensitive species, including indirect impacts on marine species, and direct and indirect impacts on plants, invertebrates, fishes, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Mitigation Measures

Mitigation Measure BIO-1: Conduct Literature Review, Habitat Assessment, and Project Surveys.

The purpose of BIO-1 is to begin the process of making a determination of whether or not the proposed individual subsequent project would have a significant environmental impact on biological resources. BIO-1 is the first step, and in some cases, the final step, in reaching the goal of a no impact, less-than-significant impact, or significant impact determination for each of the

six biological thresholds of significance (see Section 3.3.3.2, *Criteria for Determining Significance*).

During the design of individual subsequent projects and prior to construction, the implementing agency will employ a qualified biologist to review the proposed subsequent project. The qualified biologist will conduct a site-specific literature review, which will consider, at a minimum, the proposed subsequent project, site location, GIS information, and known sensitive biological resources. The review will assess the site for special-status plants and/or wildlife, aquatic resources, sensitive natural communities, wildlife corridors or nurseries, biological resources protected by local ordinances policies such as protected trees, or other regulated biological resources pursuant to CEQA, FESA, or CESA could be affected by the project. In some cases, a literature review will be sufficient for the biologist to make a no impact and/or a less-than-significant impact determination for all six of the thresholds of significance (Section 3.3.3.2) of biological resources. In this case, no further work will be required, and a summary report stating the basis for these findings, identifying each threshold of significance with a CEQA finding, will be the only requirement.

If, during the literature review, it is determined that potential biological resources exist in the individual subsequent project area that could be affected, then a habitat assessment survey will be required unless a qualified biologist determines that a field review/habitat assessment is not needed. If needed, this survey will consist of a site visit conducted by a qualified biologist, where the proposed subsequent project and adjacent buffer (as appropriate for the target species relative to the potential project direct and indirect impacts) will be assessed for candidate, sensitive, or special-status plants and/or wildlife, aquatic resources, sensitive natural communities, wildlife corridors or nurseries, biological resources protected by local ordinances policies, such as protected trees or other regulated biological resources, while identifying and mapping all vegetation communities and land-cover types (initial study). If suitable habitat is present for candidate, sensitive, or special-status plants or animals and could not be avoided, then focused protocol surveys may be required, as determined by a qualified biologist, with appropriate reporting. If aquatic resources are present and could not be avoided, a jurisdictional delineation per Mitigation Measure BIO-21a may be required. Mitigation Measure BIO-1 will include an analysis of all of the biological resources identified in the thresholds of significance, with a determination made regarding significance for each threshold. Reporting will include regulatory assessment, construction and operation impact analyses, and identification and implementation of appropriate measures based on the presence of biological resources. Impact analyses will also include appropriate assessment of project-specific disturbances (e.g., recreational effects, night lighting, noise).

If, following the literature review and project surveys, it is determined that the project will not directly or indirectly affect any species listed as endangered, threatened, or candidate by CDFW or USFWS, then the impact will be less than significant for listed species, and no further mitigation for listed species will be required. If, however, it is determined that impacts on federally or State-listed plant or animal species will occur and therefore will be considered significant, then Mitigation Measure BIO-2 will be required to reduce impacts to less-than-significant levels.

Mitigation Measure BIO-2: Avoid or Minimize Effects on Federally or State-Listed Species, Consult with Wildlife Agencies, and Implement Permit Requirements.

The implementing agency will avoid "take" of species, if applicable/occurring, within the action area (i.e., project area and buffer for species that USFWS and CDFW list as endangered, threatened, or candidate). The *action area* is a FESA term that refers to the area directly and indirectly affected by the proposed action and is based on the range of impacts (e.g., ground disturbance, water quality, air quality, lighting, noise). If avoidance of take is not possible, then the implementing agency will initiate the process of consultation with the wildlife agencies (i.e., USFWS, NMFS and/or CDFW, as appropriate based on species habitat present).

During informal consultation, it may be determined that the proposed action is not likely to affect any federally listed species or critical habitat in the project area, with no requirement to consult formally with the USFWS, this will complete the consultation process. If the proposed action may affect listed species or critical habitat, and the action has a federal nexus, then Section 7 of the FESA process applies. Under FESA Section 7, the project proponent will need to prepare a Biological Assessment (BA) to assist the USFWS in its determination of the project's effect on species and/or critical habitat. If the action is likely to adversely affect a listed species, then a request for formal consultation is submitted. Pursuant to FESA, formal consultation may last up to 90 days, after which the USFWS has 45 days to prepare a Biological Opinion (BO). These timelines may be extended through a request from USFWS. The conclusion of the BO will state whether or not the proposed action is likely to:

1. Jeopardize the continued existence of the listed species; and/or
2. Result in the destruction or adverse modification of critical habitat that appreciably diminishes the value of critical habitat as a whole for the conservation of the listed species.

If the action is reasonably certain not to jeopardize the continued existence of the listed species or diminish the value of critical habitat as a whole for the species, then the BO will include an incidental take statement with the BO. *Incidental take* is subject to the terms and conditions provided in the incidental take statement. Examples of terms and conditions included within a typical BO are included below.

FESA section 10(a)(1)(B) consultation occurs for non-federal actions. An HCP is prepared by the project proponent and accompanies the application for an ITP. The USFWS prepares the ITP and a BO. The elements of the HCP are made binding through the ITP. The timelines for HCP completion are project-specific.

If a species is listed by both FESA and CESA, Fish and Game Code Section 2080.1 allows an applicant who has obtained a federal incidental take statement (FESA Section 7 consultation) or a federal ITP (FESA § 10(a)(1)(B)) to request that the Director of CDFW find the federal documents consistent with CESA. If the federal documents are consistent with CESA, a consistency determination is issued, and no further authorization or approval is necessary under CESA.

For species that are listed by CDFW, but not the USFWS, as endangered, threatened, candidate, or a rare plant, and where take would occur, the project proponent will apply for a State ITP under Section 2081(b) of the Fish and Game Code. CDFW typically requires that the project proponent seek a 2081(b) ITP rather than a 2080.1 consistency determination because of inconsistencies between FESA and CESA, particularly conditions of approval. For example, FESA

does not prohibit the take of listed plants on private lands, whereas CESA does. When the 2081(b) ITP is issued, terms and conditions will be specified by CDFW within the 2081(b) ITP, and these terms and conditions will ensure that the items 1 through 5 below are met.

1. The authorized take must be incidental to an otherwise lawful activity.
2. The impacts of the authorized take must be minimized and fully mitigated.
3. The measures required to minimize and fully mitigate the impacts of the authorized take:
    a. Are roughly proportional in extent to the impact of the taking on the species;
    b. Maintain the applicant's objective to the greatest extent possible; and
    c. May be successfully implemented by the applicant.
4. Adequate funding is provided to implement the required minimization and mitigation measures and monitor compliance with the effectiveness of the measures.
5. Issuance of the permit will not jeopardize the continued existence of the CESA-listed species.

As a part of the above described processes, examples of mitigation for impacts on listed species through the following pathways are included below:

- If suitable habitat for listed species is present within the action area, the project will be designed to avoid impacts (direct and indirect). Through the avoidance of impacts on listed species, the project proponent will avoid the FESA/CESA permitting process.
    - Informal consultation with the wildlife agencies may be required to complete the process.
- For impacts on federally listed species and a federal permit or federal funding is involved, Section 7 consultation (if available through federal nexus) will be required. This may include consistency determination from CDFW for State-listed species.
    - A "May Affect and Is Likely to Adversely Affect" BA will be prepared and submitted to USFWS, and initiation of formal consultation will be requested. The BA will include applicant proposed mitigation measures that are often included in the required Terms and Conditions in the BO. These conditions depend on the species under consideration, as well as severity of the project impacts, but typically include avoidance and minimization measures, as well as compensatory mitigation to reduce take to the extent feasible.
    - Conservation measures or similar requirements may be required within the BO that specify conservation, minimization, and compensation measures to avoid, minimize, or offset effects to listed species. Examples include:
        - Biological monitoring
        - Worker environmental awareness program (WEAP) training
        - Minimization of construction-related impacts
        - Preconstruction clearance surveys
        - Weed management surveys

        - Compensation for loss of habitat
            - Protection of lands in perpetuity
            - Mitigation ratios for impacts (e.g., 1:1 mitigation for suitable habitat, 3:1 for riparian habitat, 5:1 for critical habitat)
            - Permanent protection and management of compensation lands
            - Costs to acquire and manage lands
            - Financial assurances
    - Terms and Conditions within the Incidental Take Statement in the BO will include mitigation measures for listed species. Examples include:
        - Immediate notification of wildlife agencies in the event of the permit's listed species being killed or injured as a result of project activities
        - Re-initiation of consultation if more than a specified number of listed species are killed or injured as a result of project activities
        - Reporting requirements
- For impacts on federally listed species for which no federal permit or federal funding is involved, Section 10(a)(1)(B)) consultation (if no federal nexus) will be required. This may include consistency determination from CDFW for State-listed species.
    - Applicant-prepared HCP that includes mitigation measures:
        - Preservation (via acquisition or conservation easement) of existing habitat
        - Enhancement or restoration of degraded or former habitat
        - Creation of new habitat
        - Establishment of buffer areas around existing habitats
        - Restrictions to access
    - The USFWS then issues an ITP and prepares a BO, and the HCP mitigation measures become legally binding. USFWS ITP measures will be similar to those described above for Section 7.
- For impacts on State-listed species, a 2081 (b) ITP will be issued. The BO conservation measures are often included in the BO in order to meet CESA requirements and allow CDFW to make a consistency determination. For this reason, the 2081 (b) ITP requirements are often similar to the BO conservation measures and may include other measures, such as:
    - CNDDB Observations (reporting of any CNDDB species)
    - Traffic speed limits
    - Habitat acquisition, permanent protection, and perpetual management of compensatory habitat

In addition to the measures listed above, additional measures may be required through agency consultations and/or permits that are deemed necessary for the recovery of a listed species.

If it is determined that there is suitable habitat present for special-status species of nesting birds, raptors, or eagles, or if construction involves non-incidental take of migratory birds that are not special-status, and if construction is to occur during the nesting season within suitable habitat, then the following mitigation measures will be implemented.

Mitigation Measure BIO-3a: Conduct Preconstruction Nesting Bird Surveys.

Prior to any ground-disturbing activity, including vegetation removal or structure disturbance/ demolition, during the bird breeding season (February 1 to August 31), a qualified biologist will conduct nesting bird surveys within 7 days prior to construction for any activities that could disturb nesting birds within the subsequent project area and its 500-foot buffer area for nesting birds and active nests (i.e., nests with eggs or young) of non-raptor species listed under the MBTA or CFGC.

If active bird nests are observed, the biologist will establish an appropriate ESA buffer based on the species, work activities, and the tolerance of the species to disturbance. No entry or work will occur within the ESA nest buffer unless approved by the qualified biologist. The ESA nest buffer will be maintained until nestlings have fledged and are no longer reliant on the nest or parental care for survival, or the biologist determines that the nest has been abandoned.

Mitigation Measure BIO-3b: Conduct Preconstruction Raptor Nest Surveys.

If construction is scheduled to occur during the breeding season for raptors (January 1 to September 1), then no more than 7 days before the start of the activities, a qualified biologist will conduct a pre-construction survey for nesting raptors in areas where suitable habitat is present within the project area and up to a 500-foot buffer, as determined by a qualified biologist. If active raptor nests are found, then the biologist will delineate an ESA buffer of sufficient size or utilize a buffer as determined by regulatory authorizations for species listed under the FESA or CESA, around the nest. The ESA buffer will be maintained until the young have fledged from the nest and are no longer reliant on the nest or parental care for survival or until such time as the biologist determines that the nest has been abandoned.

Mitigation Measure BIO 3c: Active Eagle Nest Avoidance Measures.

If an occupied nest (as defined by Pagel et al. 2010) is detected within 4 miles of the work areas, the implementing agency will notify USFWS and will follow the specified line-of-sight and no line-of-sight no-work buffer requirements during the breeding season to ensure that construction activities do not result in injury or disturbance to eagles. The implementing agency in coordination with the project biologist, will coordinate with the USFWS regarding any modifications to these proposed buffers. It is not anticipated that activities during operations would disturb eagle nesting, but should operations activities have the potential to disturb eagle nesting, then this measure will be required.

- The no-work buffer will be maintained throughout the breeding season or until the young have fledged and are no longer dependent on the nest or parental care that includes nest use for survival.
- Buffers around occupied nests may be reduced if a qualified biologist determines that smaller buffers would be sufficient to avoid impacts on nesting eagles.

If it is determined that suitable habitat is present for burrowing owls, then then the following mitigation measure will be implemented.

Mitigation Measure BIO-3d: Conduct Burrowing Owl Preconstruction Surveys.

Prior to any ground-disturbing activity or any activity that could disturb burrowing owl burrows or nesting, a qualified biologist will conduct protocol-level surveys for burrowing owl within suitable habitat located in the work area or extending 500 feet from the boundary of the work area, where access is available. Surveys will be conducted in accordance with guidelines in the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFG 2012).

If it is determined that suitable habitat is present for bats, then the following mitigation measure will be implemented to avoid potentially significant impacts.

Mitigation Measure BIO-3e: Conduct Preconstruction Special-Status Bat Surveys.

No earlier than 30 days prior to the start of ground-disturbing activities or activities that could disturb bat roost sites in a work area, a qualified bat biologist will conduct a visual and acoustic survey (over the course of one day and one evening at a minimum) for roosting bats in the work area and extending a distance deemed appropriate by the qualified biologist from the boundary of the work area, where access is available. Such surveys will be conducted only in those areas in which bridges, abandoned structures, or trees with large cavities or dense foliage are present. The qualified bat biologist will also visually inspect for crevice dwelling birds (e.g., nesting, overwintering swifts) and note any observations.

If bat roost sites are identified and could be disturbed, then the following mitigation measure will be implemented.

Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.

Prior to any ground-disturbing activity or activities that could disturb bat roost sites, a qualified bat biologist will survey for active bat colonies, such as hibernacula or maternity roosts. If active hibernacula or maternity roosts are identified in the work area or in the buffer area (as defined by the qualified bat biologist, based on site conditions, planned work, and anticipated indirect impacts on bats), they will be avoided. If avoidance is not feasible, then a qualified bat biologist with experience conducting bat evictions, exclusion, and mitigation will prepare a mitigation plan detailing the eviction, exclusion, and relocation of the bat colony and will provide for construction of an alternative bat roosting habitat outside of the work area. Alternative bat habitat may be required to be constructed and installed up to 2 years prior to any bat eviction and exclusion and must be approved by CDFW.

The qualified bat biologist will implement the mitigation plan for a period of time determined by the qualified bat biologist to be sufficient for the bats to adjust to the disturbance before the commencement of any ground-disturbing activities that would occur within the buffer area of the hibernacula. All bat colony and roost management will be conducted in accordance with accepted exclusion and deterrent techniques. If non-breeding or non-hibernating individuals or groups of bats are found roosting within the work area, cannot be avoided, and would be affected by the proposed Project, then the following will be implemented:

- **Implement Bat Exclusion and Deterrence Measures**. A qualified biologist will facilitate the eviction of the bats by either opening the roosting area to change the lighting and airflow

conditions or installing one-way doors or other appropriate methods. To the extent feasible, the roosts will remain undisturbed by project activities for a minimum of 1 week after implementing eviction and exclusion activities. Evictions will not occur to active maternity or hibernacula.

If it is determined that suitable habitat is present for American badgers, and impacts on badgers could not be avoided and would therefore be significant, then the following mitigation measure will be implemented.

Mitigation Measure BIO-3g: Conduct Preconstruction Surveys for American Badger.

Prior to ground disturbance, the implementing agency will require a qualified biologist to conduct preconstruction surveys for American badger den sites within suitable habitat located within the project site. These surveys will be conducted no less than 14 days and no more than 30 days prior to the start of ground-disturbing activities in the project site. As required by CDFW, the biologist will establish a no-work buffer around occupied maternity dens throughout the pup-rearing season (February 15 through July 1) and an ESA buffer around occupied dens during other times of the year. If non-maternity dens are found and cannot be avoided during construction activities, they will be monitored for badger activity. If the biologist determines that dens may be occupied, passive den exclusion measures (outside the pupping season) will be implemented for 3 to 5 days to discourage the use of these dens prior to disturbance activities.

If it is determined that sensitive habitat (e.g., wetlands, habitat for special-status species, wildlife movement corridors, nest sites) is present, and the impacts of the project have been determined to be potentially significant, then the following mitigation measure will be implemented.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Prior to any ground-disturbing activity, the implementing agency will require the construction area, including access roads and staging areas, to be delineated through the use of construction flagging and signage under the supervision of a qualified biologist. To prevent the inadvertent disturbance of habitat, vehicle traffic and construction personnel will be restricted to established roads, construction areas, and other designated areas. Any ESAs, such as wetlands, habitat for special-status species, wildlife movement corridors, and/or nest sites, will be delineated, and no access will be allowed into these areas. Delineation of ESAs will include fencing, flagging, and other methods of demarcation sufficient to prevent entry into the ESA. No grading or fill activity of any type will be permitted within ESAs. In addition, no construction activities, materials, or equipment will be allowed within ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby preserved areas. Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the limits of disturbance and designated staging areas and routes of travel. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities. ESA fencing and exclusion fencing will remain in place and be maintained until project construction is completed.

Equipment storage, fueling, and staging areas will be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive natural communities. These designated areas will be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions will be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials will be reported to appropriate

regulating entities including, but not limited to, the applicable jurisdictional city and RWQCB and will be cleaned up immediately and contaminated soils removed to approved disposal areas.

If sensitive biological resources are identified within the project footprint or surrounding buffer, but will not be affected by the proposed Project, then those resources must be marked clearly with permanent signage to promote avoidance of the resource by the public and operations and maintenance staff.

If there is ground disturbance that could result in the establishment of invasive plant species, and this impact has been determined to be potentially significant, then the following mitigation measure will be implemented.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Prior to construction on all projects, a weed abatement plan will be prepared and implemented by the project proponent to minimize the spread and importation of nonnative plant material during and after construction and will include the following:

- Any exotic species removed during construction will be properly handled to prevent sprouting or regrowth. Methods will be developed to avoid spreading exotic plant seeds during plant removal and ensure plants will be removed prior to flowering, if feasible.
- An herbicide use protocol will be included within the weed abatement plan. Anyone using herbicides will be required to complete a "Report of Chemical Spray Form" per the LA County Department of Public Works BMP Manual (Public Works 2010). Hazardous waste management practices will apply to the use of all herbicides. The application of all herbicides will be performed by a licensed applicator.
- Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site or at the nearest staging area during the course of construction. Cleaning of equipment will occur in a designated area distant from ESA fencing.
- Trucks carrying loads of vegetation removed from the project footprint will be covered and disposed of in accordance with applicable laws and regulations.
- Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control. Fill material will be obtained from weed-free sources.
- After construction, any disturbed areas remaining as bare ground will be returned to original grade (unless the design incorporated permanent grade changes), soils will be decompacted, and areas will be revegetated with native hydroseed and/or container plantings to match existing sensitive habitats as detailed in design plans or a project-specific restoration plan. All revegetated areas will avoid the use of species listed in Cal-IPC's California Invasive Plant Inventory.

If it is determined that special-status plants, wildlife, and/or aquatic resources, sensitive habitat, or protected trees have the potential to be present at the project site, then the following mitigation measures will be required.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

In sensitive areas or adjacent to special-status plants, wildlife, and/or aquatic resources, sensitive habitat, protected trees, a biological monitor will be required to monitor construction activities for the duration of construction activities to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and special-status species outside of the project footprint.

Biological monitoring will include items such as monitoring activities associated with the installation of protective barriers (e.g., ESAs fencing, silt fencing, sandbags, fencing); ensuring that the removal of vegetation near sensitive biological resources is limited to the proposed disturbance area; monitoring of active bird nests; ensuring that all food related trash items are enclosed in sealed containers and removed from the site; ensuring that construction employees strictly limit their activities, vehicles, equipment and construction materials to the proposed project footprint, designated staging areas, and approved routes of travel, with construction areas being the minimal area necessary to complete the proposed Project as specified in construction plans; ensuring that equipment storage, fueling, and staging is located in upland sites to protect riparian habitats and other sensitive habitats; ensuring that brush, loose soils, and other debris materials will not be stockpiled within stream channels or on banks; checking potential wildlife pitfalls; contacting CDFW (and USFWS as appropriate) regarding any dead or injured federally or State-listed wildlife; and disposal of road-killed animals.

The biological monitor will conduct WEAP training to train construction contractors and other site personnel. The purpose of WEAP training is to provide training regarding the avoidance and minimization measures for biological resources, the laws and regulations related to biological resources, and the fines and penalties for violating those laws.

The biological monitor will monitor construction within the vicinity of any riparian habitats or other sensitive natural community areas prior to and during vegetation removal to ensure that vegetation removal, best management practices (BMPs), ESAs, and all avoidance and minimization measures are properly implemented. ESA fencing will be inspected by the biological monitor at a frequency necessary to ensure that it is in place and properly maintained.

As part of this effort, the biological monitor will document compliance with applicable avoidance and minimization measures, including measures set forth in regulatory authorizations.

Mitigation Measure BIO-7: No Intentional Collection and/or Killing of Plants or Wildlife.

During construction, the biological monitor will ensure that intentional killing or collection of any plant or animal species unrelated to lawful construction activities does not occur. Construction crews will attend WEAP training (as specified in BIO-1), where field crews will be educated regarding biological resources and the avoidance of impacts on these resources, including the prohibition of collecting and killing of plant and animals. The fines and penalties for the collection and killing of special-status species and nesting birds will be explained in the WEAP training and will be enforced. In addition, purposeful collection and killing of plants and animals unrelated to lawful construction could result in a construction noncompliance and/or a stop work order.

Mitigation Measure BIO-8: Work Stoppage.

The biological monitor, under the direction of the Resident Engineer or Construction Inspector, has the authority to stop work to protect biological resources, including but not limited to, aquatic resources, special-status wildlife and plants, and protected trees.

If aquatic resources or protected trees are identified in the work area and are not adequately protected, the biological monitor will have the authority to halt work in the area to prevent impacts on the resource. Any such work stoppage will be limited to the area necessary to protect the resource. Work will be resumed as quickly as possible once the appropriate the course of action has been determined.

In the event that any special-status plant or wildlife species is found in a work area, the biological monitor will have the authority to halt construction to prevent the death or injury to the species. Any such work stoppage will be limited to the area necessary to protect the species and work may be resumed once the biologist determines that individuals have moved out of harm's way or the biologist has relocated them out of the work area.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Construction BMPs

The implementing agency will require all construction contractors to prepare and implement a construction BMP plan and stipulate the requirement in construction bid documents. The construction BMP plan will include, at a minimum, the following measures.

- All construction contractors and all construction personnel will be responsible for promptly cleaning up any fuel or other hazardous materials spills, and any leaks from equipment will be stopped and repaired immediately. Vehicle and equipment fluids that are no longer in use will be transported to an appropriate offsite disposal location. Fuel and lubricant storage and dispensing locations will be constructed to fully contain spilled materials until disposal can occur. Hazardous waste, including used motor oil, hydraulic fluid, and coolant, will be stored and transferred in a manner consistent with applicable regulations and guidelines.
- Dust-control measures will be implemented by the contractor to reduce excessive dust emissions. Dust-control measures will be carried out during periods of grading or other activities that will disturb soils and may include wetting work areas, using soil binders on dirt roads, and wetting or covering stockpiles.
- Fire-suppression capability, including extinguishers, shovels, and water tankers, will be available on site whenever construction occurs during the fire season (as determined by the Los Angeles County fire department) to help minimize the chance of human-caused wildfires. Activities that may produce sparks, including welding or grinding, will use protective gear, such as shields and protective mats, to reduce fire risks.
- Available ESA data and information will be reviewed prior to placement of deposition and stockpiling of any material, such as erodible materials, vegetation, loose soils, or other debris material. No erodible materials will be deposited into aquatic features (e.g., rivers, channels, drainages, ditches, drains, ponds, lakes) or areas demarcated.

- Construction and maintenance activities will be timed during sensitive periods with ESA fencing, and materials will not be stockpiled within such areas.

Operations Recreation Plan

The Operations Recreation Plan will include requirements for the following measures (as applicable) to be implemented for areas of the *2020 LA River Master Plan* where recreational opportunities will be created:

- Signage requiring pets to be on leash
- Pet dropping/waste bag dispensers and disposal stations
- Foot-wiping stations with signage explaining the purpose of the station (to prevent the spread of invasive weeds that degrade natural habitats that species depend on)
- Wildlife-proof waste bins
- Educational interpretive kiosks/signage (e.g., how to respect wildlife and habitats, stay on trail signs, identifying sensitive areas, pick up trash and fishing line, pick up after pets; opportunities to view wildlife)
- Incorporation of signage to avoid ESAs around sensitive wildlife/habitat features
- Seasonal closures during sensitive periods (will occur if there were a significant biological impact that could not be mitigated except through avoidance)
- Improvement (i.e., restoration) of affected habitat areas
- Seasonal restrictions on certain uses (e.g., no kayaking during least Bell's vireo nesting if vireo are present)
- Prevention of fertilizer runoff
- Management of unauthorized uses through coordination with local resources
- Proper handling of any exotic plant species removed during operations and maintenance activities to prevent sprouting or regrowth; development of methods to ensure that exotic plant seeds are not spread during plant removal and that plants will be removed prior to flowering, if feasible

If it is determined that there is the potential for special-status wildlife, including special-status mammals, reptiles, or amphibians, that could become entrapped in construction materials or excavations, then the following mitigation measures will be implemented.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Any excavated steep-sided holes, pits, or trenches more than 12 inches deep with sidewalls steeper than 45 degrees will be covered with plywood or similar materials at the end of the day or have escape ramps, with at least one ramp per 100 feet of trenching, and slopes of escape ramps of no greater than 3:1. All construction pipe, culverts, or other structures with a diameter of 3 inches or greater that are stored overnight will either be elevated at least 1 foot above the ground, screened, or covered each night.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

The implementing agency will restrict the use of monofilament materials. Plastic monofilament netting (i.e., erosion control wattles or matting) or similar material will be prohibited as part of erosion-control activities. Alternative materials that could be used include, but are not limited to, geotextiles, fiber rolls, geomembranes, tackified hydroseeding compounds, loose-weave mesh, such as jute, hemp, and coconut (i.e., coir) fiber, and rice straw wattles (e.g., Earthsaver wattles: biodegradable, photodegradable, burlap).

If it is determined that special-status birds (or those protected by the MBTA and CFGC) and special-status mammals, reptiles, or amphibians have the potential to occur, then the following mitigation measures will be required.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Construction and/or facility lighting will be designed to minimize or lessen the attraction of birds, bats, or their prey to the project site. Best practices for lighting for avian species conflict with those for bats. Best practices for avian species include using non-steady burning lights (e.g., red, dual red, and white strobe-like flashing lights) using motion or heat sensors and switches to reduce the time when lights are illuminated, using appropriate shielding to reduce horizontal or skyward illumination, and avoiding the use of high-intensity lights (e.g., sodium vapor, quartz, halogen). Best practices for lighting for bat species include avoiding green and red lights, as these interfere with migration patterns. White lighting tends to attract prey species and increase foraging. Lighting adjacent to wildlife areas should be limited to an upper limit of 3,000 on the Kelvin color temperature scale and shielded to prevent light from entering the wildlife area.

Night lighting will be designed for best practices for both avian and bat species, while also considering special-status reptiles and amphibians. Some design measures could include construction and facility lighting designed to prevent casting light toward surrounding wildlife habitats and the riverbed and using non-steady burning lights and avoiding green and red lights.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Biological monitors will ensure that any installed poles, whether temporary or permanent, will not have openings that could entrap birds or bats. Construction contractors will be required to seal and cap all openings in poles or provide for escape routes (i.e., openings accommodating escape for various species). Installation of poles will not begin until it is demonstrated that the poles can be adequately capped and/or sealed on installation.

If it is determined that special-status wildlife, nesting birds, raptors, or eagles could occur, then the following mitigation measure will be implemented.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

The implementing agency will incorporate setbacks, berms, walls, or similar noise-attenuating method to avoid and minimize the effects of noise on special-status wildlife, nesting birds, raptors, or eagles in noise-generating activities affecting areas where special-status wildlife has been identified. Wildlife habitat areas occupied by sensitive species will not be subject to noise that will exceed residential noise standards as specified in Section 3.12, *Noise*. If the biological monitor determines that noise generation by construction activities may affect nesting, the biological monitor may require the monitoring of noise by a qualified technician, if attenuation

is not possible. Setbacks or other structures will be sufficient to ensure noise attenuates adequately to avoid disturbance of special-status wildlife, nesting birds, raptors, or eagles. If noise standards cannot be met, other measures may be incorporated, such as delaying construction until nesting is completed (for nesting birds) or until special-status species are no longer present or until a take permit for special-status species is obtained.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Frame 1

Special-Status Plant Species

Because it is unlikely that any special-status plant species would occur within the project footprint of Typical Projects within Frame 1 (as detailed in the *Construction* subsection, above), no direct impacts on special-status plant species potentially occurring within Frame 1 are anticipated as a result of Typical Projects operations. Indirect disturbances, such as dust and introduction of invasive species, could degrade suitable or occupied habitat located in areas adjacent to or nearby Common Elements and Multi-use Trails and Access Gateways Typical Project facilities, as described in detail in the *Construction* subsection, above. In addition, landscaping runoff and other maintenance/repair operations could indirectly affect adjacent or nearby habitat by increasing runoff of fertilizers, green waste, or maintenance chemicals and petroleum products.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Additional indirect recreational impacts on special-status plants may include changes in vegetation cover through increases in invasive species by the spread of weeds and soil compaction due to the use of trails. Direct impacts may include plant mortality due to crushing of plants from hiking, walking, and equestrian uses. Homeless encampments may also increase or decrease in size with recreational uses, depending on the use, which could also result in impacts on adjacent or nearby habitat.

Special-Status Wildlife Species

During the desktop analysis, the special-status wildlife species in Table 3.3-3 were noted to have some potential to occur.

Federally Listed Marine Species

As described above in the *Construction* section, direct impacts on these species due to operations of the Typical Projects are not anticipated. Operations indirect impacts on these species could include trash in the watercourse, unintentional poisoning due to rodenticide programs in upland areas, and exposure to pesticides and herbicides. Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Indirect operations effects due to recreational uses to federally listed marine species may include the introduction of toxoplasmosis infection (from droppings of domestic cats) to sea mammals.

Special-Status Fish Species

Direct operations impacts on tidewater goby in Frame 1 are not anticipated due to the operations of the Typical Projects because these projects are located along the LA River in upland areas and would not be within or adjacent to aquatic environments where this species could be directly affected by operations.

Indirect impacts on special-status fish from operations of Typical Projects may consist of dust, erosion, trash in the watercourse, pesticide use in upland areas, and chemical spills as discussed above, under *Construction*.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Indirect operations effects due to recreational uses to special-status fish species may include increases in trash, increases in sedimentation from erosion, and chemical spills. These impacts on special-status fish have been discussed further above under *Construction*.

Special-Status Birds, Raptors, and Migratory Birds

Maintenance impacts (e.g., mowing, weed control, tree, and palm trimming) of Typical Projects on birds during operations could result in the removal or disturbance of areas that provide potential nesting habitat for a diverse population of birds. Operations impacts could include the unintentional poisoning of raptors through the use of rodenticides. After habitat destruction, windows are the leading cause of bird mortality (USFWS 2018); lethal and sublethal effects to special-status birds, raptors, and migratory birds could include window strikes during operations. Operations and maintenance activities conducted in areas of nesting habitat during the breeding season (generally between February 1 and September 1) could disturb nesting birds, which could cause nest abandonment and subsequent loss of eggs or developing young at active nests in or near the area of activity.

Alteration of movement and migration patterns of bird species could occur due to project lighting. Habitat fragmentation through the widening of the urban corridor in areas where intact vegetation had previously been present could occur due to project operations. However, because of the existing constrained nature of the proposed Project and generally low habitat quality, the impact of habitat fragmentation is expected to be minimal.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Additional indirect recreational impacts on special-status birds, raptors, and migratory birds may include human disturbance of nesting, foraging, mating, and resting through human activities such as hiking, bird watching, walking, biking, and use of the river. Indirect effects could occur through changes in vegetation cover by increases in invasive species from tracking in weeds during activities such as hiking, walking, and equestrian uses, which also increase soil compaction. Direct impacts from trash (i.e., entanglement, ingestion, increases in predators or competition) may occur. Direct impacts of recreation may include mortality due to collisions with bikes; and increased predation of nesting sites by domestic predators (i.e., dogs and cats).

Special-Status Mammals

Direct operations effects on mammals could include ground disturbance during operations activities. Burrowing, denning, and foraging habitat may be directly affected. In addition, increased noise levels and human presence may accelerate local shifts in populations. Some free-ranging

mammals may avoid the area and be funneled along the proposed Project until locating a wildlife crossing. Night lighting may attract insects and therefore may attract some bat species to the project area, which could result in mortality of bats from collisions with cars.

Vehicles, including cars, have a direct risk of collision for bat species. Many bat species are long lived, but have low fecundity (one to two offspring per year) (Kunz and Fenton 2003), so even a moderate increase in mortality can have large effects on populations (Schorcht et al. 2009). In addition to the direct effects associated with collision mortalities, roads can act as barriers to movements of bats between habitats. Increases in noise and night lighting could also affect bat species or how bats use the Typical Projects, including all permanent components, such as the cafés, areas to be lit at night, parking areas, etc.

Pallid bats, western mastiff bats, western yellow bats, pocketed free-tailed bats, and big free-tailed bats may be attracted to the open environment of the LA River. Similarly, light may deter some species, but attract other species.

Low-flying species are more prone to collisions than high-flying species, and juveniles are more vulnerable than adults, with a significant bias toward male casualties (Fensome and Mathews 2016). Pallid bats, Townsend's big-eared bats, western red bats, Mexican long-tongued bats, western red bats, and western yellow bats are low-flying species. In a 2016 study, Fensome and Mathews) found that most bat casualties were from the genus Pipistrellus and Myotis. Less common were casualties from high-flying species. It has been observed that the higher a bat flies as it approaches a road/crossing, the more likely it is to cross (Bennett and Zurcher 2013), and even though low-flying species are less likely to cross, it was still demonstrated that these species have much higher mortality associated with roads and crossings. Low-flying species often prefer to use bridges and underpasses to cross, rather than flying directly over the road or crossing (Bennett and Zurcher 2013).

Local noise and motion disturbance effects resulting from operations may cause avoidance behavior or alter foraging ability/efficiency for bat species. Night lighting could disrupt local movement or migration patterns of bat species.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Additional indirect recreational impacts on special-status mammals may include human disturbance through hiking, bird watching, walking, biking, and use of the river on behavior such as foraging and denning. Additional indirect impacts include changes in night lighting, and therefore may affect prey availability for bats. Increases in weeds through foot traffic, equestrian uses, and biking may result in increases in invasive plant species and soil compaction, which would lead to changes in vegetation composition. Direct impacts may include mortality due to collisions with bikes.

Special-Status Reptiles

Direct impacts resulting from Typical Projects could include injury or mortality to special-status reptiles associated with direct collisions with vehicles. Security fencing would not prohibit or deter reptile species from accessing Typical Projects, so individuals could enter the area occasionally, which could result in a direct strike from landscape-maintenance activities or related maintenance/repair activities.

Indirect impacts on special-status reptiles resulting from operations of Typical Projects could occur. Artificial perch sites created by the project components (e.g., security fencing, light poles, elevated

structures) could increase predation from birds on special-status reptiles. Increases in invasive species from operation activities could reduce the quantity and quality of refuges. Spills of fuel, oil, and other pollutants from operations or maintenance equipment could reduce the quality of habitat.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Additional indirect recreational impacts on special-status reptiles may include impacts from human use, such as hiking, walking, biking, and use of the river, on behaviors such as foraging, and predator avoidance. Other indirect effects may include increases in invasive species from activities like foot traffic, equestrian uses, hiking, and biking, which would also increase soil compaction. Direct effects may include mortality due to collisions with horses, humans, and bikes.

Frame 2

Special-Status Plant Species

Special-status plant species would not be expected to occur within the built components of the Typical Projects within Frame 2, as the facilities would either be developed or landscaped with ornamental or commonly occurring native plant species. As such, no direct impacts on special-status plant species potentially occurring within Frame 2 are anticipated as a result of Typical Projects operations. Indirect disturbances, such as dust and introduction of invasive species, landscaping, and repairing, could degrade suitable or occupied habitat located in the area surrounding Common Elements and Multi-use Trails and Access Gateways Typical Projects, as described for special-status plant species in the construction subsection for Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Within Frame 2, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee. Indirect impacts on this species as a result of operations of Typical Projects could include the use of pesticides and herbicides and increases in invasive plant species. Herbicide use can degrade habitat and remove floral resources. Pesticide use can cause bee mortality and have sublethal effects. Neonicotinoids are more likely to directly harm bumble bees because they are broadly toxic to insects. Fungicides can also lead to increased susceptibility to pathogens and parasites. Invasive plant species may be introduced during operations, outcompeting native plant species that provide nectar sources for bumble bees.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Additional indirect recreational impacts on special-status invertebrates may include human disturbance of floral resources and burrow sites through activities such as hiking, bird watching, walking, biking, and use of the river. Other indirect impacts may include increases in invasive species due to the spread of weeds through human activities like hiking, biking, walking, equestrian uses, and use of the river. Soil compaction may also occur. Direct impacts may include mortality due to collisions with bikes.

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect operations impacts of the Typical Projects on special-status birds, raptors, and migratory birds are similar to those as described for operations in Frame 1.

Special-Status Mammals

Operations impacts within Frame 2 for the Typical Projects would be similar to those discussed for special-status mammals for operations for Frame 1. Additional operations impacts on special-status mammals in Frame 2 could include direct impacts on San Diego black-tailed jack rabbit through inadvertent poisoning during rodent control programs.

Special-Status Reptiles

Direct and indirect operations impacts on special-status reptiles for the Typical Projects would be similar to those discussed for special-status reptiles for operations in Frame 1.

Frames 3 and 4

Special-Status Plant Species

Special-status plant species would not be expected to occur within the built components of the Typical Projects within Frames 3 and 4 because the facilities would either be developed or landscaped with ornamental or commonly occurring native plant species. As such, no direct impacts on special-status plant species potentially occurring within Frames 3 and 4 are anticipated as a result of Typical Projects during operations. Indirect disturbances, such as dust and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding Common Elements and Multi-use Trails and Access Gateways Typical Project facilities, would be similar to those as described for special-status plants in the construction subsection for Frame 1.

Special-Status Wildlife Species

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect operations impacts in Frames 3 and 4 for the Typical Projects on special-status birds, raptors, and migratory birds would be similar to those as described for special-status birds, raptors, and migratory birds for operations in Frame 1.

Special-Status Mammals

Direct and indirect operations impacts within Frames 3 and 4 Typical Projects would be similar to those discussed for special-status mammals in Frame 1.

Special-Status Reptiles

Direct and indirect operations impacts for Typical Projects on special-status reptiles within Frames 3 and 4 would be similar to those discussed for special-status reptiles for operations in Frame 1.

Frame 5

Special-Status Plant Species

Special-status plant species would not be expected to occur within the built components of the Typical Projects within Frame 5, as the facilities would either be developed or landscaped with ornamental or commonly occurring native plant species. As such, no direct impacts on special-status plant species potentially occurring within Frame 5 are anticipated as a result of Typical Projects operations. Indirect disturbances, such as dust and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding Common Elements and Multi-use Trails and Access Gateways Typical Project facilities, as described in detail in the *Operations* subsection for Frame 1 above.

Special-Status Wildlife Species

Special-Status Invertebrates

Impacts on Crotch's bumble bee as a result of operation of the Typical Projects would be similar to those described for special-status invertebrates for operations in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect operations impacts on special-status birds, raptors, and migratory birds are similar to those as described for special-status birds, raptors, and migratory birds for operations in Frame 1.

Special-Status Mammals

Operations impacts on special-status bats within Frame 5 would be similar to those discussed for special-status mammals for operations in Frame 1. Operations impacts on San Diego black-tailed jackrabbit would be similar to those described for this species in Frame 2.

Temporary operations impacts on San Diego desert woodrat, southern grasshopper mouse, and Los Angeles pocket mouse could result from vehicle traffic damaging vegetation, foraging, and burrowing areas. Permanent operations impacts would include the disruption of local movement patterns due to operation night lighting and the unintentional poisoning through the use of rodenticides. These small mammals may also become entrapped in uncovered pipes and fall into and become trapped in trenches or pits. Direct mortality of these species due to collisions with bikes during recreational uses may occur.

Due to the large home-range size of American badger and the low probability of badgers occurring, operations-related direct impacts are not expected to occur for this species. Other direct and indirect impacts on badger would be expected to be negligible.

Special-Status Reptiles and Amphibians

Operations-related impacts on special-status reptile and amphibian species would be similar to those discussed in Frame 1 for special-status reptiles.

Frame 6

Special-Status Plant Species

Special-status plant species would not be expected to occur within the built components of the Typical Projects within Frame 6 because the facilities would either be developed or landscaped with ornamental or commonly occurring native plant species. As such, no direct impacts on special-status plant species potentially occurring within Frame 6 are anticipated as a result of Typical Projects during operations. Indirect disturbances, such as dust and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding Common Elements and Multi-use Trails and Access Gateways Typical Project facilities, as described in detail in the *Operations* subsection for special-status plant species in Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Impacts on Crotch's bumble bee within Frame 6 as a result of operations of Typical Projects would be similar to those described for Crotch's bumble bee for operations in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Impacts on special-status birds, raptors, and migratory birds with Frame 6 as a result of operations of Typical Projects would be similar to those described for special-status birds, raptors, and migratory birds for operations in Frame 1.

Special-Status Mammals

Operations impacts Typical Projects on special-status bats within Frame 6 would be similar to those discussed above for operations in Frame 1. Operations impacts on San Diego black-tailed jackrabbit for Typical Projects for operations would be similar to those described for this species in Frame 2. Operations-related impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described for these species in operations in Frame 5.

Special-Status Reptiles and Amphibians

Within Frame 6, two special-status amphibians have potential to occur: western spadefoot and coast range newt, both State species of special concern. Operations-related impacts on special-status reptiles and amphibians for Typical Projects would be similar to those discussed for special-status reptiles for operations in Frame 1.

Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects. Additional indirect recreational impacts on special-status reptiles and amphibians may include impacts from human use, such as hiking, walking, biking, and use of the river, on behaviors such as foraging and predator avoidance. Other indirect effects may include increases in invasive species from activities such as foot traffic, equestrian uses, hiking, and biking, which would also increase soil compaction. Indirect impacts from recreational uses on amphibians may affect vocalizations used for mating. Direct effects may include mortality due to collisions with horses, humans, and bikes.

Frame 7

Special-Status Plant Species

Because it is unlikely that any special-status plant species would occur within the project footprint of Typical Projects within Frame 7 (as detailed in the construction subsection above), no direct impacts on special-status plant species potentially occurring within Frame 7 are anticipated as a result of Typical Projects operations. Indirect disturbances, such as dust and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding Common Elements and Multi-use Trails and Access Gateways Typical Project facilities, as described in detail in the *Construction* subsection of Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Impacts on Crotch's bumble bee within Frame 7 as a result of operations of Typical Projects would be similar to those described for operations in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Impacts on special-status birds, raptors, and migratory birds within Frame 7 as a result of operations of Typical Projects would be similar to those described for these species for operations in Frame 1.

Special-Status Mammals

Operations impacts for Typical Projects to special-status bats within Frame 7 would be similar to those discussed for operations in Frame 1. Operations impacts on San Diego black-tailed jackrabbit would be similar to those described for operations in Frame 2. Operations-related impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described for operations in Frame 5.

Special-Status Reptiles and Amphibians

Operations-related impacts for Typical Projects to special-status reptiles and amphibians would be similar to those discussed for operations in Frame 1 for special-status reptiles and Frame 6 for special-status reptiles and amphibians.

Frame 8

Special-Status Plant Species

Because it is unlikely that any special-status plant species would occur within the project footprint of Typical Projects within Frame 8 (as detailed in the *Construction* subsection, above), no direct impacts on special-status plant species potentially occurring within Frame 8 are anticipated as a result of Typical Projects operations. Indirect disturbances, such as landscape runoff and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding Typical Projects facilities, as described in detail in the *Construction* subsection for Frame 1 above.

Special-Status Wildlife Species

Special-Status Invertebrates

Impacts on Crotch's bumble bee within Frame 8 as a result of operations of Typical Projects would be similar to those described for operations in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Impacts on special-status birds, raptors, and migratory birds within Frame 8 as a result of operations of Typical Projects are described for operations in Frame 1.

Special-Status Mammals

Operations impacts of Typical Projects to special-status bats within Frame 8 would be similar to those discussed above for operations in Frame 1. Operations impacts on San Diego black-tailed jackrabbit would be similar to those described above for operations in Frame 2. Operations impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described for operations in Frame 5.

Special-Status Reptiles and Amphibians

Operations impacts for Typical Projects to special-status reptiles and amphibians within Frame 8 would be similar to those discussed for operations in Frame 1 for special-status reptiles and Frame 6 for special-status reptiles and amphibians.

Frame 9

Special-Status Plant Species

Special-status plant species would not be expected to occur within the built components of the Typical Projects within Frame 9 because the facilities would either be developed or landscaped with ornamental or commonly occurring native plant species. As such, no direct impacts on special-status plant species potentially occurring within Frame 9 are anticipated as a result of Typical Project operations. Indirect disturbances, such as landscape runoff and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding Common Elements and Multi-use Trails and Access Gateways Typical Project facilities, as described in detail in the *Construction* subsection for Frame 1.

Special-Status Wildlife Species

Special-Status Invertebrates

Impacts on Crotch's bumble bee in Frame 9 as a result of operations of Typical Projects would be similar to those described for operations in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Impacts on special-status birds, raptors, and migratory birds as a result of operations of Typical Projects in Frame 9 would be similar to those described for operations in Frame 1.

Special-Status Mammals

Operations impacts on special-status bats within Frame 9 for Typical Projects would be similar to those discussed for operations in Frame 1. Operations impacts on San Diego black-tailed jackrabbit would be similar to those described for operations in Frame 2. Operations-related impacts on San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger would be similar to those described for operations in Frame 5.

Special-Status Reptiles and Amphibians

Operations-related impacts of Typical Projects to special-status reptiles and amphibians would be similar to those discussed for special-status reptiles for operations in Frame 1.

Impact Determination

Impacts would be potentially significant.

Operation of the Typical Projects could have a substantial adverse impact, either directly or through habitat modifications, on sensitive species, including indirect impacts on marine species, and direct and indirect impacts on plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Mitigation Measures

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

The implementing agency will require that all installed trash canisters will be wildlife proof/animal tamper resistant. The design will ensure that the trash will be securely stored to keep wildlife from being attracted to the project site. Trash containers must be resistant to mountain lions.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

The implementing agency will require that glass used in the design of buildings and other facilities is bird safe. Bird-safe glass is designed specifically for making glass a visible obstacle to birds, while still being transparent to humans.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

The implementing agency will require that a pest management plan be developed by a qualified biologist. To prevent the inadvertent poisoning of raptors and non-target animals during operations, pest-control measures will prohibit the use of rodenticides. Other methods of rodent control, such as resetting lethal rat traps (https://goodnature.co.nz/), will be used. As a part of the pest-management plan, the use of neonicotinoid pesticides will be prohibited, as these are known to be harmful to bumble bees.

To avoid the spread of invasive species and encourage the use of native plant species, the following mitigation measure will be implemented.

Mitigation Measure BIO-18: Prohibit Use of Invasive Species during Operations.

The implementing agency will require landscape plans to prioritize the use of native plant species and will prohibit the use of invasive, nonnative plant species. The species on the invasive plant species listed on the Invasive Species of California website (http://ice.ucdavis.edu/invasives/home/species) will be prohibited within or adjacent to the LA River or within wildlife corridors or sensitive habitat.

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

With implementation of the above mitigation measures, operation of the Typical Projects will not affect, either directly or through habitat modifications, marine species, plants, invertebrates, fish,

mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Significance after Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Typical Projects analyzed above could be implemented in whole or as a combination of their individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Typical Projects, see above. The impact discussion below focuses on specific KOP categories only.

The impacts on special-status plants and wildlife due to KOP Category 1, KOP Category 3, KOP Category 4, and KOP Category 5 were similar in type and scope for each taxonomic group, so these KOP categories were grouped together for this analysis. In addition, all four of these KOP categories have impacts both in-channel and off-channel. The analysis of KOP Category 6 was conducted separately because no in-channel impacts are associated with this KOP. The impacts of KOP Category 2 are expected to be similar to KOP Categories 1, 3, 4, and 5, with the exception that beneficial effects due to terracing of banks and planting trays is expected to provide habitat for both special-status plants and wildlife, a global beneficial effect, so the analysis for KOP Category 2 was conducted separately.

KOP Categories 1, 3, 4, and 5

Construction

The construction of KOP Category 1 would be similar in scope and type as to the construction of the Typical Projects. The additional design components include the construction of light towers, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridors, all of which would contribute to new construction impacts. Habitat corridors consisting of planted vegetated buffers and connections between large habitat blocks would also be constructed. In-channel impacts are expected to include channel access points, vehicular access points to the channel for maintenance and operations, and underpasses and overpasses on the channel.

KOP Category 3 construction activities would include the construction of crossings and platforms that would include multiuse bridges for pedestrian, bike, and equestrian access, as well as wildlife/habitat bridges. It is anticipated that this would require in-channel construction activities for footings and piers.

In KOP Category 4, pumps, diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors, and wetlands would be constructed. This construction could include the removal of existing vegetation, where present, and land cover and the conversion to project components. The creation of wetlands could be beneficial to special-status plants and wildlife.

The construction of KOP Category 5 includes the limited opportunities along the LA River for floodplain reclamation. Construction could include the removal of existing in-channel and adjacent

off-channel vegetation and land cover types and replacement of these vegetation types with reclaimed floodplain. Floodplain reclamation includes wetlands, naturalized banks, braided channels, fields, storage, and side channels.

Special-Status Plant Species

Direct impacts on special-status plant species due to the construction of KOP Categories 1, 3, 4, and 5 would be as the same as those described for the Typical Projects. However, in-channel components may have increased direct impacts depending on the location within the channel (e.g., along the channel walls versus within the channel bottom). In addition, in-channel indirect impacts could occur due to the construction of these KOP categories. In Frame 1, in-channel species, such as salt marsh species, could occur in-channel where potentially suitable pickleweed mats herbaceous alliance habitat is present. In earthen portions of Frame 6, in-channel impacts could occur to sensitive plant species that may be present. Sensitive species may experience direct impacts (e.g., removal of suitable habitat or direct injury and/or mortality) during KOP construction.

Direct impacts on special-status plant species due to the construction of KOP Category 5 could include the removal of existing in-channel and adjacent out of channel vegetation and land cover types and replacement of vegetation and land cover with wetlands, naturalized banks, braided channels, fields, storage, and side channels. These impacts could include direct mortality of any special-status plants present or degradation of existing habitat.

Indirect impacts on special-status plants due to the construction of these KOP categories would be similar to those discussed above in Typical Projects. In addition, in-channel construction could indirectly affect sensitive plants through downstream sedimentation, chemical/petrochemical releases, and release of construction debris, such as concrete chippings that can alter water acidity/alkalinity.

Special-Status Wildlife Species

Federally Listed Marine Species

With the exception of in-channel construction within Frame 1, direct construction impacts on federally listed marine species are not anticipated to result from construction of the KOP Categories 1, 3, 4, or 5. These categories are anticipated to be proposed along the LA River in freshwater habitat and would not be within or adjacent to marine environments where these species would be directly affected by construction. Should any in-channel work occur within Frame 1, then direct and indirect impacts on federally listed marine species could occur if species are present, but the probability of these species occurring is low. Tidal influence extends up a portion of the channel, and it is possible that turtles and Guadalupe fur seal could be present within portions of the channel within Frame 1.

Indirect impacts on federally listed marine species are discussed above in Typical Projects, Frame 1, *Construction*. In addition, indirect impacts from construction in-channel may include underwater noise increases, increases in sediment, and increases in turbidity.

Special-Status Fish Species

Tidewater goby can occur in lagoons, estuaries, and salt marshes where brackish water conditions occur. Brackish zones suitable for this species exist in Frame 1. Impacts on this species due to KOP Categories 1, 3, 4, and 5 could occur due to in-channel modifications, the installation of piers or footings from crossings and platforms, the alteration from the upstream flow being diverted and

substantially changing the downstream hydrological input, and habitat loss due to conversion. Both direct and indirect impacts on tidewater goby could occur during construction of these structures or other in-channel work. Direct impacts could include mortality due to construction, changes in flow, or loss of habitat.

Indirect impacts on special-status fish from construction may consist of shading, dust, erosion, and chemical spills. Dust can lead to increased levels of sediment and turbidity in the water, which can reduce biological productivity of aquatic systems. Increased sediment and turbidity can reduce aquatic plant growth, which can reduce secondary productivity for organisms that feed on plant material, which often provide food for fish. Increased sediment can also cause lethal and sublethal effects on fish and their habitat. Suspended sediment can kill fish directly or over short periods of time. Sublethal effects can occur due to effects on feeding and growth, cover and risk of predation, avoidance and displacement, egg development and survival, and primary and secondary productivity. Chemical spills from construction equipment could be lethal or sublethal to special-status fish populations. Reducing water quality can affect foraging, breeding, and egg laying negatively.

Special-Status Invertebrates

Direct impacts on Crotch's bumble bee as a result of construction of KOP Categories 1, 3, 4, and 5 could include the crushing of nest and overwintering sites, the direct loss of floral resources, mortality through collisions with construction site traffic, and the permanent or temporary loss of occupied Crotch's bumble bee habitat.

Special-Status Birds, Raptors, and Migratory Birds

Generally, direct and indirect impacts on special-status birds, raptors, and migratory birds due to the construction of KOP Categories 1, 3, 4, and 5 would be as described for the Typical Projects. However, in-channel construction within Frames 1 and 6 could result in a higher degree of impact, especially for direct removal or alteration of earthen channel bottom areas.

Special-Status Mammals

Construction-related direct and indirect impacts on special-status mammals due to the construction of KOP Categories 1, 3, 4, and 5 would be generally as described for the Typical Projects.

Special-Status Reptiles and Amphibians

Construction-related direct and indirect impacts on special-status reptiles and amphibians due to the construction of KOP Categories 1, 3, 4, and 5 would be generally as described for the Typical Projects.

The construction of the KOP Categories 1, 3, 4, and 5 could have a substantial adverse impact, either directly or through habitat modifications, on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys.

Mitigation Measure BIO-2: Avoid or Minimize Sensitive Species and Consult with Resource Agencies and Implement Requirements.

Mitigation Measure BIO-3a: Conduct Preconstruction Nesting Bird Surveys.

Mitigation Measure BIO-3b: Conduct Preconstruction Raptor Nest Surveys.

Mitigation Measure BIO 3c: Active Eagle Nest Avoidance Measures.

Mitigation Measure BIO-3d: Conduct Burrowing Owl Preconstruction Surveys.

Mitigation Measure BIO-3e: Conduct Preconstruction Special-Status Bat Surveys.

Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.

Mitigation Measure BIO-3g: Conduct Preconstruction Surveys for American Badger.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-7: No Intentional Collection and/or Killing of Plants or Wildlife.

Mitigation Measure BIO-8: Work Stoppage.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Where opportunities for habitat reclamation efforts exist, the following mitigation measure will also be implemented.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Where habitat reclamation opportunities exist (e.g. floodplain reclamation, creation of naturalized banks, braided channels, habitat blocks for crossing and platforms, wetlands through diversions, wetland terraces and planting trays), restoration BMPs will be used. These will include the following:

- Planting of invasive species will be prohibited, as specified in Mitigation Measure BIO-18, Invasive Species, Operations.
- The plant palette for restoration will be composed of native species that will be expected within the project area.
- If special-status plant species were removed prior to reclamation efforts, where feasible, these will be replanted within the reclamation site.
- A qualified biologist will assist in the design of habitat reclamation efforts. The biological goal of each reclamation site may differ (e.g., one site may function mainly as a wildlife corridor, whereas another may provide foraging habitat for special-status mammals), but given the limited amount of reclamation opportunities in the LA River, the wildlife and botanical goals that each reclamation site can achieve will be maximized.
- Upstream hydrological regimes and conditions and their impacts on the project area will be assessed.

With implementation of the mitigation measures, construction of KOP Categories 1, 3, 4, and 5 would not affect either directly or through habitat modifications, any sensitive species identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Significance after Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The operation of KOP Category 1 would be similar in scope and type as to the operation of the Typical Projects. Additional design components including light towers, channel access points, vehicular access for maintenance and operations, and underpasses and overpasses, would contribute to new operations impacts, or in the case of habitat corridors, beneficial effects on biological resources. In-channel impacts are expected to include channel access points, vehicular access points to the channel for maintenance and operations, and underpasses and overpasses on the channel.

KOP Category 3 operations activities would include the operation of crossings and platforms that would include multi-use bridges for pedestrian, bike, and equestrian access, as well as wildlife/habitat bridges, where platforms could include riparian and upland vegetation and conditions, allowing for wildlife migration.

In KOP Category 4, during operations, can provide opportunities for treatment and reuse of water for groundwater recharge, habitat features, or recreational opportunities during smaller storm events, or in the dry season, when flows are reduced.

In KOP Category 5, any reclamation efforts are anticipated to be small-scale, but could have significant benefits for ecosystem function. Ecological operational uses could include naturalized banks and a wider channel to support habitat. Some recreational operational uses could include boardwalk platforms and farmer's markets. KOP Category 5 could include the removal of existing in-channel and adjacent out-of-channel vegetation and land cover types and replacement of these vegetation types with reclaimed floodplain. Floodplain reclamation includes wetlands, naturalized banks, braided channels, fields, storage, and side channels.

Special-Status Plant Species

The impacts of operations of KOP Categories 1, 3, 4, and 5 has the potential for small-scale beneficial effects to special-status plants. Although floodplain reclamation opportunities in the LA River are limited, the conversion of urban or similar land cover types to floodplains, naturalized banks, braided channels, could provide real benefits to special-status plants in the region. The level of benefit will depend on the individual KOP design. Providing essential habitat components could be beneficial to special-status plants. No direct impacts on special-status plant species potentially occurring are anticipated as a result of KOP Category 4 during operations.

Indirect disturbances, such as dust, landscape runoff, altered water availability due to diversions, and introduction of invasive species, could degrade suitable or occupied habitat located in the areas adjacent to KOP Categories 1, 3, 4, and 5, as described in detail in the construction subsection above.

The construction of KOP Category 1 could provide habitat corridors, planted vegetated buffers, and connections between large habitat blocks, which could provide beneficial effects to special-status plants. Similarly, the crossings and platforms of KOP Category 3 could provide beneficial effects by providing connections between large habitat blocks for special-status plants. If areas are intended to function as habitat corridors, design would be important. Beneficial effects to special-status plants of KOP Category 4 could include groundwater recharge and the creation of wetlands and habitat features. Restoration efforts associated with KOP Category 5 could provide habitat for special-status plants.

Special-Status Wildlife Species

Federally Listed Marine Species

Seven federally listed marine species were identified as having potential to occur: white abalone, black abalone, loggerhead sea turtle, green turtle, leatherback sea turtle, olive Ridley sea turtle, and Guadalupe fur seal.

With the exception of in-channel operations within Frame 1, operations impacts on federally listed marine species are not anticipated due to the operation of the KOP Categories 1, 3, 4, and 5. These categories are anticipated to be proposed along the LA River in freshwater habitat and would not be within or adjacent to marine environments where these species could be directly affected by operations. Tidal influence extends up a portion of the channel, and it is possible that turtles and Guadalupe fur seal could be present within portions of the channel within Frame 1. Operations impacts on these species could include trash in the watercourse, increased sediment and water turbidity, unintentional poisoning due to rodenticide programs in upland areas, and exposure to pesticides and herbicides.

Recreational use along the LA River may substantially increase due to implementation of KOP Categories 1, 3, 4, and 5. Additional indirect recreational impacts on federally listed marine species

may include the introduction of toxoplasmosis infection (from droppings of domestic cats) to sea mammals.

Special-Status Fish Species

One special-status fish species was identified as having potential to occur: tidewater goby. Brackish zones suitable for this species occur in Frame 1. Direct impacts on this species due to the operation of KOP Categories 1, 3, 4, and 5 may occur. If this species is present in Frame 1, then direct and indirect impacts during operations could include mortality due to in-channel modifications if the hydrological regime must be modified for operations or maintenance.

Indirect operations impacts could include increased trash in the watercourse, increased sediment and water turbidity, and exposure to pesticides and herbicides. Indirect impacts on tidewater goby in Frame 1 due to operations could occur due to shading from the crossings and platforms in occupied habitat.

Potential beneficial operations effects for this species could include the restoration of previously unoccupied, unsuitable habitat for this species within Frame 1 to provide suitable habitat or the enhancement of occupied habitat.

Recreational use along the LA River may substantially increase due to implementation of KOP Categories 1, 3, 4, and 5. Additional indirect recreational impacts on special-status fish species may include trash in the watercourse, which could lead to entanglement and ingestion. Other indirect impacts may include chemical spills and increases in sedimentation from erosion. These impacts on special-status fish have been discussed further above under construction impacts.

Special-Status Invertebrates

Within Frame 2, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee.

Direct impacts on this species as a result of operations of KOP Categories 1, 3, 4, and 5 could include the use of herbicides that reduce abundance of floral resources for bumble bees, affecting for foraging and nesting habitat. Pesticide use, including insecticides (specifically neonicotinoids) and fungicides could directly affect bumble bees through mortality and sublethal impacts. Insecticides are broadly toxic to insects. The use of nonnative landscape plants could also reduce foraging and reproduction site availability.

The operation of KOP Categories 1, 3, 4, and 5 could provide beneficial effects, including habitat corridors, planted vegetated buffers, and connections between large habitat blocks. In addition, the conversion of urban land cover types to floodplains, naturalized banks, and braided channels could provide beneficial effects. With native vegetation, these areas could provide essential habitat components, such as foraging areas for Crotch's bumble bee, which would be beneficial to this species. This would provide habitat for foraging and overwintering sites. If areas are intended to function as habitat corridors, effective design would be important for preventing unintended deleterious consequences to special-status species.

Recreational use along the LA River may substantially increase due to implementation of KOP Categories 1, 3, 4, and 5. Additional indirect recreational impacts on special-status invertebrates may include disturbance of floral resources and burrow sites through human activities such as hiking, bird watching, walking, and biking. Other indirect impacts include increases in invasive

species by the spread of weeds through activities such as hiking, walking, and equestrian uses, which also lead to soil compaction. Direct impacts may include mortality due to collisions with bikes.

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect operations impacts for special-status birds, raptors, and migratory birds of KOP Categories 1, 3, 4, and 5would include the operations impacts described for the Typical Projects. In addition, maintenance of deck or pier structures could affect bridge dwelling birds (e.g., swifts and swallow) that construct mud nests on bridge structures.

Because the LA River mainly is concrete-lined, in-channel impacts from channel access points and vehicular access for maintenance and operations are not expected to impact special-status birds, raptors, and migratory birds. However, some operations activities could affect adjacent nest sites in Frames 1 and 6 if the operations activities have increased noise or visual effects compared to ambient conditions.

The operation of KOP Categories 1, 3, 4, and 5 could provide nesting and roosting sites for some species, which could be beneficial for those species, but could lead to increased competition for resources between common and special-status avian species.

The operation of KOP Categories 1, 3, 4, and 5 would provide habitat corridors, planted vegetated buffers and connections between large habitat blocks, conversion of urban land cover features to wetlands, and habitat features that could provide beneficial effects to special-status birds, raptors, and migratory birds. Crossings and platforms could provide beneficial effects by providing connections between large habitat blocks for golden and bald eagles, thereby enhancing foraging habitat. Other beneficial effects could include providing for groundwater recharge and a potential increase in available water for avian species. If water quality is poor, it could be a negative impact on avian species. If areas are intended to function as habitat corridors, design would be important for preventing unintended deleterious consequences to special-status species.

During operations, beneficial effects to special-status birds, raptors, and migratory birds could occur due the conversion of urban land cover types to floodplains, naturalized banks, and braided channels and maintenance of these areas during operations. With native vegetation, these areas could provide essential habitat components such as foraging, roosting, and nesting areas that would be beneficial to avian species.

Recreational use along the LA River may increase substantially due to implementation of KOP Categories 1, 3, 4, and 5. Additional indirect recreational impacts on special-status birds, raptors, and migratory birds may include human disturbance of nesting, foraging, mating, and resting through human activities such as hiking, bird watching, walking, biking, and use of the river. Indirect effects through changes in vegetation cover by increases in invasive species through tracking in weeds through activities such as hiking, walking, and equestrian uses, which also increase soil compaction. Direct impacts from trash (e.g., entanglement, ingestion, increases in predators or competition) may occur. Direct impacts of recreation may include mortality due to collisions with bikes and increased predation of nesting sites by domestic predators (i.e., dogs and cats).

Special-Status Mammals

Direct and indirect operations effects on mammals of KOP Categories 1, 3, 4, and 5would include the operations impacts described for the Typical Projects.

The operation of KOP Category 1 could provide roosting sites for special-status bat species, which could be beneficial. Light towers would provide increased night lighting impacts on special-status bats.

Operation of these KOP categories could provide habitat corridors (i.e., crossings and platforms could provide beneficial effects by providing connections between large habitat blocks), planted vegetated buffers, and connections between large habitat blocks that would provide beneficial effects to special-status mammals. These beneficial effects could occur due to the conversion of urban land cover features to wetlands and habitat features. Providing essential habitat components, such as an increase in available ground water or surface water, could be beneficial to special-status mammals, unless water quality is poor; then this could be a negative impact. If areas are intended to function as habitat corridors, design would be important to prevent unintended deleterious consequences to special-status species.

The impacts of KOP Category 5during operations have the potential for small-scale beneficial effects to special-status mammals. Although floodplain reclamation opportunities in the LA River are limited, the conversion of urban or similar land cover types to floodplains, naturalized banks, braided channels, could provide real benefits to special-status mammals in the region. This would be realized through the conversion of urban land cover (or similar) habitat types to suitable foraging and/or roosting habitat for special-status mammals. The level of benefit will depend on the individual KOP Category 5 designs. The temporary removal of vegetation and land cover of urban components during construction of wetlands and habitat features could have direct or indirect impacts on special-status mammals.

Recreational use along the LA River may substantially increase due to implementation of KOP Categories 1, 3, 4, and 5. Additional indirect recreational impacts on special-status mammals may include human disturbance through hiking, bird watching, walking, biking, and use of the river on behavior such as roosting, foraging, and denning. Additional indirect impacts include changes in night lighting, which in turn affects prey availability for bats. Increases in weeds through foot traffic, equestrian uses, and biking may result in increases in invasive plant species and soil compaction, which would lead to changes in vegetation composition. Direct impacts may include mortality due to collisions with bikes.

Special-Status Reptiles and Amphibians

Direct and indirect operations impacts on special-status reptiles and amphibians for KOP Categories 1, 3, 4, and 5 would include the operations impacts described for the Typical Projects.

The operation of KOP Categories 1, 3, 4, and 5 could provide habitat corridors (i.e., crossings and platforms) and planted vegetated buffers and connections between large habitat blocks could provide beneficial effects to special-status reptiles. Beneficial effects on special-status reptiles could occur due to the conversion of urban land cover features to wetlands and habitat features. Providing essential habitat components, such as foraging areas and cover sites, could be beneficial to special-status reptiles. Providing essential habitat components, such as an increase in available ground water or surface water, could be beneficial to special-status reptiles, unless water quality is poor; then this could be a negative impact. If areas are intended to function as habitat corridors, design would be important for preventing unintended deleterious consequences to special-status species.

The operations impacts of KOP Category 5 have the potential for beneficial effects to special-status reptiles and amphibians at a localized level. The level of benefit will depend on the individual KOP

Category 5 designs. Providing essential habitat components, such as foraging areas and cover sites, could be beneficial to special-status reptiles and amphibians. The temporary removal of vegetation and land cover of urban components during construction of wetlands and habitat features could have direct or indirect impacts on special-status reptiles.

The operation of the KOP Categories 1, 3, 4, and 5 could have a substantial adverse impact, either directly or through habitat modifications, on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Recreational use along the LA River may substantially increase due to implementation of KOP Categories 1, 3, 4, and 5. Additional indirect recreational impacts on special-status reptiles and amphibians may include impacts from human use, such as hiking, walking, biking, and use of the river, on behaviors such as foraging and predator avoidance. Other indirect effects may include increases in invasive species from activities such as foot traffic, equestrian uses, hiking, and biking, which would also increase soil compaction. Direct effects may include mortality due to collisions with horses, humans, and bikes.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 2

Construction

The construction of KOP Category 2 could include construction of terraces on channel banks, construction of dams or deployable barriers, channel modifications for erosion protection, adding or removing concrete within the channel, replacement of underground drainage pipes, installation of levees, armored channels/vertical walls, and/or planting trays.

Because the location and design for these components is not yet known, specific project impacts are unknown. However, as throughout this document, based on the known information with the study

area and the design components, determinations regarding impacts and proposed mitigation measures are provided.

Special-Status Plant Species

Direct impacts on special-status plant species due to the construction of KOP Category 2 would be as described for the Typical Projects. In addition, in-channel impacts could occur due to the construction of in-channel and off-channel modifications. In Frame 1, in-channel plants like salt marsh species could occur where potentially suitable pickleweed mats herbaceous alliance habitat is present. These species may experience direct impacts, including removal of suitable habitat or direct injury and/or mortality.

Indirect impacts on special-status plants due to the construction of KOP Category 2 would be similar to those discussed above in *Typical Projects*, but may also be more intense as many of the in-channel modification under KOP Category 2 may be more invasive in nature during construction compared to activities outside of the channel.

Special-Status Wildlife Species

Federally Listed Marine Species

Direct construction impacts on federally listed marine species are not anticipated in Frames 2 through 9 due to the construction of the KOP Category 2 despite the potential for in-channel impacts. This category is along the LA River in freshwater habitat and would not be within or adjacent to marine environments where these species could be directly affected by construction. However, construction of in-channel components within Frame 1 could directly and indirectly affect listed marine species, as described in KOP Categories 1, 3, 4, and 5.

Special-Status Fish Species

Brackish zones suitable for tidewater goby may exist in Frame 1, where levees and/or dams (or other structures) to provide flood protection, may be installed for the construction of KOP Category 2. Direct and indirect construction impacts on this species could occur if this species is present and would generally be as described in KOP Categories 1, 3, 4, and 5.

Special-Status Invertebrates

Direct effects to Crotch's bumble bee in Frame 2 as a result of construction to KOP Category 2 are as described in KOP Categories 1, 3, 4, and 5.

Special-Status Birds, Raptors, and Migratory Birds

Generally, direct and indirect impacts on special-status birds, raptors, and migratory birds due to the construction of KOP Category 2 would be as described in KOP Categories 1, 3, 4, and 5.

Special-Status Mammals

Construction-related direct and indirect impacts on special-status mammals due to the construction of KOP Category 2 would be generally as described for the Typical Projects and KOP Categories 1, 3, 4, and 5.

Special-Status Reptiles and Amphibians

Construction-related direct and indirect impacts on special-status reptiles and amphibians due to the construction of KOP Category 2 would be generally as described for the Typical Projects and KOP Categories 1, 3, 4, and 5.

The construction of the KOP Category 2 could have a substantial adverse impact, either directly or through habitat modifications, on marine species, plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-2: Avoid or Minimize Effects on Sensitive Species and Consult with Resource Agencies and Implement Requirements.

Mitigation Measure BIO-3a: Conduct Preconstruction Nesting Bird Surveys.

Mitigation Measure BIO-3b: Conduct Preconstruction Raptor Nest Surveys.

Mitigation Measure BIO 3c: Active Eagle Nest Avoidance Measures.

Mitigation Measure BIO-3d: Conduct Burrowing Owl Preconstruction Surveys.

Mitigation Measure BIO-3e: Conduct Preconstruction Special-Status Bat Surveys.

Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.

Mitigation Measure BIO-3g: Conduct Preconstruction Surveys for American Badger.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-7: No Intentional Collection and/or Killing of Plants or Wildlife.

Mitigation Measure BIO-8: Work Stoppage.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

As described in Chapter 2, *Project Description*, KOP Category 2 could provide a range of flood-management functions, using design components such as check dams and deployable barriers, levees, and armored channels or vertical walls; removing or adding concrete; making bridge pier modifications; texturing, grooving, or smoothing channels; and installing access ramps, each of which may require maintenance during operations.

The operation of KOP Category 2 would include maintenance of terraced banks, planting trays, and dams, and deployment of barriers. This could include management of invasive species, maintenance and planting of vegetated areas, maintenance of dams and deployment of barriers, and maintenance of other KOP structures.

The terracing of banks could allow for planting trays, providing space for native vegetation communities and habitat for wildlife. Dams or deployable barriers could increase barriers to wildlife movement. The addition of concrete within the channel where soft bottom currently exists could remove existing vegetation in the channel, whereas the removal of concrete could allow for the establishment of riparian vegetation. Within the LA River, although unintentional, concrete-lined channels do provide for duckweed blooms where an herbaceous layer forms on the water surface in freshwater habitats. This herbaceous layer is an important food source for wildlife, especially waterfowl, so the removal of existing duckweed blooms or similar aquatic habitats could negatively affect wildlife. The removal of concrete would remove these herbaceous habitat layers, but conversion to earth would allow a much higher diversity of plants and animals.

Because the location and design for these components is not yet known, specific project impacts are unknown. However, as throughout this document, based on the known information with the study area and the design components, determinations regarding impacts and proposed mitigation measures are provided.

Special-Status Plant Species

Direct impacts on special-status plant species potentially occurring within the channel portions of the Plan Area could occur as a result of KOP Category 2 operations maintenance activities (e.g.,

vegetation removal, mowing) as described in the Frame 2 *Construction* subsection. Indirect disturbances, such as landscape runoff, dust, and introduction of invasive species, could degrade suitable or occupied habitat located in the area surrounding KOP Category 2 within Frames 1 and 6 where earthen bottoms are present, as described in detail in the *Construction* subsection above.

During operation, the terracing of banks and planting trays could provide beneficial effects to special-status plants, providing space for native vegetation, as could conversion of concrete channel to earthen bottom.

Recreational use along the LA River may substantially increase due to implementation of KOP Category 2. Additional indirect recreational impacts on special-status plants may include changes in vegetation cover through increases in invasive species by the spread of weeds, soil compaction due to trails. Direct impacts may include plant mortality due to crushing of plants from walking.

Special-Status Wildlife Species

Federally Listed Marine Species

For the reasons listed above under *Construction*, no impacts on these species are anticipated during operations for the KOP Category 2, with the exception of Frame 1, where operations and maintenance could potentially affect listed marine species if they are present during structure maintenance.

Special-Status Fish Species

Brackish zones suitable for tidewater goby may exist in Frame 1 where levees and/or dams to provide flood protection may be installed for the operation of KOP Category 2. Direct and indirect operations impacts on tidewater goby as a result of KOP Category 2 are not expected because the channel operations are not anticipated to improve or decrease habitat quality substantially enough to affect this species. Recreational uses are not expected to affect special-status fish species.

Special-Status Invertebrates

Within Frame 2, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee. Direct operations impacts on this species for KOP Category 2 would be as described for KOP Categories 1, 3, 4, and 5.

Terracing of banks and planting trays could provide beneficial effects to special-status invertebrates, providing space for native vegetation communities and habitat for wildlife.

Recreational use along the LA River may substantially increase due to implementation of KOP Category 2. Additional indirect recreational impacts on special-status invertebrates may include human disturbance of floral resources and burrow sites through activities such as walking and changes in vegetation cover through increases in invasive species by the spread of weeds.

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect operations impacts for special-status birds, raptors, and migratory birds for KOP Category 2 would be as described in the Typical Projects and KOP Categories 1, 3, 4, and 5. Due to the LA River being mainly concrete-lined, operational channel modifications are not expected to affect special-status birds, raptors, or migratory birds.

Terracing of banks and planting trays could provide beneficial effects to special-status birds, raptors, and migratory birds, providing space for native vegetation communities to provide foraging and nesting habitat for avian species.

Recreational use along the LA River may substantially increase due to implementation of KOP Category 2. Additional indirect recreational impacts on special-status birds, raptors, and migratory birds may include human disturbance of nesting, foraging, mating, and resting, impacts from trash, changes in vegetation cover through increases in invasive species via the spread of weeds, and soil compaction due to trails.

Special-Status Mammals

Direct and indirect operations impacts on special-status mammals for KOP Category 2 would be as described in the Typical Projects. Due to the LA River being mainly concrete-lined, in-channel operations impacts are not expected to impact special-status mammals.

Terracing of banks and planting trays could provide beneficial effects to special-status mammals, providing space for native vegetation communities to provide habitat for mammal species.

Recreational use along the LA River may substantially increase due to implementation of KOP Category 2. Additional indirect recreational impacts on special-status mammals may include human disturbance of roosting, foraging, denning, etc. through activities such as hiking, bird watching, walking, biking, and use of the river. Other indirect effects may include changes in night lighting, which in turn may affect prey availability for bats. Direct impacts may include mortality due to collisions with bikes.

Special-Status Reptiles and Amphibians

Direct and indirect operations impacts on special-status reptiles and amphibians for KOP Category 2 would be as described in the Typical Projects and KOP Categories 1, 3, 4, and 5. Due to the LA River being mainly concrete-lined, in-channel operations impacts are not expected to impact special-status reptiles and amphibians.

Terracing of banks and planting trays could provide beneficial effects to special-status reptiles and amphibians, providing space for native vegetation communities to provide habitat for reptile and amphibian species.

Impact Determination

Impacts would be potentially significant.

The operation of the KOP Category 2 could have a substantial adverse impact, either directly or through habitat modifications, on marine species, plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 6

Construction

The construction of KOP Category 6 would include several improvements related to water, including water storage, water treatment, dry wells (to allow percolation of surface water into the ground), spreading grounds, purple pipe connections (for recycled water), storm drains, and injection wells (for injecting water deep underground). Other improvements include projects like affordable housing, cultural centers, urban agriculture/composting, solar panels, fields, parks, orchards, composting centers, community gardens, and ponds.

Special-Status Plant Species

Direct impacts on special-status plant species due to the construction of KOP Category 6 could include the removal of existing vegetation and land cover types (which could include largely urban land cover) and replacement with improvements related to water or other KOP Category 6 improvements, such as affordable housing, parks, and solar facilities. If special-status plants are present, direct impacts could include direct mortality.

Indirect impacts on special-status plants due to the construction of KOP Category 6 would be similar to those discussed above for construction in Multi-use Trails and Access Gateways Typical Projects.

Special-Status Wildlife Species

Federally Listed Marine Species

Direct and indirect construction impacts on federally listed marine species are not anticipated due to the construction of the KOP Category 6 because no in-channel work will occur.

Special-Status Fish Species

Direct and indirect construction impacts on special-status fish species are not anticipated due to the construction of the KOP Category 6 because no in-channel work will occur.

Special-Status Invertebrates

Within Frame 2, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee. Direct and indirect impacts on special-status invertebrates due to the construction of KOP Category 6 would generally be as described for the Typical Projects in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect impacts on special-status birds, raptors, and migratory birds due to the construction of KOP Category 6 would generally be as described for the Typical Projects in Frame 1.

Special-Status Mammals

Direct and indirect impacts on special-status mammals due to the construction of KOP Category 6 would generally be as described for the Typical Projects.

Special-Status Reptiles and Amphibians

Direct and indirect impacts on special-status reptiles and amphibians due to the construction of KOP Category 6 would generally be as described for construction of the Typical Projects for special-status reptiles in Frame 1.

The construction of the KOP Category 6 could have a substantial adverse impact, either directly or through habitat modifications on plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-2: Avoid or Minimize Effects on Sensitive Species and Consult with Resource Agencies and Implement Requirements.

Mitigation Measure BIO-3a: Conduct Preconstruction Nesting Bird Surveys.

Mitigation Measure BIO-3b: Conduct Preconstruction Raptor Nest Surveys.

Mitigation Measure BIO 3c: Active Eagle Nest Avoidance Measures.

Mitigation Measure BIO-3d: Conduct Burrowing Owl Preconstruction Surveys.

Mitigation Measure BIO-3e: Conduct Preconstruction Special-Status Bat Surveys.

Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.

Mitigation Measure BIO-3g: Conduct Preconstruction Surveys for American Badger.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-7: No Intentional Collection and/or Killing of Plants or Wildlife.

Mitigation Measure BIO-8: Work Stoppage.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operations of KOP Category 6 would include the operation of water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drains, and injection wells. The KOP Category 6 would also include affordable housing, cultural centers, urban agriculture/composting, solar panels, fields, parks, orchards, composting centers, community gardens, and ponds.

Special-Status Plant Species

Direct and indirect operations impacts on special-status plant species for KOP Category 6 would be as described for the operation of the Typical Projects.

Special-Status Wildlife Species

Federally Listed Marine Species

For the reasons listed above under *Construction*, no impacts on federally listed marine species are anticipated during operations for the KOP Category 6.

Special-Status Fish Species

Direct and indirect operations impacts on special-status fish species are not anticipated due to the construction of the KOP Category 6 because no in-channel work will occur.

Special-Status Invertebrates

Within Frame 2, one special-status invertebrate was identified as having potential to occur: Crotch's bumble bee. Direct and indirect operations impacts on this species for KOP Category 6 would be as described for the operation of the Typical Projects in Frame 2.

Special-Status Birds, Raptors, and Migratory Birds

Direct and indirect operations impacts for special-status birds, raptors, and migratory birds for KOP Category 6 would be as described for the operation of the Typical Projects in Frame 1.

Special-Status Mammals

Direct and indirect operations impacts on special-status mammals from KOP Category 6 would be as described for operation of the Typical Projects in Frame 1.

Special-Status Reptiles and Amphibians

Direct and indirect operations impacts on special-status reptiles and amphibians for KOP Category 6 would be as described for special-status reptiles during operations of the Typical Projects in Frame 1.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-14: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction

The *2020 LA River Master Plan* would involve construction and operations activities to implement 107 projects that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel) and design for these components, along with associated operations and maintenance activities, have not yet been determined and would depend on numerous factors, including project proponent(s) and availability of funding. Similar to the Typical Projects and the KOP categories discussions above, construction under the *2020 LA River Master Plan* could have a substantial adverse impact, either directly or through habitat modifications, on marine species, plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

To reduce construction-related impacts on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS under the *2020 LA River Master Plan*, apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-2: Avoid or Minimize Effects on Sensitive Species and Consult with Resource Agencies and Implement Requirements.

Mitigation Measure BIO-3a: Conduct Preconstruction Nesting Bird Surveys.

Mitigation Measure BIO-3b: Conduct Preconstruction Raptor Nest Surveys.

Mitigation Measure BIO 3c: Active Eagle Nest Avoidance Measures.

Mitigation Measure BIO-3d: Conduct Burrowing Owl Preconstruction Surveys.

Mitigation Measure BIO-3e: Conduct Preconstruction Special-Status Bat Surveys.

Mitigation Measure BIO-3f: Implement Bat Avoidance and Relocation Measures.

Mitigation Measure BIO-3g: Conduct Preconstruction Surveys for American Badger.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-7: No Intentional Collection and/or Killing of Plants or Wildlife.

Mitigation Measure BIO-8: Work Stoppage.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Significance after Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Similar to the Typical Projects and the KOP categories discussion above, operations under the *2020 LA River Master Plan* could have a substantial adverse impact, either directly or through habitat modifications, on marine species, plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

To reduce operations-related impacts on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by CDFW or USFWS under the *2020 LA River Master Plan*, apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-14: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.3(b): Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction

Frames 1, 2, and 6 through 9

Riparian habitats and other sensitive natural communities are present within Frames 1, 2, and 6 through 9 of the study area, as described below. Permanent and temporary direct and indirect impacts could occur on these sensitive natural communities should the Typical Projects be located within the portions of Frames 1, 2, and 6 through 9 that contain these habitats (Figures 3.3-2, 3.3-3, and 3.3-7 through 3.3-10).

Pickleweed mats herbaceous alliance occurs in Frame 1, within the soft bottom portion of the river channel within the LA River ROW just south of where the river channel transitions to a concrete bottom section at W. Willow Street. This is a sensitive natural community classified as Cismontane Alkali Marsh and Southern Coastal Salt Marsh by CNDDB (CDFW 2018 (Appendix D.2) and Holland (1986).

Riparian habitats and other sensitive natural communities within Frame 2 include coastal and valley freshwater marsh and riparian woodland habitats. These communities are equivalent to Gooding's black willow–red willow riparian forest and woodland alliance, mulefat thickets shrubland alliance, and Fremont cottonwood forest and woodland alliance and are present within the Dominguez Gap Wetlands, which is directly adjacent to the western bank of the LA River (Public Works 2014), and the Sepulveda Basin (SBWR 2020). These communities were not included in the USFS CalVeg mapping, but are visible on aerial imagery and Google Earth photos.

California walnut groves forest and woodland alliance, bigpod ceanothus shrubland alliance, and chamise–black sage chaparral shrubland alliance are present within Frames 6 through 8 and are classified as walnut forest and chamise chaparral, respectively, by CNDDB (2020) (Appendix D.2) and Holland (1986). These communities are located within the Santa Monica Mountains and Glendale Narrows outside of the fenceline (i.e., LA River ROW). Gooding's black willow–red willow riparian forest and woodland alliance occurs within Frames 6 and 7 and is equivalent to southern mixed riparian forest (CNDDB 2020; Holland 1986). This community occurs within the Verdugo Wash along Fairmont Street (Frame 6) and Sennett Canyon and Creek (Frame 7) outside of the fenceline. Mulefat thickets shrubland alliance is along the northern edge of Frame 8, bordering Sepulveda Basin outside of the fenceline, and is classified as mulefat scrub by CNDDB (2020; Appendix D.2) and Holland (1986). Coastal and valley freshwater marsh (equivalent to Gooding's

black willow–red willow riparian forest and woodland alliance, mulefat thickets shrubland alliance, and Fremont cottonwood forest and woodland alliance) is also present in Frame 6 within the soft bottom portions of the channel within the LA River ROW. This community was not included in the USFS CalVeg mapping, but is visible on aerial imagery and Google Earth photos.

Mulefat thickets shrubland alliance, Fremont cottonwood forest and woodland alliance, Goodding's black willow–red willow riparian forest, and woodland alliance are present in Frame 9; these communities are equivalent to mulefat scrub, southern cottonwood willow riparian forest, and southern willow scrub, respectively, as classified by CNDDB (2020; Appendix D.2) and Holland (1986). Fremont cottonwood forest and woodland alliance is present within the Sepulveda Basin outside of the fenceline and mulefat thickets shrubland alliance, and Goodding's black willow–red willow riparian forest and woodland alliance occur within the Sepulveda Basin both within and outside of the fenceline, both in-channel and on the landside. Goodding's black willow–red willow riparian forest and woodland alliance is also found in-channel within the soft bottom portion of the channel within the LA River ROW. In addition, coastal and valley freshwater marsh is present in Frame 9 in-channel within the soft bottom portion of the channel within the LA River ROW. This community was not included in the USFS CalVeg mapping, but is visible on aerial imagery and Google Earth photos.

In addition, SEAs are considered sensitive natural communities under the *Los Angeles County 2035 General Plan* and recognized as ESAs in the City of Los Angeles Municipal Code (LAMC 64.70.01). A County SEA is located in Frame 6 within Griffith Park in the Santa Monica Mountains outside of the LA River ROW.

Within Frame 1, EFH (i.e., habitat essential for the spawning, breeding, feeding, and growth to maturity of federally managed fish) occurs in marine and estuarine waters for finfish, coastal pelagic species, and groundfish, and the estuary habitat is considered an HAPC, which are high priority conservation areas because of their important and fragile ecosystem functions (NOAA 2020c).

No USFWS designated critical habitat is present within Frames 1, 2, and 6 through 9 (USFWS 2020c). No other sensitive natural community types are present within Frames 1, 2, and 6 through 9. However, habitat conditions may change over time, either from restoration projects proposed under other county or city plans (e.g., *Upper Los Angeles River and Tributaries Revitalization Plan* [Santa Monica Mountains Conservancy 2020], *Los Angeles River Revitalization Master Plan* [City of Los Angeles 2007], *LA River Design Guidebook* [City of Los Angeles 2017], *Los Angeles River Ecosystem Restoration Project* [City of Los Angeles 2016]) or via natural recruitment. As such, sensitive natural communities may occur in areas within Frames 1, 2, and 6 through 9 where they do not currently exist.

Disturbance and Removal of Vegetation

Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects under the *2020 LA River Master Plan* could result in permanent and temporary impacts on sensitive natural communities as a result of construction activities should the project(s) be located within an area that supports sensitive communities. The construction of a Common Elements Typical Project would include cafés, pavilions, restrooms, and art/performance spaces (see Chapter 2, *Project Description*). The construction of a Multi-Use Trails and Access Gateways Typical Project would include a continuous path for multiple uses, bike trails, equestrian trails, vegetated buffers, and pedestrian trails, with access gateways for entry to the river (see Chapter 2). Permanent impacts from construction activities could include the removal of existing vegetation and encroachment into

the sensitive natural communities that may have permanent effects. Temporary direct impacts could include incidental disturbances within and adjacent to construction areas and clearing and grubbing for equipment staging and temporary construction access routes. Sensitive natural communities that are currently present within the top of levee and/or landside portion of the LA River ROW and could be potentially directly affected by construction of Common Elements and Multi-Use Trails and Access Gateways Typical Projects include mulefat thickets shrubland alliance, Gooding's black willow-red willow riparian forest and woodland alliance, and Fremont cottonwood forest and woodland alliance.

Direct impacts on EFH and HAPCs are not anticipated as no work is proposed in the riverbed, estuary, or adjacent marine waters.

Habitat Degradation from Indirect Effects

Temporary indirect impacts on riparian habitat, EFH, HPACs, or other sensitive natural communities adjacent to the Common Elements and Multi-Use Trails and Access Gateways Typical Projects limits of disturbance may be caused by construction activities (e.g., soil compaction, introduction of invasive species, dust, increased fire risk, chemical spills, sedimentation), which could lead to the degradation of native habitats and floodplains. Sensitive natural communities that are currently present within areas surrounding the top of levee and/or landside portion of the LA River ROW and could be potentially indirectly affected by Common Elements and Multi-Use Trails and Access Gateways Typical Project construction activities include Pickleweed mats herbaceous alliance, Gooding's black willow-red willow riparian forest and woodland alliance, mulefat thickets shrubland alliance, and Fremont cottonwood forest and woodland alliance.

The movement of heavy equipment and supplies during construction of Common Elements and Multi-Use Trails and Access Gateways Typical Projects could compact the soil, affecting vegetation germination and growth. Soil compaction occurs when soil particles are pressed together, reducing pore space between them. Heavily compacted soils contain few large pores, which are the most effective in moving water through the soil when it is saturated, and thus have a reduced rate of both water infiltration and drainage from the compacted layer. In addition, the exchange of gases slows down in compacted soils, causing an increase in the likelihood of root aeration problems. Soil compaction from constructing Common Elements and Multi-Use Trails and Access Gateways Typical Projects could inhibit seed germination and root penetration in the soil surface and could result in bare soil, sparsely vegetated areas, or a substantial change in species composition following construction in temporary areas. Without proper BMPs, vegetation removal and soil compaction would expose soil to the erosive forces of rain and overland stormwater runoff, causing sediment to smother vegetation within and beyond project footprints, especially in areas with steep terrain.

Common Elements and Multi-Use Trails and Access Gateways Typical Projects could also have adverse effects on sensitive natural communities and native plants as a result of the introduction and spread of invasive plant species through construction activities throughout the project footprint and surrounding area. Construction activities could introduce and increase the spread of nonnative and invasive plants in the following ways: (1) construction equipment could carry invasive plant seeds or plant parts from infested areas outside of construction areas into construction areas; (2) construction equipment could disturb existing invasive plant infestations in the project site and cause the spread of these infestations throughout the surrounding area; (3) fill material containing invasive plants could be used; and (4) seed mixtures containing nonnative or invasive plant seeds could be used for re-vegetating construction staging areas. Invasive plants are often more aggressive than native vegetation, and the disturbed conditions of a construction site create an environment

(e.g., bare and compact soil, disturbed surfaces) where some invasive plants thrive. Invasive plant species threaten the diversity and abundance of native plant species through competition for resources, hybridization with native populations, and physical or chemical alteration of the invaded habitat. The introduction of species such as giant reed and salt cedar to waterways can substantially alter the natural hydrology, flood regime, and channel characteristics by using more water than native plants, providing limited shade (which increases water temperatures and, in-turn, algae growth), and reducing water quality from decaying vegetation, as well as crowding out native plants and degrading riparian habitat. Unlike the native plants they displace, many invasive plant species do not provide the food, shelter, or other habitat components on which many native fish and wildlife species depend. In addition, dense stands of nonnative plant species such as annual grasses, giant reed, and salt cedar are highly flammable and increase the risk of fire in riparian and other natural communities.

During Common Elements and Multi-Use Trails and Access Gateways Typical Project construction activities, the operation of heavy equipment could generate fugitive dust from loose soil. Any accumulation of fugitive dust on vegetation could affect plant growth by inhibiting photosynthesis and reducing vegetation density and plant diversity. More tolerant native plant species could benefit from decreased competition. However, invasive plants could colonize and disrupt the overall plant ecosystem. The magnitude and duration of dust exposure, tolerance of native vegetation, and aggressiveness of invasive plants would determine vegetation response and the intensity of impacts.

Accidental release of contaminants during construction, such as an inadvertent spill of gasoline, oil, or lubricants when fueling or storing construction equipment, could affect plant growth and survival. Accidental releases of hazardous materials could negatively affect plant communities in the vicinity of the spill. Accidental spills of hazardous materials and chemicals could also degrade EFH and HAPCs. The magnitude of impacts would depend on the type and volume of material spilled, the location, and the habitat affected. However, an uncontained spill of hazardous materials would likely be relatively small and affect a limited area because the volume of these materials that may be present at a construction location would be relatively small, BMPs would typically be in place, and there would be no storage of hazardous materials within sensitive habitats at Common Element Typical Project or Multi-Use Trails and Access Gateways Typical Project locations.

In addition, the implementation of the Statewide NPDES Construction General Permit and construction site BMPs outlined in the proposed Project's Storm Water Pollution Prevention Plan (SWPPP) will reduce or eliminate construction-related indirect impacts on riparian habitats or other sensitive natural communities from erosion, sedimentation, and pollution.

Frames 3 through 5

No riparian habitats or other sensitive natural communities have been identified within Frames 3 through 5. Thus, no impacts on sensitive natural communities from Common Elements or Multi-Use Trails and Access Gateways Typical Project construction activities within these frames are anticipated. However, conditions can change over time, either from restoration projects proposed under other county or city plans (e.g., *Upper Los Angeles River and Tributaries Revitalization Plan* [Santa Monica Mountains Conservancy 2020], *Los Angeles River Revitalization Master Plan* [City of Los Angeles 2007], *LA River Design Guidebook* [City of Los Angeles 2017], *Los Angeles River Ecosystem Restoration Project* [City of Los Angeles 2016]) or via natural recruitment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure BIO-20a: Avoid Riparian and Sensitive Natural Communities.

Prior to construction, mapped riparian and sensitive natural communities will be delineated using ESA staking in the field and removal or disturbance of riparian habitats or other sensitive natural communities will be avoided.

If the proposed Project cannot avoid direct impacts on either riparian habitats or other sensitive natural communities, then the following mitigation measure will be implemented.

Mitigation Measure BIO-20b: Implement Riparian Mitigation and Restoration.

Prior to start of construction, the implementing agency will mitigate permanent impacts on riparian habitats or other sensitive natural communities at a ratio the resource agencies determine, through payment into an agency-approved in-lieu fee mitigation program, applicant-sponsored mitigation site, or other approved mitigation method as determined during the project-specific environmental document or permitting phase. Onsite restoration of temporarily affected riparian habitats or other sensitive natural communities will occur in-kind at their current locations on completion of construction and will consist of returning affected areas to original contour grades, decompacting the soil, and replanting with a plant palette composed of native species found onsite prior to disturbance.

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Frames 1, 2, and 6 through 9

Any riparian habitats or other sensitive natural communities that are located within the LA River ROW of Frames 1, 2, and 6 through 9, as described above, could be affected by Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project operation activities like

recreation and maintenance. Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects, potentially resulting in temporary and permanent direct and indirect impacts on sensitive natural communities during operations, including trampling of native vegetation and increased introduction of invasive plant species from visitors straying off of designated trails. Maintenance of vegetation within and adjacent to Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects, including landscaping and vegetation removal and trimming, could reduce in size or disturb any sensitive natural communities that are located within the top of levee or landside portion of the LA River ROW. Indirect disturbances, such as dust and introduction of invasive species, could degrade riparian habitat and other sensitive natural communities located in the LA River ROW that are within or adjacent to Common Elements Typical Projects or Multi-Use Trails and Access Gateways Typical Projects, as described in detail in the *Construction* subsection above. In addition, fertilizer runoff, pet droppings, increased trash from public access, and increased recreational use could all contribute to indirect impacts on adjacent sensitive natural communities.

Frames 3 through 5

No riparian habitats or other sensitive natural communities have been identified within Frames 3 through 5. Thus, no impacts on sensitive natural communities from Common Elements Typical Project or Multi-Use Trails and Access Gateways Typical Project operation activities within these frames would occur.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Typical Projects analyzed above could be implemented in whole or as a combination of their individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Typical Projects, see above. The impact discussion below focuses on specific KOP categories only.

Because the location and design for these components is not yet known, specific project impacts are unknown. However, throughout this document, based on the known information with the study area and the design components, the following determinations regarding impacts and proposed mitigation measures are provided.

Sensitive natural communities that are currently present within the study area and could be potentially directly or indirectly affected by construction of the proposed KOP categories include Pickleweed mats herbaceous alliance, coastal and valley freshwater marsh, California walnut, ceanothus chaparral, baccharis (riparian), willow, willow (shrub), Fremont cottonwood, riparian mixed hardwood, and riparian woodland habitats (Figures 3.3-1 through 3.3-10).

KOP Category 1

Construction

The construction of KOP Category 1 would be similar in scope and type as to the construction of the Multi-Use Trails and Access Gateways Typical Project. The specific location (in-channel or off-channel) and design of these KOP components has not yet been determined and would depend on numerous factors, including project proponent and availability of funding. Considering that this KOP includes a variety of construction activities ranging from trail modifications to development of facilities anywhere within the study area, construction of KOP Category 1 could result in potentially significant impacts associated with the permanent and temporary loss of sensitive natural communities.

Construction of KOP Category 1 could result in permanent and temporary direct and indirect impacts on any riparian habitats and other sensitive natural communities located within the study area and would be similar to those described for the Typical Projects above. Permanent impacts from construction activities may include removal of existing vegetation and encroachment into plant communities that may have permanent effects. Temporary direct impacts include clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes. Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, landscape cuttings and runoff, and pollutants, could degrade riparian habitats and other sensitive natural communities.

In addition to impacts from the construction of bike trails, equestrian trails, and pedestrian trails, as described for the Multi-Use Trails and Access Gateways Typical Project above, the permanent loss and/or temporary disturbance of sensitive natural communities could result from the construction of other design components included in KOP Category 1, including equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, underpasses, and overpasses.

Unlike the Multi-Use Trails and Access Gateways Typical Project described above, implementation of KOP Category 1 could include in-channel work as well as off-channel work. Should in-channel work take place in areas containing sensitive natural communities, currently limited to Frames 1 and 6, then permanent and/or temporary direct impacts could occur on sensitive natural communities found within the LA River channel (i.e., Pickleweed mats herbaceous alliance, mulefat thickets shrubland alliance, Fremont cottonwood forest and woodland alliance, Goodding's black willow–red willow riparian forest and woodland alliance), in addition to impacts on sensitive natural communities occurring outside of the river channel (as described above).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-20a: Avoid Riparian and Sensitive Natural Communities.

Mitigation Measure BIO-20b: Implement Riparian Mitigation and Restoration.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Any riparian habitats or other sensitive natural communities occurring within the study area potentially could be affected by KOP Category 1 operations and maintenance activities, should they be located within or adjacent to a KOP Category 1. The creation of access gateways and trails as a part of KOP Category 1 may substantially increase recreational use along the LA River, potentially resulting in temporary and permanent direct and indirect impacts on sensitive natural communities during operations, including trampling of native vegetation and increased introduction of invasive plant species from visitors straying off of designated trails. Maintenance of vegetation within and adjacent to KOP Category 1, including landscaping and vegetation removal and trimming, could reduce in size or disturb sensitive natural communities that are located within or adjacent to a KOP Category 1. Indirect disturbances, such as dust and introduction of invasive species, could degrade riparian habitat and other sensitive natural communities located in the project area, as described in detail in the *Construction* subsection of the *Typical Projects* section above. In addition, fertilizer runoff, pet droppings, increased trash from public access, and increased recreational use could all contribute to indirect impacts on adjacent sensitive natural communities.

There is a potential for some of the design components under KOP Category 1 to have beneficial permanent direct effects on sensitive natural communities, should planted vegetated buffers be included in individual project design features, by creating additional native habitat within the *2020 LA River Master Plan* area. However, any increases would likely be minimal because planted vegetated buffers along recreational trails would most likely be composed of plant species found in upland habitats that would not be considered sensitive natural communities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Categories 2, 3, 4, and 6

Impacts resulting from the construction of KOP Categories 2, 3, 4, and 6 were evaluated together because of the presence of similar resources (i.e., riparian habitats and other sensitive natural communities) and equivalent and/or similar activities (e.g., vegetation removal, ground disturbance, dust). Impacts from construction and operations activities would be the same regardless of whether the work was being performed while modifying a channel for KOP Category 2, constructing crossings and platforms for KOP Category 3, building a diversion system for KOP Category 4, or constructing a water treatment facility for KOP Category 6. As such, these KOP components have been combined for Impact 3.3(b).

Construction

The implementation of KOP Categories 2, 3, 4, and 6 could result in potentially significant impacts associated with the permanent and temporary loss of sensitive natural communities, should they be present within the proposed project area, as a result of construction of KOP components. KOP Category 2 components include terraced banks, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, addition of concrete, bridge pier modifications, channel texturing/ grooving/smoothing, and installation of access ramps. KOP Category 3 components include platforms, crossings, path ramps, structural walls, bridges, and cantilevers. KOP Category 4 components include pumps, diversion pipes/tunnels/channels, overflow weirs, underground galleries, side channels, and storm drain interceptors. KOP Category 6 components include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. See Chapter 2, *Project Description*, for details.

Construction of KOP Categories 2, 3, 4, and 6 components could result in permanent and temporary direct and indirect impacts on sensitive natural communities occurring within the study area, particularly on riparian habitats located within the LA River channel and/or along the riverbanks, should they be present within the proposed project area. Permanent impacts from construction activities may include removal of existing vegetation and encroachment into plant communities that may have permanent effects. Temporary direct impacts include clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes. Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade riparian habitats and other sensitive natural communities. Impacts would be similar to those described for the Typical Projects; see the above subsection for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-20a: Avoid Riparian and Sensitive Natural Communities.

Mitigation Measure BIO-20b: Implement Riparian Mitigation and Restoration.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Any riparian habitats or other sensitive natural communities occurring within the study area could be affected by KOP Categories 2, 3, 4, and 6 operations and maintenance activities, should they be located within or adjacent to a KOP Categories 2, 3, 4, or 6. Some of the design components under KOP Categories 2, 3, 4, and 6 could have beneficial permanent direct effects on sensitive natural communities if planting trays and wetland terraces are included in individual project channel modification design features (KOP Category 2), if the planting of riparian and wetland habitats are included in individual project platform design features (KOP Category 3), or if naturalized side channels are included in individual project diversion features (KOP Category 4), and if natural treatment systems and wetlands are included off-channel (KOP Category 6), by creating additional riparian and wetland habitats within the *2020 LA River Master Plan* area.

Maintenance of vegetation within and adjacent to KOP Categories 2, 3, 4, or 6 components, including landscaping and vegetation removal and trimming, could reduce in size or disturb sensitive natural communities that are located within or adjacent to a KOP Categories 2, 3, 4, or 6, particularly with in-channel operations. Indirect disturbances, such as dust and introduction of invasive species, could degrade riparian habitat and other sensitive natural communities located in the project area, as described in detail in the *Construction* subsection of the *Typical Projects* section above.

The modification of the channel as part of KOP Category 2, the creation of crossings and platforms as a part of KOP Category 3, and off-channel land assets as a part of KOP Category 6 may substantially increase recreational use along the LA River, potentially resulting in temporary and permanent

direct and indirect impacts on sensitive natural communities during operations, including trampling of native vegetation and increased introduction of invasive plant species from visitors straying off of designated trails. Fertilizer runoff, pet droppings, and increased trash from public access and increased recreational use associated with KOP Categories 2, 3, and 6 could all contribute to indirect impacts on adjacent sensitive natural communities.

Should channel modifications, such as flood-management functions, associated with KOP Category 2, or diversions, such as side channels, underground galleries, and diversion tunnels, associated with KOP Category 4, affect the current flow or water level of the LA River, there could be a potential for adverse impacts associated with physiological stress or plant mortality. Conversely, increased growth and recruitment could occur on riparian habitats or other sensitive natural communities as a result of changes such as altered hydrological conditions (i.e., an increase in water availability).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 5

Construction

The implementation of KOP Category 5 could result in potentially significant impacts associated with the permanent and temporary loss of sensitive natural communities, should they be present within the proposed project area, as a result of construction of KOP Category 5 components, including widening the channel, fields, storage, and side channels.

Construction of KOP Category 5 components could result in permanent and temporary direct and indirect impacts on sensitive natural communities occurring within the study area, particularly on riparian habitats located within the LA River channel and/or along the riverbanks, should they be present within the proposed project area. Permanent impacts from construction activities may include removal of existing vegetation and encroachment into plant communities that may have permanent effects. Permanent impacts could potentially include loss of riparian areas from construction effects such as diversions and sedimentation. Temporary direct impacts include clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes as well as loss or reduction of riparian areas due to water volume reductions of dry-season flows during construction diversions.

Direct impacts as a result of construction of KOP Category 5 components would primarily be temporary because reclamation areas would be restored or reestablished with riparian and wetland habitats. However, there could be some permanent loss of sensitive vegetation communities from construction of proposed recreation facilities (e.g., Farmer's Markets, boardwalks), should sensitive vegetation communities be present within the proposed project area.

Temporary indirect effects from KOP Category 5 construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade riparian habitats and other sensitive natural communities. Impacts would be similar to those described for the Typical Projects; see above subsection for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-20a: Avoid Riparian and Sensitive Natural Communities.

Mitigation Measure BIO-20b: Implement Riparian Mitigation and Restoration.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Reclamation of portions of the floodplain along the LA River would allow for native plant recruitment and ecological succession of native communities associated with the LA River watershed. Although there are only a limited number of opportunities along the LA River where reclamation could take place, and any floodplain reclamation projects would be small-scale, KOP Category 5 could still have beneficial impacts on sensitive natural communities within the LA River portion of the *2020 LA River Master Plan* area by partially restoring hydrological functions. Reclamation of portions of the floodplain along the LA River could have beneficial permanent direct effects on sensitive vegetation communities. KOP Category 5 components include wetlands, naturalized banks, braided channels, and side channels, which could create additional riparian and wetland habitats within the *2020 LA River Master Plan* area.

However, any riparian habitats or other sensitive natural communities occurring within the study area could potentially be adversely affected by KOP Category 5 operations and maintenance activities, should they be located within or adjacent to a KOP Category 5. Maintenance of vegetation within and adjacent to KOP Category 5 components, including vegetation removal and trimming, could reduce in size or disturb sensitive natural communities that are located within or adjacent to a KOP Category 5. Planting of landscaped areas during operation could introduce exotic plant species to the project area, if invasive, nonnative species are included in the planting palette. Indirect disturbances, such as dust and introduction of invasive species from vegetation clearing, could degrade riparian habitat and other sensitive natural communities located in the project area.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction

The *2020 LA River Master Plan* would involve construction of up to 107 projects that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel) and design for these components have not yet been determined and would depend on numerous factors, including project proponent and availability of funding. Similar to the discussion above for Typical Projects and KOP Categories, construction under the *2020 LA River Master Plan* could result in permanent and temporary direct and indirect impacts on sensitive natural communities occurring within the study area. Permanent impacts from construction activities may include removal of existing vegetation and encroachment into plant communities that may have permanent effects. Temporary direct impacts include clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes. Construction activities under the overall *2020 LA River Master Plan* could result in temporary indirect effects, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade riparian habitats and other sensitive natural communities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-4: Identify Work Areas and Environmentally Sensitive Areas.

Mitigation Measure BIO-5: Prepare and Implement Weed Abatement Plan.

Mitigation Measure BIO-6: Conduct Biological Monitoring During Construction.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-20a: Avoid Riparian and Sensitive Natural Communities.

Mitigation Measure BIO-20b: Implement Riparian Mitigation and Restoration.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Similar to the Typical Projects and the KOP categories discussion above, implementation of the overall *2020 LA River Master Plan* potentially could have beneficial permanent direct effects on sensitive natural communities—if creation of riparian and wetland habitats are included in design features—by increasing the amount of sensitive natural vegetation communities within the *2020 LA River Master Plan* area. However, operations activities of the 107 subsequent projects could also affect riparian habitats and other sensitive natural communities occurring within the study area. Implementation of the overall *2020 LA River Master Plan* may substantially increase recreational use along the LA River, potentially resulting in temporary and permanent direct and indirect impacts on sensitive natural communities during operations, including trampling of native vegetation and increased introduction of invasive plant species from visitors straying off of designated trails. Maintenance of vegetation, including landscaping and vegetation removal and trimming, could reduce in size or disturb sensitive natural communities that are located within or adjacent to a proposed Project. Indirect disturbances, such as dust and introduction of invasive species, could degrade riparian habitat and other sensitive natural communities. In addition, fertilizer runoff, pet droppings, and increased trash from public access and increased recreational use could all contribute to indirect impacts on adjacent sensitive natural communities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.3(c): Would the proposed Project have a substantial adverse effect on federally or state-protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Typical Projects

Common Elements and Multi-use Trails and Access Gateways Typical Projects

Under the *2020 LA River Master Plan*, construction of Common Elements and Multi-use Trails and Access Gateways Typical Projects would occur. Construction of Common Elements Typical Projects could include cafés, pavilions, restrooms, and art/performance spaces (see Chapter 2, *Project Description*). Construction of Multi-use Trails and Access Gateways Typical Projects could include a continuous path for multiple uses, such as bike trails, equestrian trails, easy to find and welcoming access gateways, and a series of amenities for public use, such as shade structures, play fields, and vegetated buffer (see Chapter 2). These activities could result in direct and indirect impacts on wetlands and/or potentially jurisdictional aquatic resources, as described below.

Construction

Frames 1 and 7 through 9

Common Elements and Multi-use Trails and Access Gateways Typical Projects under the *2020 LA River Master Plan* could directly affect wetlands or potentially jurisdictional aquatic resources that have a potential to occur within Frames 1 and 7 through 9 (Figure 3.3-44 through Figure 3.3-47) through permanent and temporary construction activities, should they be present beyond the top of bank in the landside portion of the LA River ROW (National Wetland Inventory 2020). If areas that are temporarily disturbed are not successfully restored, then wetlands and/or potentially jurisdictional aquatic resources may no longer occur in areas that they had previously occupied, or they could be restored, but at a diminished level of biological functions and values.

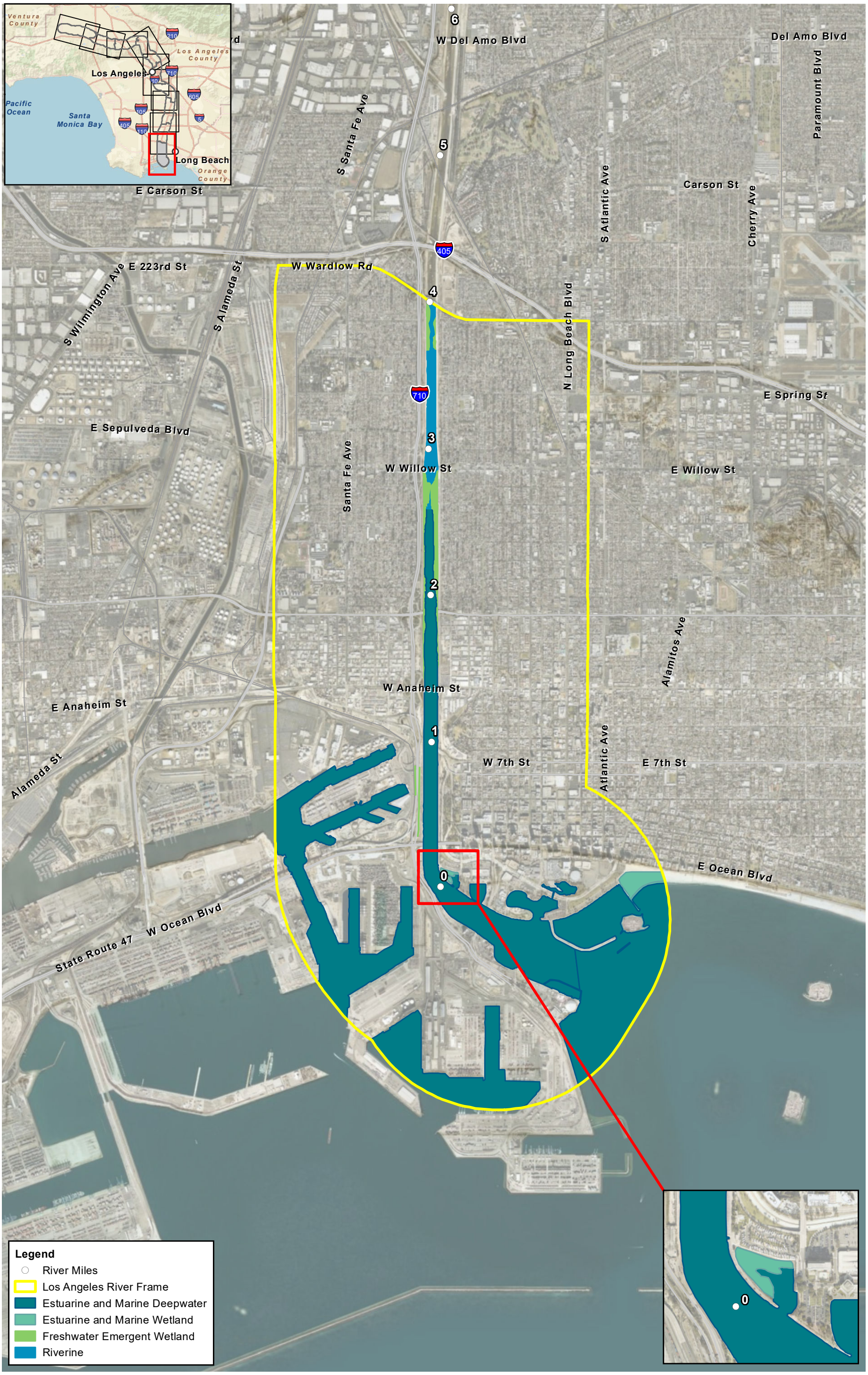
Within Frame 1, the wetlands and/or potentially jurisdictional aquatic resources within the Golden Shore Marine Biological Reserve extend to the walking path along the top of the levee and could be subject to direct impacts from the construction of a Common Elements or Multi-use Trails and Access Gateways Typical Project. Within Frame 7, potentially jurisdictional riverine aquatic resources have the potential to occur within the footprint of the Common Elements and Multi-use Trails and Access Gateways Typical Project between the limits of Griffith Park and the southern side of the LA River. Within Frame 8, a potentially jurisdictional riverine aquatic resource potentially occurs within the Typical Projects' location (between the top of levee and the fenceline) along the

northern side of the LA River immediately upstream of Interstate 405 at the El Camino Real offramp. Within Frame 9, multiple wetland and/or potentially jurisdictional aquatic resources occur within the footprint of the Common Elements and Multi-use Trails and Access Gateways Typical Project. Within the footprint area adjacent to the Sepulveda Basin, six wetland and/or riverine aquatic resources that are potentially jurisdictional drain through the potential footprint and connect to the LA River (Figure 3.3-35 through Figure 3.3-43). In addition, potentially jurisdictional vegetation and tree canopy along the LA River occurs with the Common Elements and Multi-use Trails and Access Gateways Typical Project footprint (National Wetland Inventory 2020).

Direct effects on wetlands and/or jurisdictional aquatic resources could result from project construction activities, including grading, excavating, soil stockpiling, or other earth-disturbing activities. The use of construction equipment, machinery, and vehicles within wetlands and/or jurisdictional aquatic resources could change or remove the soil, hydrology, vegetation, or other resource conditions during construction work, leading to decreased quality or loss of those conditions. Clearing and grading activities, as well as elevation modifications, could disturb and compact soils and affect hydrological conditions. These effects could be both short- and long-term in nature during the course of construction in or near these features.

Permanent and temporary disturbances from construction activities could result in indirect impacts on wetlands and/or potentially jurisdictional aquatic resources present in the area surrounding the project site. Indirect impacts could include the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrological conditions. Construction equipment, vehicles, or imported materials used during Common Elements or Multi-use Trails and Access Gateways Typical Project facilities construction could introduce and spread nonnative invasive plant species via mud and other debris tracked in from other sites that may contain invasive plants and/or seeds. Invasive plant species could out-compete native wetland plant species for resources such as water and space, which could either reduce their reproductive productivity (i.e., reduce the amount of flowers and/or seeds produced) or displace them from the area. Sites that are degraded due to exposure to indirect stressors may become increasingly low-value over time, or no longer exhibit the wetland or aquatic resource conditions. Erosion, sedimentation, and chemical spills may also reduce the quality of the wetlands and/or jurisdictional aquatic resources and the accumulation of soils from erosion or sedimentation could fill and remove the resource.

In addition, the implementation of the Statewide NPDES Construction General Permit and construction site BMPs outlined in the project's SWPPP will reduce construction-related indirect impacts on wetlands and/or jurisdictional aquatic resources from erosion, sedimentation, and pollution.



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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-44
National Wetland Inventory Impacts within Frame 1

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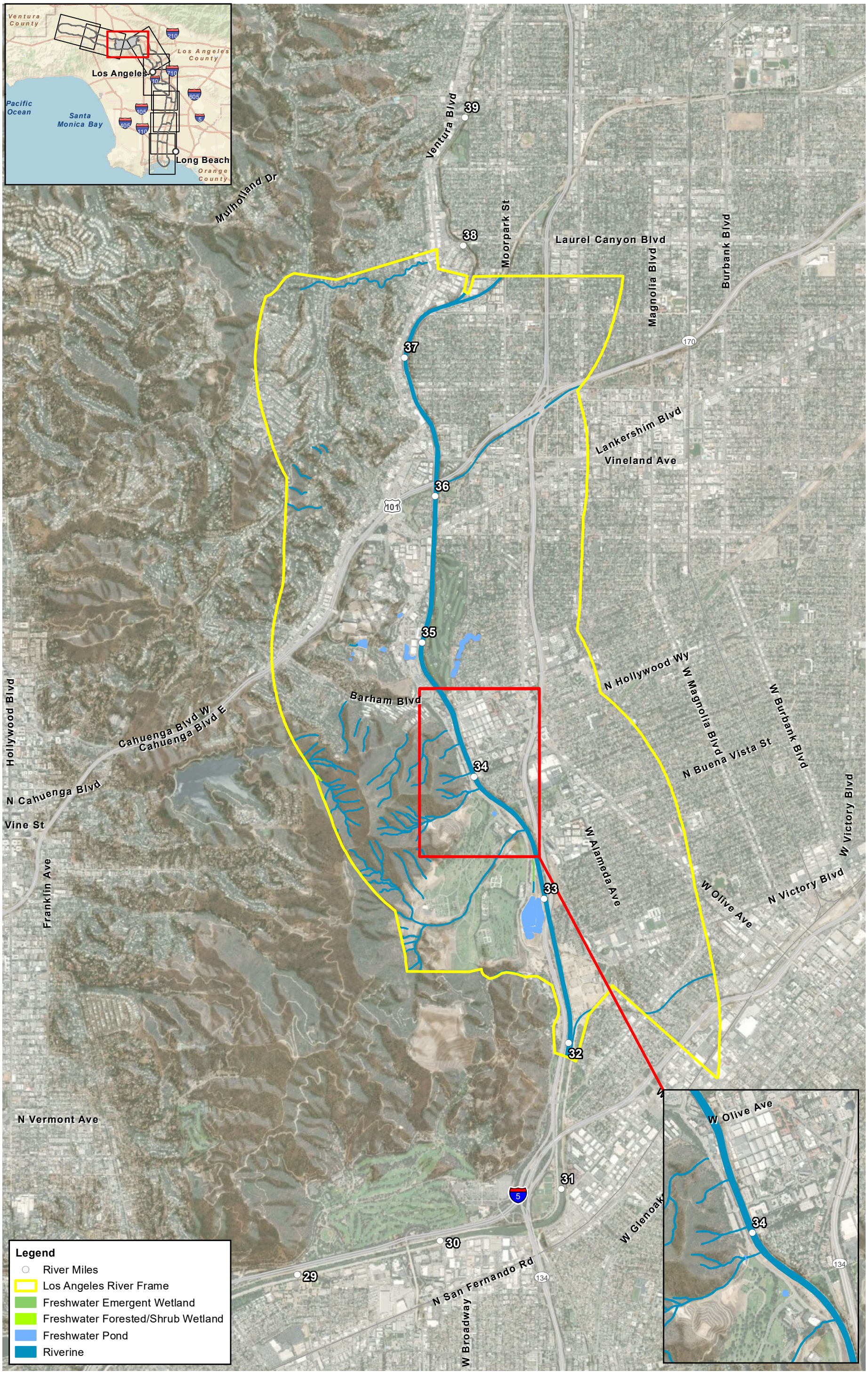

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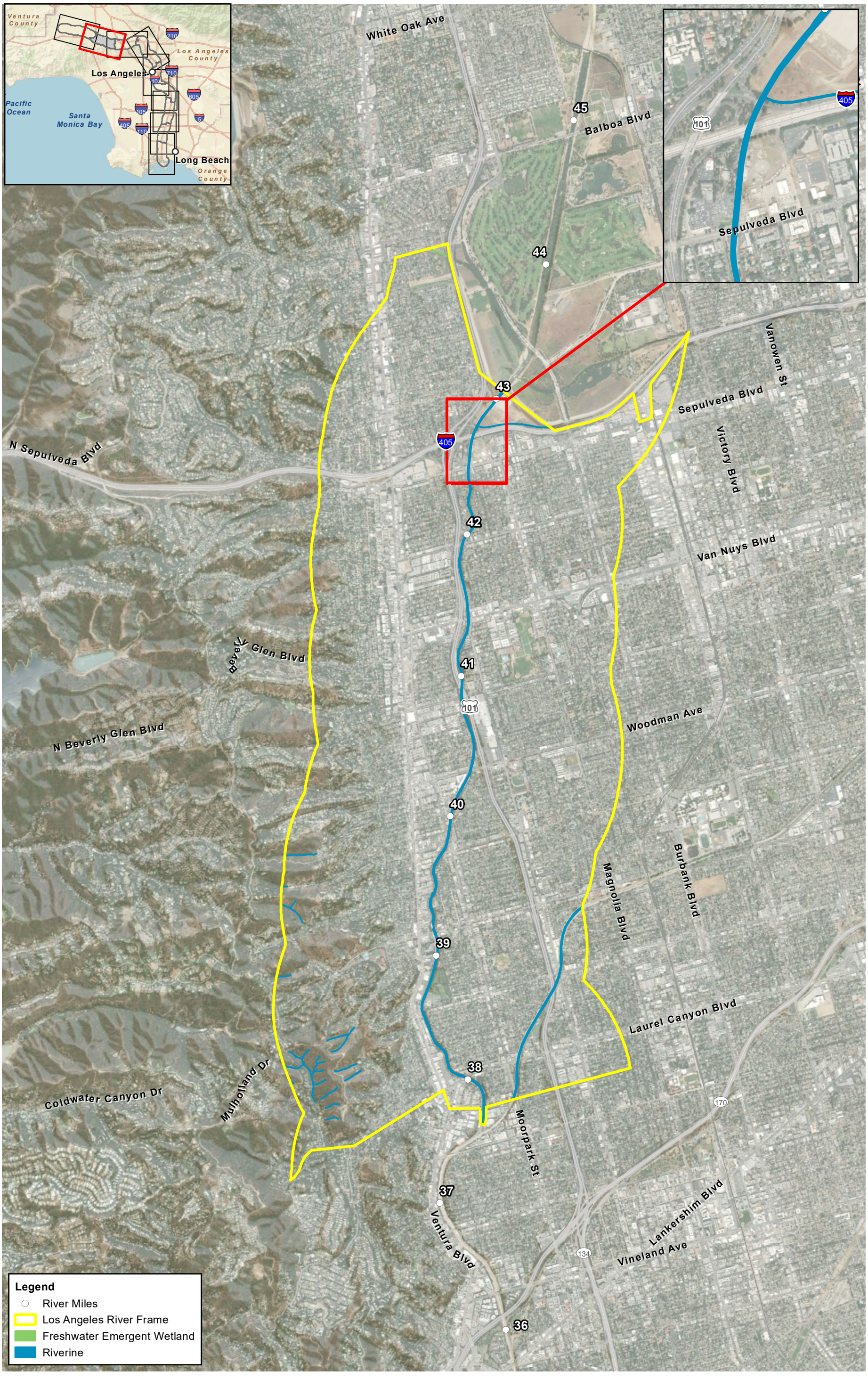
Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-45
National Wetland Inventory Impacts within Frame 7



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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-46
National Wetland Inventory Impacts within Frame 8

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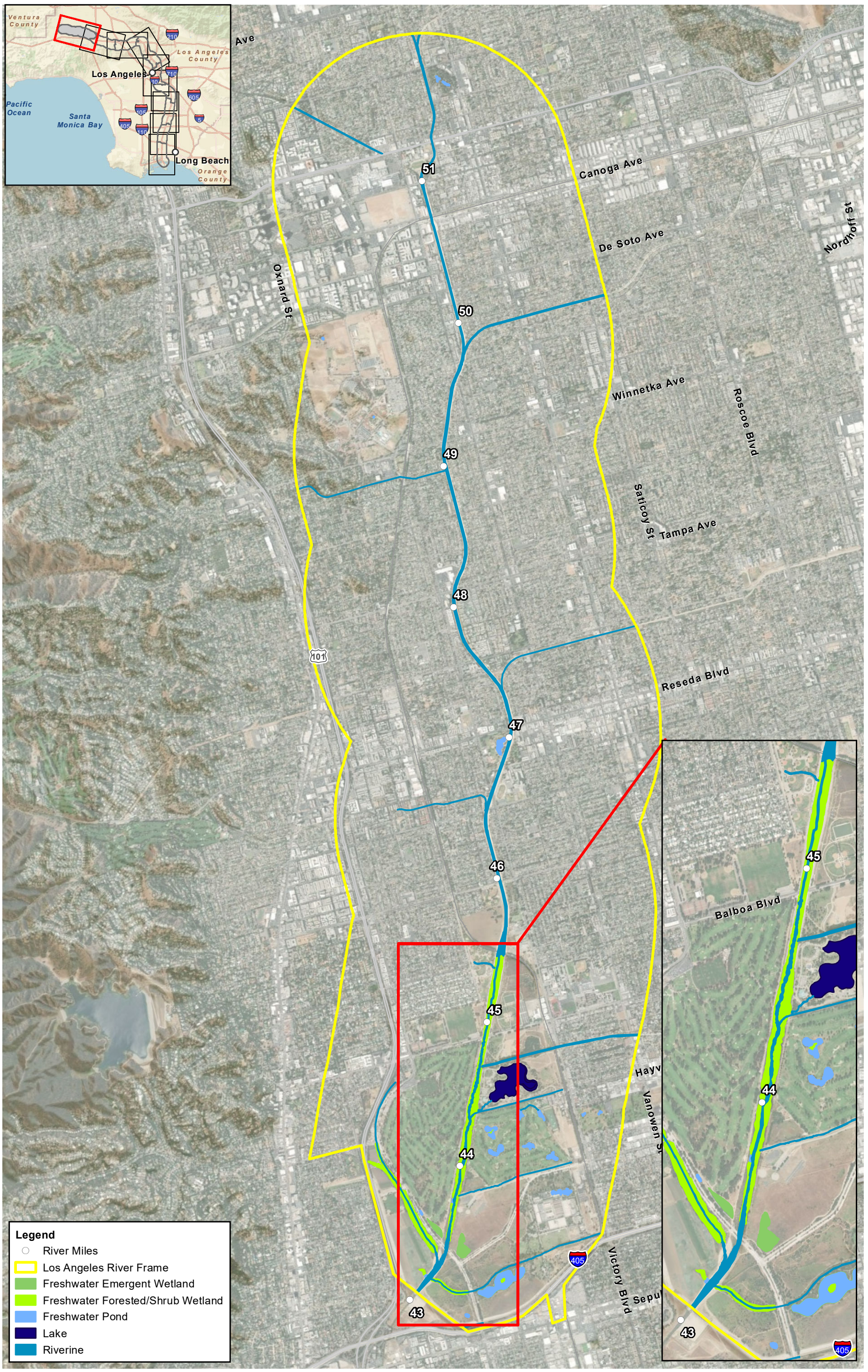

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Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-47
National Wetland Inventory Impacts within Frame 9

Frames 2 through 6

Direct impacts on wetlands and/or potentially jurisdictional aquatic resources are not anticipated as a result of Common Elements or Multi-use Trails and Access Gateways Typical Project construction within Frames 2 through 6. Although wetlands and/or potentially jurisdictional aquatic resources were determined to occur within those frames (Figures 3.3-14 through 3.3-18 and Figures 3.3-36 through 3.3-40), they generally do not occur within the limits of the Common Elements or Multi-use Trails and Access Gateways Typical Project footprint (i.e., between the top of levee and the fenceline at any location in these frames), which would be located beyond the top of bank in the landside portions of the LA River ROW and not in-channel or outside of the LA River ROW. It is unlikely that wetlands and/or potentially jurisdictional aquatic resources occur within the project footprint of Common Elements or Multi-use Trails and Access Gateways Typical Projects, and thus, are unlikely to experience any direct impacts (e.g., removal or change to the condition of the resource). Within Frame 2, the Dominguez Gap Wetlands occur immediately outside of the assumed Common Elements Typical Project and Multi-use Trails and Access Gateways Typical Project footprints and thus are not expected to be subject to direct impacts.

Wetlands and/or potentially jurisdictional aquatic resources that have the potential to occur adjacent to or near the project footprint could potentially be affected indirectly by permanent and/or temporary disturbances from nearby construction activities on the top of bank and landside portion of the LA River ROW. Indirect impacts could include the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrological conditions as described in detail in the Frames 1 and 7 through 9 subsection above.

In addition, the implementation of the Statewide NPDES Construction General Permit and construction site BMPs outlined in the project's SWPPP will reduce construction-related indirect impacts on wetlands and/or jurisdictional aquatic resources from erosion, sedimentation, and pollution.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure BIO-21a: Conduct a Jurisdictional Delineation.

Prior to the start of project construction with aquatic resources present within or directly adjacent to the limits of disturbance, a formal jurisdictional delineation will be performed within the proposed project footprint and appropriate surrounding buffer to identify and map all wetlands and jurisdictional aquatic resources subject to the jurisdiction of the USACE, SWRCB or RWQCB, CDFW, and, if the project footprint is within the Coastal Zone, the CCC or appropriate city or county. A desktop review and/or field review may be sufficient to determine if a formal delineation is needed.

If any wetlands and/or jurisdictional aquatic resources are identified, then implement the following mitigation measures.

Mitigation Measure BIO-21b: Flag Wetland ESA.

If wetlands or jurisdictional aquatic resources are identified within the project footprint, but will not be affected by the project, then those resources must be clearly marked for avoidance using flagging, fencing, or other appropriate avoidance method prior to project implementation.

Mitigation Measure BIO-21c: Obtain Wetland Permits.

If wetlands or jurisdictional aquatic resources are identified within the project footprint and would be affected by construction of the project, the appropriate permits will be obtained from the USACE, SWRCB or RWQCB, CDFW, and/or the CCC, as required. The permittee will implement all measures and conditions included in those permits.

Mitigation Measure BIO-21d: Restore Temporary Wetland Impacts.

Immediately following completion of construction, temporary impacts on wetlands and jurisdictional aquatic resources will be restored to preconstruction elevation and conditions, or as specified by the aquatic resource permits.

Mitigation Measure BIO-21e: Implement Mitigation for Permanent Loss of Wetlands or Jurisdictional Aquatic Resources.

Prior to the start of construction, impacts that result in a permanent loss of jurisdictional aquatic resources within a concrete channel or bank will be mitigated as specified in the aquatic resource permits. Impacts that result in a permanent loss of jurisdictional aquatic resources within an earthen channel, bank, or associated riparian will be mitigated at a minimum 2:1 ratio, or as specified in the aquatic resource permits.

Apply the following mitigation measure, which is described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Frames 1 through 9

Any wetlands and/or potentially jurisdictional aquatic resources that are located beyond the top of bank and within the landside LA River ROW of Frames 1 through 9, as described above, could be affected by Common Elements Typical Project and Multi-use Trails and Access Gateways Typical Project operations and maintenance activities. Maintenance of vegetation within and adjacent to Common Elements or Multi-use Trails and Access Gateways Typical Projects, including vegetation removal and trimming, could affect wetlands and/or potentially jurisdictional aquatic resources that are located beyond the top of bank within the landside portion of the LA River ROW. Project operation will increase recreational use along the LA River, potentially resulting in temporary and permanent direct and indirect impacts on wetlands and jurisdictional aquatic resources during operations, including trampling or damaging of native vegetation from visitors and pets straying off

of designated trails. Maintenance activities, such as facility repairs, as well as public activity at the facilities, could also result in direct impacts on wetlands and jurisdictional aquatic resources. Indirect disturbances, such as erosion or sedimentation, litter and landscape cuttings, pet droppings, and introduction of invasive species from facility cleaning or other maintenance/repairs, could degrade wetlands and/or jurisdictional aquatic resources located in the LA River ROW that are within or adjacent to Common Elements or Multi-use Trails and Access Gateways Typical Project facilities, as described in detail in the *Construction* subsection above. Deposition of landscape cuttings, trash and debris, fertilizer runoff, and pet and equestrian waste could also indirectly affect adjacent and downstream wetlands and aquatic resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure BIO-22a: Implement Permanent Wetlands Signage.

If wetlands or jurisdictional aquatic resources are identified within the project footprint or surrounding buffer, but will not be affected by the proposed Project, then those resources must be clearly marked with permanent signage to promote avoidance of the resource, including by the public and operations and maintenance staff.

Mitigation Measure BIO-22b: Obtain Wetland Permits for Operations.

If wetlands or jurisdictional aquatic resources are identified within the project footprint or surrounding buffer and would be affected by the proposed Project, then operations activities, including any recreational activities that could temporarily or permanently affect aquatic resources, will be included in the appropriate permits to be obtained from the USACE, SWRCB or RWQCB, CDFW, and/or the CCC, as required for construction. If operations activities are not covered by the appropriate permits issued for construction, separate permits will be obtained from the USACE, SWRCB or RWQCB, CDFW, and/or the CCC, as required. The permittee will implement all measures and conditions included in those permits.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of their individual elements with all the KOP discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOP categories only.

The specific location (in-channel or off-channel) and design for each of the KOP components has not yet been determined and would depend on numerous factors, including project proponent and availability of funding. As the location and design for these components is not yet known, specific project impacts are unknown. However, as throughout this document, based on the known

information with the study area and the design components, determinations regarding impacts and proposed mitigation measures are provided.

KOP Categories 1, 3, and 6

Construction

Construction of KOP Categories 1, 3, and 6 could take place outside or within the LA River or other jurisdictional aquatic resources and, therefore, could result in potentially significant impacts on wetlands and/or potentially jurisdictional aquatic resources. KOP Category 1 includes a variety of construction activities ranging from trail modifications to development of facilities anywhere within the frames, from in- to off-channel. KOP Category 3 includes bridge construction activities within, over, or adjacent to the channel. KOP Category 6 includes construction activities, ranging from establishment of a nursery, recreation field, development of surface and subsurface storage to well and water treatment facility installation.

Construction of KOP Categories 1, 3, and 6 could result in permanent and temporary direct and indirect impacts on wetlands and/or jurisdictional aquatic resources. Permanent impacts from construction activities may include encroachment into, or removal of, wetlands and/or potentially jurisdictional aquatic resources that may have permanent effects. Temporary direct impacts include clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes. Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade any wetlands and/or potentially jurisdictional aquatic resources.

In addition to impacts from the construction of bike trails, equestrian trails, and pedestrian trails, as described for the Multi-Use Trails and Access Gateways Typical Projects above, the permanent loss and/or temporary disturbance of wetlands and/or potentially jurisdictional aquatic resources could result from the construction of other design components included in each of these KOP categories, including equestrian facilities, light towers, water towers, lookouts and platforms, boardwalks, channel access points, underpasses and overpasses, structural decks, and inlet/outlet facilities.

Unlike the Typical Projects described above, implementation of KOP Categories 1, 3, and 6 could include in-channel work and off-channel work. Should in-channel work take place in areas containing wetlands and/or potentially jurisdictional aquatic resources—primarily Frames 1 and 6, where wetlands are present, but also in any frame where aquatic resources may be present—then permanent and/or temporary direct impacts could occur within the LA River channel, in addition to the wetlands and/or potentially jurisdictional aquatic resources occurring outside of the river channel (as described above).

In addition, the implementation of the Statewide NPDES Construction General Permit and construction site BMPs outlined in the project's SWPPP will reduce construction-related indirect impacts on wetlands and/or jurisdictional aquatic resources from erosion, sedimentation, and pollution.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-21a: Conduct a Jurisdictional Delineation.

Mitigation Measure BIO-21b: Flag Wetland ESA.

Mitigation Measure BIO-21c: Obtain Wetland Permits.

Mitigation Measure BIO-21d: Restore Temporary Wetland Impacts.

Mitigation Measure BIO-21e: Implement Mitigation for Permanent Loss of Wetlands or Jurisdictional Aquatic Resources.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Any wetlands or potentially jurisdictional aquatic resources occurring within the project area potentially could be affected by KOP Categories 1, 3, and 6 operations and maintenance activities, should they be located within or adjacent to a KOP Categories 1, 3, or 6. Maintenance of vegetation within and adjacent to KOP Categories 1, 3, and 6, including landscaping and vegetation removal and trimming, could reduce in size or disturb wetlands or potentially jurisdictional aquatic resources that are located within or adjacent to a KOP Category 1. Recreational impacts, such as trampling and trespass, kayak damage, and introduction of trash, could also result in temporary or permanent impacts on aquatic resources. Indirect disturbances, such as dust and introduction of invasive species, could degrade wetlands and/or potentially jurisdictional aquatic resources located in the proposed project area. In addition, sedimentation, fertilizer runoff, pet droppings, and increased trash from public access could all contribute to indirect impacts on adjacent sensitive natural communities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-22a: Implement Permanent Wetlands Signage.

Mitigation Measure BIO-22b: Obtain Wetland Permits for Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Categories 2, 4, and 5

Many of the projects and activities described for KOP Categories 2, 4, and 5 depend on the presence of a water feature, wetland, or jurisdictional aquatic resource and, therefore, are generally expected to take place within the limits of the LA River or other jurisdictional aquatic resources or include some project activity that will result in an impact on those resources. The nature of these KOP categories generally requires the presence of a jurisdictional aquatic resource or wetland. Therefore, these KOP categories have been combined as they are generally dependent on the presence of wetlands or jurisdictional aquatic resources.

Construction

Construction of KOP Categories 2, 4, and 5 are expected to take place within the LA River or other jurisdictional aquatic resources or to connect to the LA River or other jurisdictional aquatic resource. Therefore, construction of KOP Categories 2, 4, and 5 could result in potentially significant impacts on wetlands and/or potentially jurisdictional aquatic resources. KOP Category 2 includes construction activities ranging from terracing the banks, constructing dams or deployable barriers, modifying the channel for erosion protection, redirecting water flow as well as other channel modifications that include changing the materiality of the channel (e.g. adding or removing concrete depending on capacity requirements). KOP Category 4 includes construction activities ranging from pipe, tunnel, tank and pump installation, establishment of channels, and installation of devices and topographic features. KOP Category 5 includes construction activities such as the configuration of channels and channel features, development of storage basins, and use of off-channel facilities for water storage.

Some of the design components under KOP Categories 2, 4, and 5 could potentially have beneficial permanent direct effects on wetlands and/or potentially jurisdictional aquatic resources if the planting of riparian and wetland habitats, improvements to hydrology or channel substrate, and enhancement of existing conditions are included in individual project design features and create additional or improved wetlands or jurisdictional aquatic resources within the study area.

Construction of KOP Categories 2, 4, and 5 could result in permanent and temporary direct and indirect impacts on wetlands and/or jurisdictional aquatic resources located within or adjacent to a project. Permanent impacts from construction activities may include removal of, or direct changes to the conditions of, wetlands and/or potentially jurisdictional aquatic resources. Temporary direct impacts include vegetation maintenance, such as clearing and grubbing, dewatering or water diversions that reduce or remove water supply, equipment staging, and temporary construction access routes. Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade any wetlands and/or potentially jurisdictional aquatic resources.

Implementation of KOP Categories 2, 4, and 5 is likely to include in-channel and off-channel work. Should in-channel work take place in areas containing wetlands and/or potentially jurisdictional aquatic resources, then permanent and/or temporary direct impacts could occur within the LA River channel, in addition to the wetlands and/or potentially jurisdictional aquatic resources

occurring outside of the river channel (as described above). Temporary impacts on wetlands from construction diversions during the dry season are likely. Permanent impacts from construction activities, such as diversions causing reduced, increased, or loss of flows in portions of the channel during diversions, could occur. Altering wet or dry season flows could have an impact, including loss of wetlands if temporary diversions are in place for long durations or the diversions cause permanent changes in the hydrological regime to portions of the channel.

In addition, the implementation of the Statewide NPDES Construction General Permit and construction site BMPs outlined in the project's SWPPP will reduce construction-related indirect impacts on wetlands and/or jurisdictional aquatic resources from erosion, sedimentation, and pollution.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-21a: Conduct a Jurisdictional Delineation.

Mitigation Measure BIO-21b: Flag Wetland ESA.

Mitigation Measure BIO-21c: Obtain Wetland Permits.

Mitigation Measure BIO-21d: Restore Temporary Wetland Impacts.

Mitigation Measure BIO-21e: Implement Mitigation for Permanent Loss of Wetlands or Jurisdictional Aquatic Resources.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Any wetlands or potentially jurisdictional aquatic resources occurring within the study area could be affected by KOP Categories 2, 4, or 5 operations and maintenance activities, as KOP Categories 2, 4, and 5 could take place within a jurisdictional aquatic resource, including wetlands, or potentially be connected to one, if it exists in the study area. Permanent impacts from floodplain reclamation permanent diversion and other KOP components that alter the hydrological regime during wet or dry season would likely cause loss of wetlands in the affected area and potentially on a broader scale within the river, particularly those that reduce or eliminate dry season flows. Recreational impacts such as trampling and trespass, kayak damage, and introduction of trash, could also result in temporary or permanent impacts on aquatic resources. Maintenance of vegetation within and adjacent to KOP Categories 2, 4, and 5 components, including vegetation removal and trimming, facility maintenance, and sediment removal, could reduce in size or disturb wetlands and/or

potentially jurisdictional aquatic resources located within or adjacent to KOP Categories 2, 4, or 5. Indirect disturbances, such as dust and introduction of invasive species, sedimentation, and pollution, could degrade the conditions of wetlands or potentially jurisdictional aquatic resources located in the project area.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-22a: Implement Permanent Wetlands Signage.

Mitigation Measure BIO-22b: Obtain Wetland Permits for Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction

The *2020 LA River Master Plan* would involve construction of up to 107 projects that could occur anywhere in the LA River frames over a 25-year period. The specific location (in-channel or off-channel) and design for these components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Construction under the *2020 LA River Master Plan* could result in permanent and temporary direct and indirect impacts on wetlands and/or other jurisdictional aquatic resources occurring within the LA River frames. Permanent impacts from construction activities may include removal of existing wetlands or jurisdictional aquatic resources or activities that may have permanent effects. Temporary direct impacts include clearing and grubbing, incidental disturbances within construction areas, equipment staging, temporary and permanent diversions, and temporary construction access routes. Similar to the discussion above for the Typical Projects and KOP Categories, construction activities under the overall *2020 LA River Master Plan* could result in temporary indirect effects, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, that could degrade riparian habitats and other sensitive natural communities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-1: Conduct Literature Review and Project Surveys and Mitigation.

Mitigation Measure BIO-21a: Conduct a Jurisdictional Delineation.

Mitigation Measure BIO-21b: Flag Wetland ESA.

Mitigation Measure BIO-21c: Obtain Wetland Permits.

Mitigation Measure BIO-21d: Restore Temporary Wetland Impacts.

Mitigation Measure BIO-21e: Implement Mitigation for Permanent Loss of Wetlands or Jurisdictional Aquatic Resources.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Implementation of the overall *2020 LA River Master Plan* could potentially have beneficial permanent direct effects on wetlands and/or jurisdictional aquatic resources if improvements to those aquatic resources, such as improved hydrology, substrate, and planting plans, are included in design features by increasing the amount of, or improving the condition of, wetlands and/or jurisdictional aquatic resources within the *2020 LA River Master Plan* area. Impacts could also be negative, such as altering dry or wet-season water input to wetland resources in portions of the river or tributaries, that could reduce or eliminate aquatic resources.

Similar to the discussion for the Typical Projects and KOP categories above, operations activities under the *2020 LA River Master Plan* could potentially impact wetlands and/or jurisdictional aquatic resources occurring within the LA River frames. Maintenance of vegetation, including landscaping and vegetation removal and trimming, could reduce in size or disturb wetlands and/or jurisdictional aquatic resources that are located within or adjacent to a proposed project. Indirect disturbances, such as dust and introduction of invasive species, could degrade wetlands and/or jurisdictional aquatic resources, as described in detail in the *Construction* subsection of the *Typical Projects* section above.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-22a: Implement Permanent Wetlands Signage.

Mitigation Measure BIO-22b: Obtain Wetland Permits for Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.3(d): Would the proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?

Typical Projects

Common Elements and Multi-use Trails and Access Gateways Typical Projects

Below is a brief overview of the Wildlife Corridors, Linkages, and Local Connectivity Areas, and nursery and reproductive sites within Frames 1 through 9. The specific Wildlife Corridors, Linkages, and Local Connectivity Areas located within each frame are discussed in Section 3.3.2.1, *Wildlife Movement and Connectivity*, as are details on existing wildlife, vegetation, and habitats.

One mapped wildlife linkage, the "Griffith Park–Verdugo Hills" linkage is documented in Frame 6 by the *Missing Linkages: restoring connectivity to the California landscape* project (Penrod et al. 2001). This linkage is composed of Verdugo Wash, an approximately 9.5-mile concrete-lined channel that starts in the Verdugo Hills and flows into the LA River at Griffith Park. Verdugo Wash is limited greatly in wildlife connectivity function and value, especially for terrestrial and aquatic wildlife, due to a dam (i.e., Verdugo Debris Basin) located in its upper reach, just upstream of the Oakmont Country Club, and because it lacks any earthen bottom and vegetation or direct connectivity to surrounding habitats. However, at the confluence with the LA River, Verdugo Wash contains some refuge and breeding habitat within riparian vegetation.

One CEHC identified Large Natural Landscape Block occurs in Frame 6 at Griffith Park. Additionally, areas identified in the CEHC as Small Natural Areas occur throughout all frames both within the riverbed and the surrounding urban matrix. CEHC Potential Riparian Connections also occur in the study area and include the entire LA River. Note that no areas identified as CEHC Essential Connectivity Areas occur within the study area (Figure 3.3-25).

The river channel is predominantly concrete-lined, although it contains earthen bottom in some areas sufficient to support vegetated habitat (e.g., herbaceous vegetation and trees) within the riverbed. The river channel and associated vegetation facilitates connectivity of habitats for the species that utilize them, including fish, bats, resident and migratory birds, and possibly reptiles and amphibians. Areas of the river with earthen bottoms and vegetation contain higher quality connectivity function and value than other non-vegetated regions of the LA River and support habitat important for movement, migration, stopover, overwintering, and breeding of fish and wildlife species utilizing them. Associated infrastructure, like bridges and culverts, may also contain habitat features such as ledges, crevices, and hinges, which may provide nesting or roosting habitat for bird and bat species.

Outside of the river channel, various areas contain habitat that support species movement, migration, stopover, overwintering, and breeding, such as trees and vegetation in local parks, greenbelts, and landscaping, remnant habitat patches, and larger habitat blocks, such as those within Elysian Park, Griffith Park, and the Sepulveda Basin.

Construction

Frames 1 and 2

In addition to the Wildlife Corridors, Linkages, and Local Connectivity Areas located within Frames 1 and 2 (discussed in Section 3.3.2.1, *Wildlife Movement and Connectivity*), EFH also occurs in Frame 1 within marine and estuarine waters for finfish, coastal pelagic species, and groundfish, and the estuary habitat is considered an HAPC, which are high priority conservation areas due to their important and fragile ecosystem function (NOAA 2020c).

Construction of Typical Projects would occur directly adjacent to the riverbanks, between the top of bank and the fenceline. Construction equipment use and storage, activities, and personnel may result in temporary and permanent impacts that could adversely affect habitat connectivity, species movement, and reproduction.

Permanent direct construction impacts could include temporary and permanent ground disturbance, removal of vegetation and habitat, interference with or obstruction of habitat connectivity and/or species movements, degradation of water quality, and interference and preclusion of habitat availability.

Temporary direct impacts include clearing and grubbing, construction disturbances, equipment staging/storage, construction disturbances (e.g., noise, light, equipment access, human encroachment), and temporary construction access routes that may interfere with wildlife connectivity and nursery sites/reproduction.

All of these impacts could degrade habitats and interfere with or prohibit species movement and/or reproduction. Direct permanent impacts on EFH and HAPCs are not anticipated as no work is proposed in the riverbed, estuary, or adjacent marine waters.

Indirect construction impacts may include effects from noise, vibration, light, dust, human encroachment, chemical spills, or other construction-related indirect disturbances, introduction of invasive plant species, erosion, sedimentation, and pollutants. These impacts may also degrade habitats like riverine waters, wetlands, EFH and HAPCs, or interfere with habitat availability, habitat connectivity, and species movement and behavior, all of which may disrupt or preclude the reproduction of fish and wildlife.

Frames 3, 4, and 5

Wildlife Corridors, Linkages, and Local Connectivity Areas located within Frames 3, 4, and 5 are discussed in Section 3.3.2.1, *Wildlife Movement and Connectivity*. Construction impacts for Frames 3, 4, and 5 are as described above for Typical Projects for Frames 1 and 2, with the exception that EFH and HAPCs are not present within Frames 3, 4, and 5.

Frame 6

Construction impacts for Frame 6 are as described above for Typical Projects for Frames 1 and 2, with the exception that EFH and HAPCs are not present within Frame 6.

Frame 7

Construction impacts for Frame 7 are as described above for Typical Projects for Frames 1 and 2, with the exception that EFH and HAPCs are not present within Frame 7.

Frame 8

Construction impacts for Frame 8 are as described above for Typical Projects for Frames 1 and 2, with the exception that EFH and HAPCs are not present within Frame 8.

Frame 9

Construction impacts for Frame 9 are as described above for Typical Projects for Frames 1 and 2, with the exception that EFH and HAPCs are not present within Frame 9.

The construction of Typical Projects could affect Wildlife Corridors, Linkages, and Local Connectivity Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat removal, obstructions to existing fish and wildlife connectivity, hydrological interruption, or disturbances that interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction. Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

All subsequent projects will be planned in coordination with a qualified biologist with demonstrated expertise in wildlife connectivity and wildlife crossing design in order to ensure that all projects, during design, construction, operations, and maintenance, at a minimum maintain current existing ecological connectivity function and value and prevent unintended deleterious consequences to wildlife species, connectivity, and nursery sites. The qualified biologist will provide recommendations and design alternatives that can be implemented to avoid impacts on connectivity and nursery sites, prevent wildlife-human conflicts, and avoid other effects on connectivity and nursery site function and value. If project components are intended to have ecological function and/or maintain wildlife connectivity, then the qualified biologist will participate in their planning and design.

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operation of Typical Projects includes maintenance of facilities and vegetation, as well as the use of facilities along river between top of back and the fenceline.

Frames 1 through 9

Any resources supporting the movement, migration, or reproduction of fish and/or wildlife species that are located within the LA River ROW of Frames 1 through 9, as described above, could be affected by Typical Projects operations and maintenance activities. Maintenance of vegetation within and adjacent to Common Elements Typical Project facilities, including vegetation removal and trimming, could remove or disturb habitat supporting wildlife movement, migration, and reproduction. Recreational use along the LA River may substantially increase due to implementation of Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects, potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and other indirect disturbances, such as human encroachment, edge effects, light, noise, trash, impacts on water quality, and introduction of invasive species, could degrade habitat, alter species behavior and habitat access, and interfere with species movement, migration, and reproduction.

The operation of Typical Projects could affect Wildlife Corridors, Linkages, and Local Connectivity Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat modifications, obstructions to existing fish and wildlife connectivity, hydrological interruption, or disturbances that interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction. Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Projects analyzed above could be implemented in whole or as a combination of their individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOP categories only.

A brief overview of the Wildlife Corridors, Linkages, and Local Connectivity Areas, and nursery and reproductive sites within Frames 1 through 9 is provided above at the top of this section. The specific Wildlife Corridors, Linkages, and Local Connectivity Areas located within each frame are discussed in Section 3.3.2.1, *Wildlife Movement and Connectivity*, as are details on existing wildlife, vegetation, and habitats.

KOP Category 1

Construction

The construction of KOP Category 1 would be similar in scope and type as to the construction of the Multi-Use Trails and Access Gateways Typical Project. Additional design components, including light towers, channel access points, vehicular access for maintenance and operations, underpasses, overpasses, and habitat corridors, would contribute to new construction impacts. In-channel impacts are expected to include channel access points, vehicular access points to the channel for maintenance and operations, and underpasses and overpasses on the channel.

Construction-related direct and indirect impacts on wildlife connectivity and nursery sites due to the construction of KOP Category 1 would be generally as described for the Typical Projects. The construction of KOP Category 1 could affect Wildlife Corridors, Linkages, and Local Connectivity

Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat removal, obstructions to existing fish and wildlife connectivity, hydrological interruption, or disturbances that interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction. Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Incorporate Wildlife Connectivity in Subsequent Project Design.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The operation of KOP Category 1 would be similar in scope and type as to the operation of the Multi-Use Trails and Access Gateways Typical Project and, therefore, would have similar impacts. Habitat corridors, planted vegetated buffers, and connections between large habitat blocks would provide beneficial effects to biological resources.

Additional design components, including light towers, channel access points, vehicular access for maintenance and operations, underpasses overpasses, and habitat corridors, would provide new

impacts or positive effects to biological resources. The operation of the KOP Category 1 could have a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. The operation of KOP Category 1 could affect Wildlife Corridors, Linkages, and Local Connectivity Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat modifications, obstructions to existing fish and wildlife connectivity, hydrological interruption, or disturbances which interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction.

Additionally, recreational use along the LA River may substantially increase due to implementation of KOP Category 1, potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and other indirect disturbances, such as human encroachment, edge effects, dust, light, noise, vibration, trash, chemical spills, impacts on water quality, fertilizer runoff, and introduction of invasive species, could degrade habitat, alter species behavior and habitat access, and interfere with species movement, migration, and reproduction.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Categories 2 and 4

Construction

Construction of KOP Categories 2 and 4 will entail in-channel modifications and impacts and have potential to impact the same in-channel resources throughout Frames 1 through 9 in a similar way. Because of the presence of similar resources and equivalent and/or similar activities within identical study areas, KOP Categories 2 and 4 have been combined in the following impacts discussion.

The construction of KOP Categories 2 and 4 could result in potentially significant impacts associated with the permanent and temporary loss of habitats and nursery sites, imposed habitat fragmentation, and disruption and/or obstruction of connectivity as a result of construction of KOP Categories 2 and 4 components, including pumps, diversion pipes/tunnels/channels, overflow weirs, underground galleries, side channels, and storm drain interceptors.

Permanent impacts from construction activities may include loss of existing vegetation and habitats, habitat fragmentation, and obstructed movement ability due to constructed barriers (e.g., dams, levees), and loss of nursery habitat. Temporary direct impacts include clearing and grubbing, construction disturbances, equipment staging/storage, construction disturbances (e.g., noise, light, equipment access, human encroachment), and temporary construction access routes that may interfere with wildlife connectivity and nursery sites/reproduction.

Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade habitats and interfere with wildlife connectivity and reproduction. Impacts would be similar to those described for the Typical Projects.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Potential impacts from operation of the design components under KOP Categories 2 and 4 would vary depending on the specific design component and its intended function, as well as on the specific location, including in-channel or off-channel. The specific location (in-channel or off-channel) and design for these design components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description*, these KOP categories could provide a range of functions, including flood-management, using design components like check dams and deployable barriers, levees, and armored channels or vertical walls, removing or adding concrete, making bridge pier modifications, texturing, grooving, or smoothing channels, and installing access ramps.

Some of the design components under KOP Categories 2 and 4 could potentially have permanent beneficial effects for wildlife connectivity and nursery sites if naturalized side channels and habitat restoration are included in individual project diversion features by creating additional riparian and wetland habitats and maintaining riverine and riparian connectivity within the *2020 LA River Master Plan* area. Additional components which may have beneficial effects include small planting trays, parks, wildlife ramps, wetland restoration, vegetation restoration, daylighted storm drains, and removed concrete.

Operation of some of the design components under KOP Category 2 could potentially have deleterious effects on fish and wildlife connectivity and reproduction such as loss of habitat and habitat access due to potentially obstructive check dams and deployable barriers, levees, armored channels/vertical walls, added concrete, and bridge pier modifications. If areas are intended to have ecological function and maintain wildlife connectivity, design with a qualified biologist would be important to prevent unintended deleterious consequences to wildlife species, connectivity, or nursery sites (see Mitigation Measure BIO-23).

Maintenance activities within and adjacent to KOP Category 4 components, including landscaping, vegetation removal and trimming, and human encroachment could disturb and/or remove habitats. Indirect disturbances, such as dust and introduction of invasive species, could degrade riparian habitat and other sensitive natural communities located in the project area, as described in detail in the Construction subsection of the Typical Projects above.

Operation of some of the design components under KOP Categories 2 and 4 could potentially have deleterious effects for wildlife connectivity and reproduction, such as loss of habitat and habitat access due to potentially obstructive diversions. If areas are intended to have ecological function and maintain wildlife connectivity, design with a qualified biologist would be important to prevent unintended deleterious consequences to wildlife species, connectivity, and nursery sites.

Recreational use along the LA River may increase due to implementation of KOP Categories 2 and 4, potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and other indirect disturbances, such as human encroachment, edge effects, dust, light, noise, vibration, trash, chemical spills, impacts on water quality, fertilizer runoff, and introduction of invasive species, could degrade habitat, alter species behavior and habitat access, and interfere with species movement, migration, and reproduction.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 3

Construction

The implementation of KOP Category 3 could result in potentially significant impacts associated with the permanent and temporary loss of wildlife connectivity and nursery sites as a result of construction of KOP Category 3 components, including platforms, crossings, path ramps, structural walls, bridges, and cantilevers.

Construction of KOP Category 3 components could result in permanent and temporary direct and indirect impacts on habitats occurring within the study area, particularly on the aquatic and riparian habitats located within the LA River channel and/or along the riverbanks. Permanent impacts from construction activities may include removal and loss of existing habitats and habitat fragmentation.

Crossings and platforms may prohibit the movement and connectivity for some species occurring within the river channel, causing fragmentation and movement obstruction, which could be due to the crossings and platform covering the river channel and creating long, dark, enclosed areas within the concrete river channel sections, causing some species to be reluctant or unable/unwilling to access and pass through such areas.

Crossings and platforms that are vegetated or include a habitat/wildlife bridge may create habitat and facilitate connectivity; however, because these features are not directly connected to and are located above the river channel, they would only provide such benefits for species located outside of the river channel and adjacent to the crossing and platforms and/or for species that could access such habitat features from the river channel, such as birds, bats, and highly mobile species.

Temporary direct impacts include clearing and grubbing, construction disturbances, equipment staging/storage, and temporary construction access routes. Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade habitats and interfere with wildlife connectivity and reproduction. Temporary impact would be similar to those described for the Typical Projects.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Wildlife connectivity and nursery sites occurring within the LA River potentially could be affected by KOP Category 3 operations and maintenance activities. Maintenance activities within and adjacent to KOP Category 3 components, including landscaping (along path ramps and runs), vegetation removal and trimming, and human encroachment could disturb and/or remove habitats. Indirect disturbances, such as dust and introduction of invasive species, could degrade riparian habitat and other sensitive natural communities located in the project area. Recreational use along the LA River may substantially increase due to implementation of KOP Category 3, potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and indirect operations disturbances, such as human encroachment, edge effects, light, noise, trash, fertilizer runoff, impacts on water quality, and introduction of invasive species, could degrade habitat, alter species behavior and habitat access, and interfere with species movement, migration, and reproduction, resulting in negative impacts on wildlife connectivity and nursery sites.

The operation of KOP Category 3 could affect Wildlife Corridors, Linkages, and Local Connectivity Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat modifications, obstructions to existing fish and wildlife connectivity, hydrological interruption, or

disturbances that interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 5

Construction

The implementation of KOP Category 5 could result in potentially significant impacts on wildlife connectivity and/or nursery sites as a result of construction of KOP Category 5 components, including widening the channel, fields, storage, and side channels.

Construction of KOP Category 5 components could result in permanent and temporary direct and indirect impacts on habitats and connectivity areas occurring within the LA River, particularly on riparian habitats located within the LA River channel and/or along the riverbanks. Permanent impacts from construction activities may include removal of existing vegetation, encroachment into habitats, obstruction of connectivity within the river channel, and loss of nursery habitat. Temporary direct impacts include clearing and grubbing, construction disturbances, equipment staging/storage, and temporary construction access routes that may interfere with wildlife connectivity and nursery sites.

Direct impacts as a result of construction of KOP Category 5 components would primarily be temporary because floodplain reclamation areas would be restored or reestablished with native habitats, including riparian and wetland habitats. However, there could be some permanent loss of habitat from construction of proposed recreation facilities (e.g., farmer's markets, boardwalks), which could result in interference with or preclusion of wildlife connectivity and reproduction.

Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could degrade habitats that support wildlife connectivity and nursery sites. Impacts would be similar to those described for the Typical Projects; see the above subsection for details.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be potentially significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Some of the design components under KOP Category 5 potentially could have beneficial permanent direct effects on wildlife connectivity and nursery sites—if naturalized side channels and habitat restoration are included in individual project diversion features—by creating additional riparian and wetland habitats and maintaining riverine and riparian connectivity within the *2020 LA River Master Plan* area.

Floodplain reclamation of portions of the floodplain along the LA River could have beneficial permanent direct effects on wildlife connectivity and reproduction. KOP Category 5 components include wetlands, naturalized banks, braided channels, and side channels, which would create additional riparian and wetland habitats within the *2020 LA River Master Plan* area and could improve wildlife connectivity and facilitate/support wildlife reproduction. Floodplain reclamation of portions of the floodplain along the LA River could allow for improved ecological connectivity and habitat value through associated habitat restoration efforts. Although there are only a limited number of opportunities along the LA River where reclamation could take place, and any floodplain reclamation projects would be small-scale, KOP Category 5 could still have beneficial impacts on wildlife connectivity and nursery sites/reproduction within the LA River portion of the *2020 LA River Master Plan* area by restoring habitats, ecological connectivity, and hydrological functions.

Wildlife connectivity and nursery sites occurring within the LA River potentially could be affected by KOP Category 5 operations and maintenance activities. Maintenance activities within and adjacent to KOP Category 5 components, including landscaping, vegetation removal and trimming, and human encroachment, could disturb and/or remove habitats.

Operation of some of the design components under KOP Category 5 could potentially have deleterious effects to wildlife connectivity and reproduction, such as loss of habitat and habitat access, due to potentially obstructive diversions.

Recreational use along the LA River may substantially increase due to implementation of KOP Category 5, potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and other indirect disturbances, such as human encroachment, edge effects, dust, light, noise, vibration, trash, chemical spills, impacts on water quality, fertilizer runoff, and introduction of invasive species, could

degrade habitat, alter species behavior and habitat access, and interfere with species movement, migration, and reproduction.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 6

Construction

The implementation of KOP Category 6 could result in potentially significant impacts on wildlife connectivity and/or nursery sites associated with the permanent and temporary loss of habitats. Permanent impacts from construction activities may include removal of existing habitat, encroachment into habitat, habitat fragmentation, and establishing barriers to wildlife movement.

Temporary direct impacts include clearing and grubbing, construction disturbances, equipment staging/storage, and temporary construction access routes. Temporary indirect effects from construction-related activities, such as dust, introduction of invasive plant species, erosion, sedimentation, and pollutants, could interfere with wildlife connectivity and/or nursery sites. Impact would be similar to those described for the Typical Projects; see above subsection for details.

The construction of the KOP Category 6 could affect Wildlife Corridors, Linkages, and Local Connectivity Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat removal, obstructions to existing fish and wildlife connectivity, hydrological interruption, or disturbances which interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction. Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Any habitat or landscape features supporting wildlife connectivity and/or nursery sites occurring within the study area potentially could be affected by KOP Category 6 operations and maintenance activities. Maintenance of vegetation within and adjacent to KOP Category 6 components, including landscaping (playgrounds, ponds, recreational areas) and vegetation removal and trimming, could reduce in size or disturb vegetation and habitats that are located within or adjacent to a KOP Category 6. Recreational use along the LA River may substantially increase due to implementation of KOP Category 6 potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and other indirect operations disturbances, such as human encroachment, edge effects, dust, light, noise, vibration, trash, chemical spills, impacts on water quality, fertilizer runoff, and introduction of invasive species, could degrade habitat, alter species behavior and habitat access, and interfere with species movement, migration, and reproduction and could contribute indirect effects on adjacent habitats resulting in negative impacts on wildlife connectivity and nursery sites.

The operation of KOP Category 6 could affect Wildlife Corridors, Linkages, and Local Connectivity Areas, EFH, HAPC, and fish and wildlife nursery and reproductive sites through direct habitat modifications, obstructions to existing fish and wildlife connectivity, hydrological interruption, or disturbances which interrupt species movements, movement ability, access to habitats and nursery sites, or reproduction. Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction

The overall *2020 LA River Master Plan* implementation would involve construction of up to 107 projects that could occur anywhere in the study area over a 25-year period. The specific locations (in-channel or off-channel) and design of these projects have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Construction under the *2020 LA River Master Plan* could result in permanent and temporary direct and indirect impacts on fish and wildlife connectivity and nursery sites occurring within the study area.

Construction equipment use and storage, activities, and personnel may result in temporary and permanent impacts that could adversely affect habitat connectivity, species movement, and reproduction. Direct construction impacts could include temporary and permanent ground disturbance, encroachment into habitats, removal of vegetation and habitat, interference with or obstruction of habitat connectivity or species movements, degradation of water quality, habitat loss and fragmentation, and disturbance or removal of nursery sites, which may affect fish and wildlife connectivity and nursery sites.

Construction activities under the overall *2020 LA River Master Plan* could result in temporary indirect effects, such as noise, vibration, light, dust, human encroachment, introduction of invasive species, construction disturbances, equipment staging/storage, and temporary construction access routes, chemical spills or other construction-related indirect disturbances that may degrade habitats like riverine waters, wetlands, EFH and HAPCs, interfere with habitat availability, habitat connectivity, and species movement and behavior, and/or which may disrupt or preclude the reproduction of fish and wildlife.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-10: Prevent Entrapment in Construction Materials and Excavations.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-19: Implement Habitat Reclamation Efforts.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Implementation of the overall *2020 LA River Master Plan* could have beneficial permanent direct effects on wildlife connectivity and nursery sites if creation and restoration of native upland and wetland habitats, enhancements to wildlife connectivity, and features supporting nursery sites are implemented under the *2020 LA River Master Plan*.

The overall *2020 LA River Master Plan* operations and maintenance activities could affect habitat or landscape features supporting wildlife connectivity and/or nursery sites occurring within the study area.

Maintenance of vegetation within and adjacent to the project area, including landscaping and vegetation removal and trimming, could reduce in size or disturb vegetation and habitats supporting wildlife movement and reproduction. Disturbance or modifications of existing structures that contain habitat utilized by bats and birds, such as crevices, hinges, and other structural cavities, may affect bird nesting and bat roosting, overwintering, and stopover sites.

Recreational use along the LA River may substantially increase due to implementation of the overall *2020 LA River Master Plan*, potentially resulting in temporary and permanent direct and indirect impacts on habitats and species, such as trampling of vegetation, species disturbance, species habitat avoidance, and increased introduction of invasive plant species and pet droppings. These impacts and other indirect operations disturbances, such as human encroachment, edge effects, dust, light, noise, vibration, trash, chemical spills, impacts on water quality, fertilizer runoff, and introduction of invasive species, could degrade habitats such as riverine waters, wetlands, EFH, and HAPCs, interfere with habitat availability, habitat connectivity, and species movement and behavior, which may disrupt or preclude the reproduction of fish and wildlife, contributing to impacts on wildlife connectivity and nursery sites.

Such activities could result in a substantial adverse impact, either directly or through habitat modifications, on the movement of any native resident or migratory fish or wildlife species or with

established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure BIO-9: Prepare and Implement Construction Best Management Practices and Operations Recreation Plan.

Mitigation Measure BIO-11: Restrict Monofilament Materials.

Mitigation Measure BIO-12: Implement Best Practices for Night Lighting.

Mitigation Measure BIO-13: Avoid Bird and Bat Entrapment in Poles.

Mitigation Measure BIO-14: Minimize Noise Disturbance of Wildlife.

Mitigation Measure BIO-15: Use Wildlife-Proof Trash Canisters.

Mitigation Measure BIO-16: Use Wildlife Safety Glass.

Mitigation Measure BIO-17: Prepare and Implement Pest Management Plan.

Mitigation Measure BIO-18: Prohibit use of Invasive Species during Operations.

Mitigation Measure BIO-23: Maintain Connectivity in Subsequent Project Design, Construction, and Operation.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.3(e): Would the proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Typical Projects

Common Elements and Multi-use Trails and Access Gateways Typical Projects

Construction and Operations

Frames 1 through 9

The Common Elements and Multi-use Trails and Access Gateways Typical Projects could conflict with local tree policies and ordinances under the Los Angeles County Tree Ordinance and City jurisdictions (see Table 3.3-12). Proposed activities may be located in areas that contain protected trees, including riparian habitats, as well as urban areas. Construction of the Common Elements Typical Project, including cafés, pavilions, restrooms, and art/performance spaces, or the Multi-use Trails and Access Gateways Typical Project, including river gateways, pedestrian trails, bike trails, and equestrian trails, could require pruning or removal of trees during vegetation clearing and grading and other construction activities. Operations activities designed to keep Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project areas landscaped, clear, and accessible would require vegetation management, which could involve tree trimming and/or tree removal. The trimming or removal of trees would be subject to the same local tree policies and ordinances, regardless of whether the work was being performed as a part of construction or operations activities.

Each Common Elements Typical Project and Multi-use Trails and Access Gateways Typical Project will follow and be in compliance with any applicable local tree policies and/or ordinances, as well as any general plan or municipal codes that pertain to biological resources. The construction and operations of the Common Elements and Multi-use Trails and Access Gateways Typical Projects could have a substantial adverse impact, either directly or through habitat modifications, on any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure BIO-24: Implement Avoidance, Transplantation, and Compensatory Mitigation Measures for Protected Trees.

During the conceptual design of each individual subsequent project, all applicable local policies and ordinances, including tree preservation policies, will be followed, and protected trees will be avoided where possible.

If protected trees have been identified and their removal cannot be avoided, then prior to ground-disturbing activities, where local tree policies exist and trees are present in the work area, a qualified biologist or arborist will conduct surveys in the work area to identify protected trees.

The biologist or arborist will establish ESAs around protected trees that have the potential to be affected by construction activities, but do not require removal. ESAs will be based on local government ordinances, policies, and regulations.

Compensatory mitigation for impacts on protected trees will be required, including impacts associated with removing or trimming a protected tree, based on requirements set out in applicable local government ordinances, policies, and regulations. Compensatory mitigation based on these local ordinances, policies, and regulations may include, but is not limited to, the following:

- Transplantation of protected trees to areas outside of the work area
- Replacement of protected trees onsite or offsite, based on the number of protected trees affected, at a ratio required by local government ordinances or regulations

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

With implementation of the proposed mitigation measure, it is anticipated that the construction and operations of Common Elements and Multi-use Trails and Access Gateways Typical Projects would have a less-than-significant impact within County jurisdiction, either directly or through habitat modifications, on any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Typical Projects analyzed above could be implemented in whole or as a combination of their individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Typical Projects, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1, 2, 3, 4, 5, and 6

The projects and activities described for KOP Categories 1 through 6 all have the potential to conflict with local tree policies and ordinances. Potential impacts on protected trees would be the same, regardless of the type of project activity that would occur; for example, trimming or removing a tree would be subject to the same local tree policies and ordinances, regardless of whether the work was being performed while modifying a channel for KOP Category 2, constructing crossings and platforms for KOP Category 3, or building water treatment facilities for KOP Category 6. As such, these KOP components have been combined for Impact 3.3(e).

Construction and Operations

KOP Categories 1 through 6 could conflict with local tree policies and ordinances under the Los Angeles County Tree Ordinance and city jurisdictions (Table 3.3-11 and Table 3.3-12). Proposed KOP components may be located in areas that contain protected trees, including riparian habitats and urban areas. Construction of KOP components, including recreation trails, light towers, water towers, vehicular access for maintenance and operations, underpasses, and overpasses, could require pruning or removal of trees during vegetation clearing and grading and other construction activities. Operations activities designed to keep KOP components landscaped, clear, and accessible

would require vegetation management, which could involve both tree trimming and/or tree removal.

Because specific location (in-channel or off-channel) and design for these design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding, the locations of, and exact number of, trees to be affected resulting from construction and operations activities cannot be determined.

Each KOP category will follow and be in compliance with any applicable local tree policies and/or ordinances, as well as any general plan or municipal codes that pertain to biological resources. The construction and operations of the KOP Categories 1 through 6 could be expected to have a substantial adverse impact, either directly or through habitat modifications, on any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure BIO-24: Implement Avoidance, Transplantation, and Compensatory Mitigation Measures for Protected Trees.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

Construction and operation under the *2020 LA River Master Plan* could conflict with local tree policies and ordinances under the Los Angeles County Tree Ordinance and city jurisdictions (Table 3.3-12) as a result of tree trimming and/or tree removal. Construction and operations impacts under the *2020 LA River Master Plan* would be the same as those identified for the Typical Projects and KOP Categories 1 through 6. Construction and operations under the *2020 LA River Master Plan* could be expected to have a substantial adverse impact, either directly or through habitat modifications, on any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure BIO-24: Implement Avoidance, Transplantation, and Compensatory Mitigation Measures for Protected Trees.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.3(f): Would the proposed Project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

Typical Projects

Common Elements and Multi-use Trails and Access Gateways Typical Projects

Construction and Operations

Frames 1 through 9

No HCPs, NCCPs, or other approved local, regional, or state HCPs are located within the study area. As such, the Common Elements and Multi-use Trails and Access Gateways Typical Projects will not conflict with any conservation plans, and no impacts are anticipated. The construction and operations of the Common Elements and Multi-use Trails and Access Gateways Typical Project would not have a significant adverse impact on or conflict with the provisions of an HCP, natural community conservation plan, or other approved local, regional, or state HCP.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 6

No HCPs, NCCPs, or other approved local, regional, or state HCPs are located within the *2020 LA River Master Plan* Area, and thus, the projects and activities described for KOP Categories 1 through 6 would not conflict with any conservation plans. As such, these KOP components have been combined for Impact 3.3(f).

Construction and Operations

No HCPs, NCCPs, or other approved local, regional, or state HCPs are located within the *2020 LA River Master Plan* Area. As such, KOP Categories 1 through 6 will not conflict with any conservation plans, and no impacts are anticipated. The construction and operations of KOP Categories 1 through 6 would not have a significant adverse impact on or conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

No HCPs, NCCPs, or other approved local, regional, or state HCPs are located within the project study area. As such, implementation of the *2020 LA River Master Plan* would not conflict with any conservation plans, and no impacts are anticipated. Construction and operations under the *2020 LA River Master Plan* would not be expected to have a significant adverse impact on or conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on biological resources would be the greater Los Angeles region, including Los Angeles County, which encompasses a variety of habitats

of concern, including wetlands and sensitive natural communities, that could be affected by cumulative projects. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on biological resources if, in combination with other projects within the greater Los Angeles region, it would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS; have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS; have a substantial adverse effect on state or federally protected wetlands (e.g., marshes, vernal pools, coastal wetlands) through direct removal, filling, hydrological interruption, or other means; interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites; conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

Cumulative Condition

Present and future regional growth involving the construction of development and infrastructure projects occurring over time would have the potential to result in the loss of species and/or habitats and natural communities. While the general plans of the various jurisdictions along the river's extent attempt to reduce biological effects through implementation of goals and policies regarding the use of open space and targeting growth within developed areas, the potential growth that may be pushed out to other areas could result in the loss of habitat for plants and animals, including some sensitive species. In this context, growth and development are considered to generate significant cumulative impacts on biological resources. Although direct impacts on special-status species and the loss of sensitive habitats would be mitigated, due to the loss of common habitats and diminished resource availability, impacts on special-status species would be cumulatively significant. In addition, the impediment of wildlife movement is cumulatively significant (Los Angeles County 2014).

Activities conducted under transportation projects included in the 2020–2045 RTP/SCS (SCAG 2020) would include the conversion of natural landscapes containing sensitive biological resources into paved roads, which would result in increased access to other undeveloped areas from the extension of transportation infrastructure through rural areas. This increased access could indirectly increase manufacturing and institutional development as a result of increased transportation access within the area, resulting in further habitat fragmentation. The incremental impacts of all of the transportation projects and land use strategies included in the 2020–2045 RTP/SCS on biological resources would be expected to result in a significant cumulative impact with regard to biological resources because these projects would contribute to an increase in habitat fragmentation and development on native habitats. These impacts are considered to contribute to significant cumulative impacts related to State-sensitive plant communities, migratory corridors, nursery sites, and local policies and ordinances as a result of an incremental net loss of habitat and protected trees and vegetation (SCAG 2020).

Any future related development within the greater Los Angeles region would be subject to all required laws, permits, ordinances, and plans to reduce impacts on biological resources. Reasonably foreseeable future programs and projects would be required to implement biological avoidance and minimization measures when obtaining relevant permits, including implementation of BMPs during construction. Future development would most likely include site-specific mitigation and be expected to comply with all applicable regulations, such as the MBTA. Development projects causing impacts on wetlands and riparian habitats would be subject to mitigation and the permit requirements of the USACE, the CDFW, and RWQCB. In addition, the policies and implementation measures within the respective cumulative plans, which aim for sustainable development, would help to preserve, replace, restore, or compensate for the loss of biological resources. Although direct impacts on special-status species and the loss of sensitive habitats would generally be mitigated on a case-by-case basis, impacts on biological resources would be considered cumulatively significant.

Contribution of the Proposed Project to Cumulative Impacts

The proposed Project would be located in a primarily urban landscape. There is habitat within the LA River channel, marine habitat in Frame 1, and adjacent nesting habitat. Some in-channel modifications would occur under the *2020 LA River Master Plan*, which would be subject to Section 401 and 404 of the CWA. Although sensitive wildlife species would be affected through the potential removal of foraging habitat, such species are adapted to living in a heavily developed and disturbed urban setting. Construction noise is common throughout the project area and unlikely to harm or harass such species.

Construction impacts like increased noise may have a significant impact on sensitive and resident wildlife species that occur within the project area; however, implementation of mitigation measures BIO-1 through BIO-24 would ensure that any impact associated with habitat interference, wetlands, or protected species would be less than significant by providing detailed guidance on how to comply with the MBTA, avoiding any destruction of active nests, and complying with the CFGC and other applicable requirements. implementation of and compliance with the mitigation measures would ensure that the species' normal behavior and chances for long-term survival would not be adversely affected by construction activities.

The general plans for the jurisdictions along the LA River include goals and policies protecting biological resources. With implementation of the proposed mitigation measures and consistency with general plan goals and policies, the construction and operations of the *2020 LA River Master Plan* would have a less-than-significant effect, either directly or through habitat modifications, on any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

It is anticipated that the construction and operations under the *2020 LA River Master Plan* would have a less-than-significant effect, either directly or through habitat modifications, on or conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP.

The proposed Project would not reduce habitat, but rather would increase it. Implementation of the *2020 LA River Master Plan* would potentially have beneficial permanent direct effects on wildlife connectivity and nursery sites with creation and restoration of native upland and wetland habitats, enhancements to wildlife connectivity, and features supporting nursery sites. Implementation of the *2020 LA River Master Plan* would not result in a cumulatively considerable contribution to biological impacts.

Section 3.4
Cultural Resources

3.4.1 Introduction

This section describes the geographic and regulatory setting for cultural resources, discusses impacts on cultural resources that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible. For a discussion of the Project's effects on Tribal Cultural Resources, see Section 3.17, *Tribal Cultural Resources*.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.4.2 Setting

This section describes the existing geographic, cultural, ethnographic, and regulatory setting sections with respect to cultural resources within the *2020 LA River Master Plan* study area.

3.4.2.1 Geographic

Regional Setting

The LA River within Los Angeles County is the alignment for the project study area and includes 51 miles of the LA River from Canoga Park to the northwest to its mouth at Long Beach. The LA River is located within the Los Angeles Basin. The present-day Los Angeles Basin is a northwest-trending alluvial lowland plain, sometimes called the *Los Angeles coastal plain*, about 50 miles long and 20 miles wide on the coast of Southern California, bounded on the north by the Santa Monica Mountains, on the east by the Elysian, Repetto, and Puente hills, and on the southeast by the Santa Ana Mountains and San Joaquin Hills. The low land surface slopes gently south or seaward, but is interrupted by the Coyote Hills near the northeast margin, a line of elongated low hills and mesas to the south and west that extends from Newport Bay northwest to Beverly Hills, and the Palos Verdes peninsula at the southwest extremity.

The Los Angeles Plain is a broad, level expanse of land comprising more than 800 square miles that extend from Cahuenga Peak south to the Pacific coast and from Topanga Canyon southeast to the

vicinity of Aliso Creek. Prior to historical settlement of the area, extensive inland prairies, and a lengthy coastal strand with elevations approximately 500 feet or less above mean sea level characterized the plain. Several large watercourses, most notably the Los Angeles, San Gabriel, and Santa Ana rivers, traverse the Los Angeles Plain. Fresh or salt-water-fed marshlands also once covered many portions of the area. To the west, the coastal region encompasses approximately 375 square miles of varied terrain. West of Topanga Canyon, the terrain is rugged; the steep westward slopes of the Santa Monica Mountains reach 1,000 feet or higher, except where stream-cut ravines and canyons drain onto narrow beaches at the water's edge. From Topanga Canyon southward for roughly 22 miles to the Palos Verdes Peninsula, the coast is relatively flat and level. Extensive marshlands once existed near the mouth of Ballona Creek in the area now known as Playa del Rey. The terrain becomes rugged once again as the coast follows the Palos Verdes Peninsula for approximately 12 miles before reaching San Pedro Bay, which, in prehistoric times, contained extensive mud flats and sand bars (McCawley 1996:55–72).

The Mediterranean climate of this region experiences cool, moist winters and warm, dry summers. During the twentieth century, average annual precipitation was less than 15 inches, although 40 inches of precipitation annually is not unusual in the higher mountain regions. During prehistoric times, the land was likely well-watered by the three major river systems and numerous streams and tributaries, many of which probably ran throughout the year. Prior to livestock ranching and urbanization, there was likely much less runoff, resulting in a higher groundwater table and more groundwater.

Numerous biotic zones existed within the region prehistorically, including valley grassland, coastal sage scrub, chaparral, southern oak woodland, riparian woodland, freshwater marsh, saltwater marsh, and beach and coastal strip. The valley grassland and coastal sage-scrub zones covered much of the open prairie of the Los Angeles Plain and adjacent hillslopes.

Prehistoric Setting

Portions of the Prehistoric and Ethnographic Settings were excerpted and adapted from regional transportation project contexts that share the same geography as the project study area (Authority 2017, 2019).

Two regional chronologies are widely cited in the archaeological literature for the prehistory of the coastal regions of Southern California (Wallace 1955, 1978; Warren 1968). These chronologies are generalized temporal schemes based on the presence or absence of certain artifact types. Both chronologies span the known prehistoric occupation of coastal Southern California. The units Wallace used are *horizons* or *periods*, which are extensive in space, but restricted in time. The units employed by Warren are *traditions*, which may be spatially restricted, but display temporal continuity. Koerper and Drover (1983) have provided a more recent chronological synthesis for coastal Southern California that employs Wallace's (1955) horizon terminology, but uses radiometric data to identify the sequence of stylistic change observed in the artifact assemblages, interpreted as temporal indications of cultural change. The following discussion is divided into five major cultural intervals, called *periods*: Early Cultures, Terminal Pleistocene/Early Holocene, Middle Holocene, Middle to Late Holocene, and Late Holocene.

Environmental conditions, resource availability, and coastal access made the Los Angeles Basin an attractive location for prehistoric inhabitants for more than 12,000 years before the present (BP). The remains of long-term habitation, resource collection, food processing, and tool manufacture

sites, plus potential religious and ceremonial locations, have been found throughout the Los Angeles Basin; the subsequent projects proposed under the *2020 LA River Master Plan* have the potential to affect existing sites and those as yet unrecorded.

Early Cultures

Although neither Wallace (1978) nor Warren (1968, 1980, 1984) begin their chronologies with an Early Man horizon or period, a few archaeologists and nonprofessionals working in Southern California have claimed that cultural remains of great antiquity can be found in the region. Most sites of purported great antiquity (i.e., in excess of 15,000 years old) are centered in the Mojave and Colorado Deserts of eastern California or in coastal Southern California. Few sites of great antiquity have been identified in the vicinity of Los Angeles County, however. Most archaeological research in the project study area has involved cultural periods after that time, as discussed below.

Terminal Pleistocene/Early Holocene Period (pre-12,000 BP to 7500 BP)

Warren's (1968, 1980) earliest interval of Southern California prehistory is the *San Dieguito Tradition*, beginning about 10,000 BP, and is best defined in the coastal County of San Diego area (True 1958). Wallace (1978) calls this interval *Period I: Hunting* and considers it to begin about 12,000 BP. Farther to the east, the San Dieguito Tradition is relatively coeval to the Lake Mojave Period, an expression of the so-called Western Pluvial Lakes Tradition presumed to begin somewhat earlier than 9500 BP and lasting to perhaps 7000 BP in the southwestern Great Basin (Warren 1980, 1984). Wallace (1978:27) noted the close correspondence between the Western Pluvial Lakes Tradition and the San Dieguito Tradition and suggested that the two traditions likely represent regional variants of an early hunting tradition that prevailed over a wide geographical area.

Coastal and desert region designations for the early Holocene both refer to a long period of human adaptation to environmental changes brought about by the transition from the late Pleistocene to the early Holocene geologic periods. As climatic conditions became warmer and more arid, Pleistocene megafauna gradually disappeared. Human populations responded to these changing environmental conditions by focusing their subsistence efforts on the procurement of a wider variety of faunal and floral resources. Sites dating from this interval generally are found around early Holocene marshes, lakes, and streams, which dominated much of the landscape.

These early occupants of Southern California are believed to have been nomadic large-game hunters, whose tool assemblages included percussion-flaked scrapers and knives; large, well-made stemmed, fluted, or leaf-shaped projectile points (e.g., Lake Mojave, Silver Lake); crescentic points; heavy core cobble tools; hammerstones; bifacial cores; and choppers and scraper-planes. Warren (1968, 1980) suggests that the absence of milling tools commonly used for seed preparation indicates that an orientation toward hunting continued throughout this phase. Nonetheless, based on ethnographic models developed for hunting-gathering groups throughout the world, populations of this phase undoubtedly exploited plant resources, as well. Indeed, some Lake Mojave deposits investigated in the southwestern Great Basin have yielded milling equipment, usually handstones and large slabs with ephemeral wear, implying regular, albeit limited, use of vegetal resources (Warren 1984). Although intact stratified sites dating to this period are very scarce, the limited data do suggest that the prehistoric populations of this period moved about the region in small, highly mobile groups, using a wetland-focused subsistence strategy based on hunting and foraging. Perhaps the earliest evidence of human occupation in the City of Los Angeles region is represented at the tar pits of Rancho La Brea. In 1914, the partial skeleton of a young woman, dubbed the *Brea Maid*, was

discovered in association with a grinding stone, or *mano*. During the early 1970s, complex chemical methods were used to decontaminate the human bone of intrusive carbon, and a treated collagen sample was dated at 9000 ± 80 BP (Marcus and Berger 1984). Apart from the Brea Maid, no other human remains have been found at the tar pits.

Additional evidence of early occupation of the Los Angeles Basin has been documented at the Del Rey Bluffs, immediately south of Ballona Lagoon at the former mouth of the LA River (Lambert 1983). Projectile points similar to the Lake Mojave and San Dieguito types, as well as crescentic points, have been recovered. The presence of these point types along the region's coastal area suggests possible connections with the cultures of the southeastern California desert regions. At site CA-LAN-451 in Malibu, a fluted, Clovis-type projectile point was reportedly identified below a cultural stratum radiocarbon dated to 9000 BP.

The Middle Holocene Period (7500 BP to 5000 BP)

In coastal Southern California, the early traditions gave way to the Middle Holocene period, what Warren refers to as the *Encinitas Tradition* and what Wallace (1978) terms *Period II: Food Collecting* by about 8000 BP to 7000 BP. Inland San Diego County sites dating to this period have been assigned to the La Jolla/Pauma Complex by True (1958). This interval has been frequently described as the *Milling Stone Horizon* because of the preponderance of milling tools in the archaeological assemblages of sites dated to this era (Kowta 1969; Wallace 1955). Paleoclimatic data for this period indicate a trend toward increasingly warm and desiccating conditions. This climatic interval has generally been referred to as the *Altithermal* (Antevs 1948, 1952), although more complex temporal and regional variabilities of this interval have been documented since (Moratto et al. 1978). In the coastal and inland regions of Southern California, this period of cultural development is marked by the technological advancements of seed grinding for flour and the first use of marine resources, such as shellfish and marine mammals. The artifact assemblage of this period is similar to that of the previous period and includes crude hammerstones, scraper planes, choppers, large drills, crescents, and large flake tools. This assemblage also includes large leaf-shaped points and knives, manos, and milling stones used for grinding hard seeds and, likely, nonutilitarian artifacts, such as beads, pendants, charmstones, discoidals, and cogged stones (Kowta 1969, True 1958; Warren et al. 1961).

Although sites assigned to this stage of cultural development are similar in many respects, their content, structure, and age vary, largely due to geographical differences between the coast and interior. The primary difference between the archaeological assemblages of coastal and inland sites appears to be related to subsistence. Coastal occupants gathered fish and plant resources, and hunting was generally less important (projectile points are rare). Inland occupants primarily collected hard seeds and hunted small mammals; projectile points are more common in inland assemblages. Overall, the general settlement-subsistence patterns of the Middle Holocene showed greater emphasis on seed gathering, regardless of location. Coastal and inland sites exhibit shallow midden accumulations, suggesting seasonal camping. Based on the distribution of sites assigned to this period, aboriginal groups likely followed a modified, centrally based wandering pattern with an inferred shift toward enhanced logistical settlement organization (cf. Binford 1980; Warren 1968). In this semi-sedentary pattern, larger groups occupied a base camp during a portion of the year, whereas smaller groups of people used satellite camps to exploit seasonally available floral resources, such as grass seeds, berries, tubers, and nuts.

Moratto (1984) suggests that increasing use of coastal resources enabled semipermanent occupations near resource-rich bays and estuaries. A more mobile subsistence round was likely

necessary for inland inhabitants. It is possible, too, that inland and coastal sites of this period represent seasonal movement by the same groups.

Over time, populations gradually grew and became more sedentary. Associated with this increase in sedentism and population size was an intensification of local resource utilization. Adaptation to various ecological niches and further population growth typify the subsequent periods of cultural history in Southern California. This subsistence orientation, characterized by a heavy dependence on both hunting and plant gathering, continued into the historic period. Jones (2008) reviewed these inconsistencies in content, structure, and age of sites assignable to the Milling Stone Horizon. In his discussion, he compares research that posits cultural unity and adaptation in place to theories regarding population incursions that replaced existing cultural adaptations. Although Jones states that the Milling Stone Horizon must be recognized as both adaptation and culture, decades of research have documented significant variability in subsistence emphasis, mortuary practices, and nonutilitarian artifacts (e.g., cogged stones, discoidals, beads), notwithstanding great similarities in one element of the tool kit—the milling stone and the mano.

The Topanga Complex is perhaps the best-known component of the so-called Milling Stone Horizon in the vicinity of the City of Los Angeles. In the 1940s and 1950s, Treganza and Bierman (1958) identified two phases of the Topanga Complex during excavations at CA-LAN-l (the Tank Site) and CA-LAN-2, both located in Topanga Canyon. Scraper-planes, scrapers, choppers, core/cobble tools, an extensive ground-stone tool assemblage, few projectile points, and secondary burials characterize Phase I. Small projectile points, incised and cogged stones, and fewer core/cobble tools distinguish Phase II, in addition to an extensive ground-stone tool inventory; reburial continues along with the introduction of extended burials. A third phase of the Topanga Complex was identified at CA-LAN-2 in 1957 (Johnson 1966). The hallmarks of Phase III are large rock-lined ovens, mortars and pestles, pressure-flaked points, core tools, and plentiful milling stones. Radiometric assays, coupled with temporally diagnostic artifacts, chronologically place the Topanga Phase I earlier than 5000 BP, Phase II at ca. 5000 BP to 3000 BP, and Phase III at ca. 3000 BP to 2000 BP (Johnson 1966:15, 20). Aside from the sites in Topanga Canyon, the only evidence of prehistoric occupation of the Los Angeles Basin dating to this interval is an occasional discoidal or cogged stone recovered from sites dating to more recent periods of prehistory.

The Middle to Late Holocene Period (5000 to 1500 BP)

For the Middle to Late Holocene period, after about 5000 BP, Warren (1968) and Wallace (1978) diverge in their chronological sequences for the coastal regions of Southern California. Warren's Encinitas Tradition includes all areas outside the Chumash territory of the Santa Barbara County coastal zone and continues until approximately 1300 BP. Wallace, on the other hand, identifies a transition beginning approximately 5000 BP, marking the onset of Period III: Diversified Subsistence. In his original 1955 sequence, Wallace based this period, generally referred to as the *Intermediate Horizon*, largely on changes in the archaeological assemblages of sites from the Santa Barbara County coastal region. This horizon is characterized by a greater variety of artifacts that suggest more diverse food resources. Although this interval of human occupation in Southern California is poorly defined and dated because of the paucity of representative sites, many researchers have retained Wallace's original Intermediate Horizon as a classification for sites dating between 5000 BP and 1500 BP.

During the Middle to Late Holocene Period, the subsistence base broadened. The technological advancement of the mortar and pestle indicates the use of acorns, an important storable subsistence

resource. During the Middle to Late Holocene, hunting also presumably increased in importance. An abundance of broad, leaf-shaped blades and heavy, often stemmed or notched projectile points have been found in association with large numbers of terrestrial and aquatic mammal bones. Other characteristic features of this period include the appearance of bone and antler implements and the occasional use of asphaltum and steatite. Most chronological sequences for Southern California recognize the introduction of the bow and arrow by 1500 BP, marked by the appearance of small arrow points and arrow shaft straighteners.

Some archaeologists have suggested that the changes in the coastal artifact assemblages dating to this period were the result of an influx or incursion of Shoshonean people from interior desert areas to the coastal regions (Wallace 1978). However, there is virtually no agreement among researchers as to the timing of the initial Shoshonean incursion into the study region; nonetheless, few researchers acknowledge or question the assumption that Shoshoneans arrived in the study region and replaced some other cultural group. Other archaeologists suggest that cultural transition from the earlier Milling Stone Horizon to the succeeding Intermediate Horizon coastal and inland assemblages reflects progressive economic changes (e.g., trade), rather than population replacement (King 1990; Moratto 1984:164).

In general, cultural patterns remained similar in character to those of the preceding horizon. However, the material culture at many coastal sites became more elaborate, reflecting an increase in sociopolitical complexity and increased efficiency in subsistence strategies (e.g., the introduction of the bow and arrow for hunting). The settlement-subsistence patterns and cultural development during this period are not well understood because of a lack of data, although some researchers have proposed that sedentism increased with the exploitation of storable food resources, such as acorns. The limited data do suggest that the duration and intensity of occupation at the base camps increased, especially toward the latter part of this period.

Within the Los Angeles Basin, only a few identified sites can be placed within this interval of prehistory. As discussed previously, the Phase II and Phase III components at CA-LAN 2 in Topanga Canyon are dated to this period; in addition, several sites south of Ballona Lagoon on the Del Rey bluffs confirm a rather well-developed Intermediate Horizon presence (Altschul et al. 2005). Projectile points from the Ballona Bluffs sites are, in some cases, similar to those found at sites in the southeastern California deserts, specifically in the Pinto Basin and at Gypsum Cave, suggesting that the coastal occupants of this period were in close contact with cultures occupying the eastern deserts.

The Late Holocene (Post-1500 BP)

Reliance on the bow and arrow for hunting, along with the use of bedrock mortars and milling slicks, marks the beginning of the Late Holocene period, which Wallace (1955) denotes as the *Late Prehistoric Horizon* and Warren (1968) the *Shoshonean Tradition* in Southern California coastal regions, dating from about 1500 BP to the time of Spanish contact (approximately A.D. 1769). Late Prehistoric coastal sites are numerous. Diagnostic artifacts include small, triangular projectile points, mortars and pestles, steatite ornaments and containers, perforated stones, circular shell fishhooks, and numerous and varied bone tools as well as bone and shell ornamentation. Elaborate mortuary customs, along with generous use of asphaltum and the development of extensive trade networks, are also characteristic of this period.

The Late Prehistoric Horizon appears to represent increases in population size and economic and social complexity, as well as the appearance of social ranking. King (1990) posits that the mortuary

practices of the Intermediate and Late Horizons throughout Chumash territories evince social ranking, with beads used to confer status. Similarly, craft specialization on the northern Channel Islands has been linked to expanding economic capacities and emerging social ranking during the Late Period (Arnold 1987). Although the motivating forces for such trends have yet to be identified with certainty, some researchers have suggested that economies controlled by social elites spurred increasing economic productivity and resultant population growth (King 1990). More recently, archaeologists have linked past changes in subsistence, population, exchange, health, and violence to periods of drought that occurred during the late Holocene (Arnold 1992a, 1992b; Arnold et al. 1997). During the Medieval Climatic Anomaly (ca. 1200 BP to 650 BP)—particularly during the late Medieval Period (ca. 850 BP to 650 BP)—environmental dynamics may have played a role in deterioration of health and long-distance exchange relationships, increased subsistence stress and interpersonal violence, and even regional abandonments (Jones et al. 1999).

Kroeber (1925) and others have described a dispersion of Shoshonean peoples from eastern California desert areas and the Great Basin into southern and western California. This migration may have been linked to an unfavorable climatic change that prompted populations to seek richer distributions of plant and animal species and more reliable water sources. On the basis of linguistic evidence, Kroeber (1925:580) suggests that this intrusion occurred ca. 1500 BP. Warren (1968:9–10) identifies a Shoshonean Tradition in the San Bernardino County area at this time (i.e., Post-1250 BP). This movement of populations speaking Uto-Aztecan languages purportedly divided and displaced coastal Hokan speakers to the north and south, creating a wedge that subsequently defined ethnographically known territories. Warren (1968) indicates that small, triangular-shaped projectile points are the hallmark of this intrusion. Langenwalter and Brock (1985:3–8) note that various other researchers (e.g., Hopkins 1965; Kowta 1969; Rogers 1966; Rozaire 1967; Wallace 1962) have suggested a variety of dates for the initial Shoshonean influence in Southern California, some as early as the Milling Stone Horizon. It is worth noting here that Wallace (1978) discusses an increase in interregional trade during later prehistory that merely built upon the basic diversified-subsistence economy and social structure. In his sequence, the Shoshonean permeation caused little or no cultural discontinuity.

All chronological sequences for the region recognize the introduction of the bow and arrow at about 1450 BP by the appearance of small arrow points and arrow shaft straighteners. For neither Wallace (1955, 1978) nor Warren (1968), however, is this technological development a marker of a cultural traditional horizon/period change, even though this date marks the estimated terminus of Kroeber's (1925) Shoshonean incursion.

Based on work in the San Luis Rey River Basin in northern San Diego County, Meighan (1954) and True (1970) defined two late-prehistoric complexes. The San Luis Rey I Complex existed from approximately 600 BP to 250 BP and is typified by grinding implements, small, triangular projectile points with concave bases, stone pendants, Olivella shell beads, quartz crystals, and bone tools. The San Luis Rey II Complex, lasting from about 250 BP to 150 BP, is very similar, but also includes ceramic vessels, red and black pictographs, glass beads, metal knives, and steatite arrow straighteners. True, Meighan, and Crew (1974) believe that the San Luis Rey complexes developed out of the earlier La Jolla/Pauma cultural substratum and are the prehistoric antecedents to the historically known Luiseño.

Pottery, ceramic pipes, cremation urns, rock paintings, and some European trade goods were added to the previous cultural assemblage during the latter half of the late prehistoric occupation of the Southern California coastal region (Meighan 1954). Increased hunting efficiency through use of the

bow and arrow and widespread exploitation of acorns and holly-leaf cherry, indicated by the abundance of mortars and pestles, provided reliable and storable food resources. This, in turn, promoted greater sedentism. Related to this increase in resource utilization and sedentism are sites with deeper middens that suggest centrally based wandering or permanent habitation. These would have been the villages, or *rancherias*, noted by the early European explorers (True 1966, 1970). By 500 BP, strong ethnic patterns developed among native populations in Southern California. This may reflect accelerated cultural change brought about by increased efficiency in cultural adaptation and diffusion of technology from the central coastal region of California and the southern Great Basin (Douglas et al. 1981:10).

Ethnographic Setting

The study area mainly encompasses the ethnographic territory of the Gabrieleño. The Tataviam traditionally occupied the San Fernando Valley north of the Los Angeles Basin. More detailed information on these two tribal groups is presented below.

Gabrieleño

The project study area is entirely within the ethnographic territory of the Gabrieleño, the Native American population that has long inhabited the area in the Los Angeles Basin. Following the Spanish custom of naming local tribes after nearby missions, missionaries dubbed the native peoples the Gabrieleño, Gabrieliño, or San Gabrieleño in reference to Mission San Gabriel Arcángel, located northeast of the project study area.

The Gabrieleño consist of a number of smaller bands, some of whom refer to themselves as *Tongva* and others who refer to themselves as *Kizh*. Gabrieleño speaker Mrs. James Vinyard Rosemeyer told anthropologist C. Hart Merriam that Gabrieleño speakers referred to themselves as Tongva, and Merriam recorded the name (King 2011:5). McCawley (1996:9) states that the Gabrieleño living near Tejon used Tongva; however, the term also referred to a ranchería in the San Gabriel area. Today, some Gabrieleño have chosen to be known as Tongva (McCawley 1996:10). Another name that the Gabrieleño have been reported to use is *Kizh* or *Kij*, perhaps derived from the word *kītç*, meaning *houses* (McCawley 1996:10; Stickel 2016). The latter term may refer specifically to Gabrieleño living in the Whittier Narrows (McCawley 1996:10).

The Gabrieleño spoke a language that falls within the Cupan group of the Takic subfamily of the Uto-Aztecan language family. This language family is extremely large and includes the Shoshonean groups of the Great Basin. Given the geographic proximity of Gabrieleño and Serrano bands living in the area and their linguistic similarities, ethnographers have suggested that the bands shared the same ethnic origins (Kroeber 1925).

The Gabrieleño are considered one of the most distinctive tribes in all of California. They occupied a large area bordered on the west by the community of Topanga and the City of Malibu, the San Fernando Valley, the greater Los Angeles Basin, and the coastal strip south of Aliso Creek, south of San Juan Capistrano. Gabrieleño territory extended from the San Bernardino Mountains to the islands of Catalina, San Clemente, and San Nicolas and occupied most of modern-day Los Angeles and Orange Counties (Bean and Smith 1978:538–549). By 1500 B.P., permanent villages were built in the lowlands along rivers and streams. Over 50 villages may have been occupied simultaneously with populations of between 50 and 200 people per village (Bean and Smith 1978).

Very little has been written about early Gabrieleño social organization because the band was not studied until the 1920s and had already been greatly influenced by missionaries and settlers by that time (Kroeber 1925). Kroeber's (1925) work indicates that the Gabrieleño were a hierarchically ordered society with a chief who oversaw social and political interactions both within the Gabrieleño culture and with other groups. The Gabrieleño had multiple villages, ranging from seasonal satellite villages to larger, more permanent settlements. Resource exploitation was focused on village-centered territories, and hunting ranged from deer, rabbits, birds, and other small game to sea mammals. Fishing for freshwater fish, saltwater mollusks, and crustaceans and gathering acorns and various grass seeds were also important (Bean and Smith 1978:538–549). Fishing technology included basket fish traps, nets, bonefish hooks, harpoons, and vegetable poisons, and ocean fishing was conducted from wooden plank canoes lashed and asphalted together. Gabrieleño houses were large, circular, thatched, and domed structures of tule, fern, or carrizo that were large enough to house several families. Smaller ceremonial structures were also present in the villages and used in a variety of ways. These structures were earth covered and used as sweathouses, meeting places for adult males, menstrual huts, and ceremonial enclosures (*yuva'r*) (Heizer 1962:289–293).

The coastal Gabrieleño are among the few indigenous peoples who regularly navigated the ocean. They built seaworthy canoes, called *ti'at*, with wood planks that were sewn together, edge to edge, and then caulked and coated with either pine pitch or, more commonly, the tar available from the La Brea Tar Pits or asphaltum washed ashore from offshore oil seeps. The ti'at could hold as many as 12 people, all of their gear, and all of the goods carried to trade with other people, either along the coast or on one of the Channel Islands. The Gabrieleño paddled out to greet Spanish explorer Juan Cabrillo when he arrived off the shores of San Pedro in 1542. Modern place names with Gabrieleño origins include Pacoima, Tujunga, Topanga, Rancho Cucamonga, Azusa, and Cahuenga Pass.

The name of their creation deity, Quaoar, has been used to name a large object in the Kuiper belt (a disc-shaped region of icy objects beyond the orbit of Neptune). A 2,656-foot summit in the Verdugo Mountains, in the City of Glendale, has been named Tongva Peak. The Gabrieleño Trail is a 32-mile-long path through the Angeles National Forest.

Recorded ethnographic and archaeological sites associated with Gabrieleño settlements are not common. This is directly attributable to the extensive and prolonged urban development of the City of Los Angeles region over the last one and a half centuries (DPR 2005:16). In the 1990s, Kuruvungna Springs, a natural spring located on the site of a former Gabrieleño village on the campus of University High School in West Los Angeles, was revitalized due to the efforts of the Gabrieleño Tongva Springs Foundation. The spring, which produces 22,000 gallons (83,279 liters) of water each day, is considered by the Gabrieleño to be one of their last remaining sacred sites and is regularly used for ceremonial events.

Tataviam

This group was also at one time referred to as the Alliklik (Bright 1975). Tataviam territory included the mountainous canyons and valleys just north of the San Fernando Valley (Hudson 1982, Johnson and Earle 1990). The traditional Tataviam territory lies primarily between 1,500 feet and 3,000 feet above sea level. Their territory included the upper reaches of the Santa Clara River drainage system east of Piru Creek. Their territory extended to the east to include what is now the Vasquez Rocks Natural Area Park in Agua Dulce (W&S Consultants 2001). Their territory also may have extended west to the Sawmill Mountains to the north it included at least the southwestern fringes of the

Antelope Valley, which they apparently shared with the Kitanemuk, who occupied the greater portion of the Antelope Valley.

The name "Tataviam" means "People who Face the Sun." The Tataviam may be among the larger "Shoshonean" migration into Southern California that occurred 2,000 to 3,000 years ago (Higgins 1996, Ventura County Resource Conservation District 2005). The Tataviam belong to the family of Serrano people who migrated into the Antelope, Santa Clarita, and San Fernando Valleys some time before 450 A.D. They also settled into the upper Santa Clara River drainage.

Tataviam settlements include *Nuhubit* (Newhall), *Piru-U-Bit* (Piru), *Tochonanga* (which is believed to have been located at the confluence of Wiley and Towsley Canyons), and the very large village of *Chaguibit*, the center of which is buried under the Rye Canyon exit off Interstate 5. The Tataviam also lived where Saugus, Agua Dulce, and Lake Elizabeth are located today. Although the Tataviam people lived primarily on the upper reaches of the Santa Clara River drainage system, they also inhabited the upper San Fernando Valley, including the present-day City of San Fernando and neighborhood of Sylmar (which they shared with their inland Gabrieleño neighbors).

The Tataviam were hunters and gatherers. Larger game was generally hunted with the bow and arrow, while snares, traps, and pits were used for capturing smaller game. At certain times of the year, communal hunting and gathering expeditions were held. Faunal resources available to the Tataviam included deer, mountain sheep, antelope, rabbit, small rodents, and several species of birds. Meat was generally prepared by cooking in earthen ovens, boiling, or sun-drying. Cooking and food preparation utensils consisted primarily of lithic (stone) knives and scrapers, mortars and metates, pottery, and bone or horn utensils. Vegetal resources available to the Tataviam included honey mesquite, piñon nuts, yucca roots, mesquite, and cacti fruits (Solis 2008). These resources were supplemented with roots, bulbs, shoots, and seeds that, if not available locally, were obtained in trade with other groups.

The Tataviam people lived in small villages and were semi-nomadic when food was scarce. There is little available data regarding Tataviam social organization, although information shows similarities among Tataviam, Chumash, and Gabrieleño ritual practices. Like their Chumash neighbors, the Tataviam practiced an annual mourning ceremony in late summer or early fall, which would have been conducted in a circular structure made of reeds or branches.

At first contact with the Spanish in the late 18th century, the population of this group was estimated at less than 1,000 persons. By 1810 nearly all of the Tataviam population had been baptized at San Fernando Mission (King and Blackburn 1978).

Access to the rivers and creeks was of great importance to the Tataviam, as these environments provided resources necessary for subsistence. Particular care was allotted to familiarity with flooding or drainage patterns (River Project 2006). It was along these waterways that access to fresh water, food, and other materials necessary for the construction of traditional house structures, or Ki'j, such as willow or tule reeds, was possible (FTBMI 2012). Datura (or jimsonweed), native tobacco, and other plants found along the local rivers and streams provided raw materials for baskets, cordage, and netting.

Relevant Historical Trends in the Project Study Area

The following historic trends are relevant to understanding the archaeological and historical environment within the project study area. Rather than present a complete history of the area, the

goal of this historic context is to focus on those historical facts that are most important to understanding the types of cultural resources that could be located in the project study area. Overall trends are described first followed by a discussion focused on each of the 18 jurisdictions in the project study area.

The Spanish and Mexican Periods: 1781–1849

The first Europeans in the region were led by Spanish explorer Gaspar de Portolà, who was sent from Mexico in 1769 to establish settlements in the Spanish territory known as Alta California. When they arrived in the Los Angeles area, they discovered a lush area surrounding the confluence of the LA River and Arroyo Seco and determined that it had "all the requisites for a large settlement" (Historic Resources Group et al. 2012:7–8).

The Pueblo de Los Angeles was founded within the project area vicinity near this junction of the two rivers in 1781. As the town developed, San Fernando Road (part of the El Camino Real, or "The King's Highway) emerged as a crucial transportation route between El Pueblo and the missions, presidios, and ranchos to the north and east (Historic Resources Group et al. 2012:8). The Zanja Madre, or "Mother Ditch," was also established to serve the growing settlement. The Zanja Madre was an open-air earthen canal that diverted water to the Pueblo from a dammed portion of the nearby LA River, providing irrigation that was crucial for the Pueblo's growth and success (Taniguchi 2008).

In the late 1700s, the Spanish government began creating large land grants called ranchos (Figure 5.3-1). The Spanish crown would retain the title to the rancho while allowing—or granting—settlement and cattle grazing rights on the land. Three major ranchos were established within the project vicinity: Rancho San Rafael, Rancho Los Feliz, and Rancho Providencia. Rancho San Rafael was granted to Corporal José Maria Verdugo in 1798. The approximately 36,000 acres of the rancho made up portions of present-day Glendale, Eagle Rock, and Highland Park (Galvin Preservation Associates, Inc. 2009:10). Rancho Los Feliz, which comprised areas of present-day Los Feliz and Griffith Park, was granted to Corporal Jose Vicente Feliz in 1795 (Historic Resources Group et al. 2012:8). Rancho Providencia, the smallest of the three ranchos, was located in portions of present-day Burbank and Griffith Park; however, this area was not immediately granted to anyone until after Mexico declared its independence from Spain. It was then granted to Comandante Jose Castro, Luis Arenas and Vincente de la Ossa in the 1820s (Galvin Preservation Associates, Inc. 2009:15; Schonauer et al. 2014:7). Most of the ranchos were used for raising livestock, namely sheep and cattle, which helped to establish the local agricultural economy (Historic Resources Group et al. 2012:8).

In the early 1800s, Spain began to lose its foothold in Mexico and Alta California due to political unrest, a lack of economic independence, and physical isolation. These factors, coupled with Napoleon's invasion of Spain, hindered Spain's ability to manage its far-flung colonies, thereby allowing Mexico to gain and declare its independence in 1821. The period of Mexican rule that followed was somewhat tumultuous as the Spanish missions were secularized and a clear and organized form of government failed to take hold. Between 1822 and 1848, there were 12 different governors and 15 different administrators (Prosser 2016:15). By the early 1840s, the number of Anglo-American settlers in the area had increased considerably, creating pressure for the annexation of Alta California to the U.S. (Prosser 2016:28).

The instability of this time period culminated in the Mexican War, which broke out in 1846. Annexing California, a strategic asset, became one of President James Polk's primary goals during

the war. Los Angeles came under American occupation during the 1847 Battle of La Mesa, which would be the last battle of the war. A series of treaties, ending with the signing of the Treaty of Guadalupe Hidalgo in 1848, officially brought the war to a close. The 1848 treaty formally ended Mexican rule of the territory and transferred authority to the U.S. For a year, California was a U.S. military-governed territory. In November 1849, voters chose to make California a state, and it was admitted to the Union in 1850 (Prosser 2016:29–30).

California Statehood and Los Angeles County

Mexico ceded California to the United States on February 2, 1848 with the signing of the Treaty of Guadalupe Hidalgo, and California became a state on September 9, 1850. In principle, the Treaty of Guadalupe Hidalgo protected the rights of the Californios who owned property during the Mexican period. In practice, however, the legal process for vetting land claims that was set into motion by the Land Commission established in 1851, combined with the mounting debts of many rancho owners, allowed American and other newcomers eventually to take possession of nearly all of the rancho lands originally granted to Californios. Los Angeles became one of California's original 27 counties, created by the State's first legislature on February 18, 1850. Los Angeles County was named for the territory's largest city, Los Angeles, which was designated the county seat on July 15 of that year. Los Angeles County comprised lands that encompassed 4,340 square miles and originally contained all of San Bernardino County, a large portion of Kern County, and all of Orange County. During the 1850s and 1860s, the County underwent several boundary changes: in 1853, California's Legislature extracted the eastern portion of the county to form the County of San Bernardino; in 1866 an act created Kern County from portions of Tulare and Los Angeles Counties; and in 1889, a similar act created the County of Orange from lands lying southeast of Coyote Creek (Bean and Rawls 2003:61, 63–64, 142–147; Coy 1923:2–3, 140–56).

River Channelization and Flood Control 1920–1960

In heavy winter rains, the LA River would swell and flood, often changing course and sweeping increasingly larger debris—mud, rocks, trees, animals, even dwellings—into its path as it raced down the San Gabriel Mountains. When enough of this debris gathered, it would flood and swamp along the river, halting travel and causing millions of dollars in damage and repair costs to properties along the riverbank. The combination of an unpredictable river and an increase in development along the river created a perfect storm of flood danger: the less undeveloped land that was available along the river provided less surface area for runoff water to be absorbed in a heavy storm (Lee et al. 2000:7). The Los Angeles County Flood Control District (LACFCD) was formed in 1915 in response to a series of devastating floods and began developing a plan to manage flood management issues. Some of the earliest flood management efforts included sections of river channelization and the creation of reservoirs. The Arroyo Seco was determined to be one of the primary contributors to flooding in downtown Los Angeles; as such, the first LACFCD flood management project was the completion of the Devil's Gate Dam north of Pasadena in 1920 (EDAW 2003:6). Taxpayers funded some of the flood projects through bonds issued in 1917 and 1924, but they were unwilling to fund other more substantial infrastructure (Grumprecht 2001:178, 196).

In the 1930s, another series of destructive floods prompted officials to request federal assistance. After a flood in 1934, the City of Pasadena began channelizing sections of the Arroyo Seco that were less than 80 feet wide. With the help of Works Progress Administration labor, much of the Arroyo Seco through Pasadena and Los Angeles was channelized by 1940, just before the first phase of the Arroyo Seco Parkway was dedicated. The final section was completed between 1946 and 1947.

In the City of Glendale, the Verdugo Wash, an 8-mile tributary to the LA River, was channelized beginning in 1935. The LACFCD appealed for federal aid in the undertaking, which was provided by the U.S. Army Corps of Engineers (USACE). The Verdugo Wash Project was completed in 1939 (Environmental Science Associates 2012). The City of Los Angeles also received assistance from the U.S. Army Corps of Engineers to channelize the LA River. The undertaking began in 1938 and would not be completed until 1960. In all, 51 miles of the LA River was channelized (McCool 2012: 223). Only three portions of the river remain unlined: a portion near Griffith Park and the Elysian Valley, another within the Sepulveda Flood Control Basin in the San Fernando Valley, and a third in Long Beach where the river empties into the Pacific Ocean (Los Angeles County Department of Public Works 2009). Channelization of the LA River was successful in providing effective and predictable flood management and helped protect the continued development in river-adjacent areas during and after World War II.

Long Beach (Frames 1 and 2)

“In 1783, Pedro Fages, Governor of California, issued the first grants of land to private individuals. Manuel Nieto, a former soldier who had requested land upon which to graze cattle, received a grant that was bounded by the ocean on the south, El Camino Real "highway" on the north, the Santa Ana River on the east, and the San Gabriel River on the west. Because, at that time, the San Gabriel River flowed into San Pedro Bay, this grant included all of the land upon which Long Beach currently stands.

In 1833, 29 years after Nieto's death, his lands were divided among his heirs. In this way, the Ranchos Santa Gertrudis, Los Bolsas, Los Cerritos, Los Alamitos, and Los Coyotes were created. Most of modern Long Beach stands on land that was included in the Los Alamitos and Los Cerritos Ranchos. Alamitos Avenue in downtown Long Beach follows the old boundary line between the two estates.

The Rancho Los Alamitos was acquired in 1842 by Abel Stearns, a New Englander who had migrated to California in 1829 and who had subsequently been successful in the hide and tallow trade. The purchase price of the Rancho was $5,954. In 1843, another transplanted New Englander named John Temple acquired the neighboring Rancho Los Cerritos. Both men became Mexican citizens as a condition of their land title, and for the following two decades their hide and tallow businesses flourished. The early 1860's, however, were characterized by a succession of floods and periods of drought that eventually ruined the ranchos. Stearns mortgaged his Rancho to San Francisco businessman Michael Reese in 1864, and when he defaulted on his payments, the property passed to Reese. The Rancho Los Cerritos was likewise sold in 1866 by Temple to Flint, Bixby, and Company, also of San Francisco.

The management of the Rancho Los Cerritos was turned over by Flint, Bixby, and Company to Jotham Bixby who formed a subsidiary named J. Bixby & Company for that purpose. The primary activity of J. Bixby & Company in the Long Beach area was the raising of sheep. Meanwhile, Reese and his estate retained possession of the old Rancho Los Alamitos until 1881 when it was sold for $125,000 to a group of investors consisting of John Bixby (Jotham's cousin), J. Bixby & Company, and a Los Angeles banker named I. W. Hellman. John Bixby managed this parcel of land in much the same way that his cousin Jotham managed the neighboring Los Cerritos ranch.

In 1880 the first plan for the establishment of a community in the Long Beach area was announced. It called for the subdivision of 10,000 acres of land on the Cerritos Ranch to form an "American Colony Tract". In 1882 the California Immigrant Union (CIU), which had been the main financial

backer of the American Colony, backed out and the program was reorganized under the leadership of William Willmore, a former employee of the CIU. During the next 2 years, land was surveyed and a map of Willmore City prepared. The modest success the city enjoyed in attracting residents during its first year was ruined by torrential rains in the fall and winter of 1883. Consequently, Willmore was unable to make payment to J. Bixby & Company from whom he had arranged to buy the property and the colony failed.

Shortly thereafter, however, land values began to rise, and the rights to the town were purchased by a new syndicate called the Long Beach Land and Water Company. In 1884 the name of the town was changed from Willmore City to Long Beach. In 1887 the town was sold to a San Francisco syndicate, the Long Beach Development Company, that was closely associated with the Southern Pacific Railroad. Urban development during these years was not confined solely to the Cerritos Ranch area. As Long Beach was beginning to develop, John Bixby in 1886 laid plans for another: community that he called Alamitos Beach. This new town adjoined Long Beach at its east boundary, Alamitos Avenue. The two towns coexisted until, by a series of annexations beginning in 1905, Long Beach absorbed Alamitos Beach.

In 1890 Long Beach had a population of 564; by 1907 that number exceeded 20,000. Much of this growth has been attributed to the city's reputation as a year-round pleasure resort and to the absence of saloons. However, all of Southern California's population grew rapidly in those years, and railroad transportation played the vital role in bringing people west. In 1887, when the Long Beach Development Company bought the town, the company laid out plans to bring people to Long Beach and to make the area an important resort community. A large pier was constructed at Magnolia Street in 1888, the Pine Avenue Municipal Pier was constructed in 1893, and the Pacific Electric Railroad came to Long Beach in 1902. The heyday of the Long Beach era followed. The pike, the beach, and the pleasure piers were crowded on Sundays. R. L. Bisby, Secretary of the Chamber of Commerce, managed to have articles about the vacation mecca published all over the country. People came to bathe in the surf, rent a cottage, or stay in the elegant Virginia Hotel.

City of Los Angeles (Frame 1 and 5-9)

Within the boundaries of the City of Los Angeles, the LA River runs through the downtown area, northeast neighborhoods like Cypress Park and Atwater Village, and communities in the San Fernando Valley. Although much of the river was channelized in the 1940s, the general alignment of the river through these communities has largely remained unchanged since their initial development.

Downtown Los Angeles

Spanish settlement in the Los Angeles area began in 1771, when Fathers Josef Angel Fernandez de La Somera and Pedro Benito Cámbon founded Mission San Gabriel Arcángel near the location where the Portolá Expedition had camped the previous year. In 1781, Spanish Governor Felipe de Neve sent 11 families of Native American, African, and Spanish descent to establish the new pueblo of Los Angeles at the banks of the LA River, close to a Gabrieleño village near what is now downtown Los Angeles (Engelhardt, Zephyrin 1927). The settlers would lay out streets, construct modest adobe houses around a central plaza, and plant crops adjacent to the settlement (ICF 2011:11–13; Los Angeles County n.d.; Bean and Rawls 2003:44–45). While the area directly adjacent to the LA River in present day downtown Los Angeles developed first as vineyards and orchards, the introduction of the Southern Pacific Railroad along the river ushered in more industrial development to the area. By

the turn of the 20th century, industrial manufacturing enterprises and railroad-related warehouses lined the area near the river (Davis 1999:99; Los Angeles Conservancy 2013:2)

Northeastern Communities (Cypress Park, Glassell Park, and Atwater Village)

After the initial development of the downtown, LA River adjacent communities began to grow starting in the 1880s. Just north of downtown, Cypress Park was first subdivided in 1882 and grew rapidly with the introduction of the Pacific Electric Railway line in 1904. By the 1920s, the area came to reflect its current built environment with modest, single-family, Craftsman residences and small businesses (Northeast Los Angeles Community Plan Area, 9-10). Further to the north, the neighborhood of Glassell Park, named after local developer Andrew Glassell, was annexed by the City of Los Angeles in 1912 and began to grow in population soon after. Like Cypress Park, the built environment came to be dominated by modest, single-family Craftsman homes along with commercial businesses located on major automobile corridors (Northeast Los Angeles Community Plan Area, 16-17). Even further north, the neighborhood of Atwater Village consisted of ranchland in the 1870s and was not fully developed as a residential community until the 1910s and 1920s due to frequent flooding from the nearby LA River. Period Revival and Craftsman styles dominate the residential landscape which was once served by a streetcar line along Glendale Boulevard. Industrial development spans the area of the neighborhood closest to river and rail lines (Northeast Los Angeles Community Plan Area, 7-9).

San Fernando Valley

Starting with Glendale to the southeast, the LA River stretches through communities like Burbank, Studio City, and Sherman Oaks in the southern San Fernando Valley. The City of Glendale began as a rural townsite in the 1880s with the completion of the Southern Pacific Railroad and incorporated as a city in 1906. The modern city emerged in the first quarter of the 20th century when financier Leslie C. Brand bought and developed 1,000 acres in the Verdugo Mountains. To the northwest, the City of Burbank was founded in 1887 as part of the Southern California land boom of the 1880s. The town would develop around Lockheed Aircraft and later the entertainment industry. Further to the west along the LA River are the neighborhoods of Studio City and Sherman Oaks, which have a similar development history. Both developed first as single-family residential communities in the 1920s; they were both served by a commercial corridor along Ventura Boulevard that expanded rapidly in the 1930s. Both communities retain their suburban character along both have experienced some multi-family residential infill since the 1950s (Pitt 1997: 66, 174-175, 465, 488). After passing the Sepulveda Basin, a narrower band of the river travels northwest through the neighborhoods of Reseda, Winnetka, and West Hills, suburban areas largely developed in the post-World War II era.

Carson (Frame 2)

Carson was incorporated in 1968 and includes an area of 19.2 square miles. Originally part of Rancho San Pedro, Carson is named for George Henry Carson, who was married into the Rancho's land grantee, the Dominguez family in the mid-nineteenth century, or his son, John M. Carson, for whom a Pacific Electric Railroad stop was named in the 1930s. The elder Mr. Carson supervised the Dominguez family land holdings and ranching operations. As with many of its neighbors, the community that would become Carson began as portions of Rancho San Pedro was sold off or leased to farmers and real estate investors. The land remained relatively undeveloped and in agricultural

use. However, due to its location, the area was subject to repeated flooding and residential development was sparse.

Oil was discovered in this location in the 1920s, which brought the first significant industry to the community in the form of refineries, tank farms, and oil derricks. As a result, this made the community attractive for additional related industries in the years leading up to, and following, World War II. The need for people to work in these rapidly developing industries lead to increased need for housing, and Carson was one of many communities in southeast Los Angeles County that accommodated that need. Local calls for incorporation began as early as the 1950s, and in 1960 a committee of residents petitioned Los Angeles County for incorporation as "Dominguez." (https://lacountylibrary.org/carson-local-history/, accessed 4/7/2020). It took eighteen more years, but the city finally incorporated in 1968.

Compton (Frame 2)

Compton was settled in the 1860s by thirty families led by Griffith Dickenson Compton, for whom it was eventually named. These settlers purchased 4,600 acres of land that had been part of Rancho San Pedro. When Compton donated his land for incorporating the city, he stipulated that a certain amount was to be set aside strictly for agricultural use. This 10-block section of the city is Richland Farms, and it is the largest urban agricultural zone in the Los Angeles basin. (https://www.npr.org/2011/04/03/134981907/straight-outta-compton-on-horseback, accessed 04/07/2020).

The city was incorporated in 1888 with 500 people and is one of the oldest incorporated cities in Los Angeles County. The Los Angeles and San Pedro railroad was constructed through the city, so the early farmers of the area were able to access the railroad hub in the City of Los Angeles, 10 miles to the north, or the growing ports of Long Beach and San Pedro to the south.

As with its neighbors, the community remained primarily agricultural, especially in the Richland Farms area which maintains its farming nature today, through the first decades of the twentieth century. By the 1920s, the city had an airport, and a junior college, and two major oil fields. In addition, the Samson Tire and Rubber Factory (Uniroyal) was founded in 1918 in Compton, and in 1929 the company constructed the largest tire manufacturing facility on the west coast (23 acres), designed in an Assyrian style with a Samson and Delilah motif, by the acclaimed Los Angeles architects Morgan, Walls, and Clements.

Cudahy (Frame 3)

Cudahy was incorporated in 1960 and measures 1.2 square miles. Located in southeast Los Angeles County, it was named for a meat-packing baron, Michael Cudahy, who had purchased the land that would become the new city, in 1908. The land Cudahy purchased was known as the Nadeau Ranch, and was originally part of Rancho San Antonio.

Downey (Frame 3)

The City of Downey was established on October 13, 1873, by the Downey Land Association (Land Association) and was named in honor of John Gately Downey, the governor of California during the Civil War and president of the Land Association (Los Angeles Directory Company 1950).

The original plot of the town site consisted of 125 acres of land that was originally part of the Los Nietos Township, the largest Spanish land grant given to Manuel Nieto in 1784 by Governor Pedro Fages (Los Angeles Directory Company 1950). In 1834, the land was divided among the Nieto heirs, in which a portion became the Rancho Santa Gertrudes. In 1873, 96 acres of the Rancho was used to found Downey City (City of Downey 2021), after word spread that a railroad stop was to be constructed at the future town site. On April 15, 1874, the Southern Pacific Railroad established a stop in Downey, while building a branch line between Los Angeles and San Diego (Los Angeles Directory Company 1950). The railroad created a rise in population after the residents of the two small nearby communities of Gallatin and College Settlement moved to the newly founded Downey City (Quinn 1973).

The railroad provided the footings for the town to flourish as an agricultural and stock raising community. In the early 1870s, oranges were first grown in the area, in which the seed came from the original stalk brought by the padres. Navel and Valencia oranges were grown and citrus production began to thrive. Ball & Tweedy, acquired by Sunkist in the early 1900s, began packing oranges in 1895 and took advantage of the Southern Pacific depot, which was just south of the central downtown center (Los Angeles Directory Company 1950). At the end of the 1800s, other agricultural products that proved prosperous were the castor bean, walnuts, and various fruit trees. In 1884, a winery was established just south of the railroad off what was called Crawford Street (now Downey Avenue); however, a cold winter killed the vines and the industry a few years later. In 1899, the dairy farmers organized the Downey Cooperative Creamery, with a plant off Downey Avenue by the railroad (Quinn 1973).

In the early twentieth century, Downey flourished with the citrus and dairy industries, and in the late 1920's, an emerging aircraft company, EMSCO, built industrial buildings on existing farmland southeast of the town center. The company grew through the mid-century, developing the surrounding land and became established with aeronautics and aerospace industries (Christopher A. Joseph & Associates 2008). As the population rose following World War II, there was a movement from the city to be incorporated. The desire for incorporation failed by the Los Angeles County Supervisors in 1954 but was successful on December 4, 1956 with a two-to-one margin (City of Downey 1981). By 1964, Downey had over 90,000 residents and was almost the seventh largest charter city in Los Angeles County (City of Downey 1981).

Lynwood (Frame 3)

The City of Lynwood was incorporated in 1921, and was named for Lynn Wood Sessions, the wife of a local dairyman. C. H. Sessions had acquired 400 acres of the former Ranch San Antonio twenty years earlier, and established his dairy, which was named the Lynwood Dairy and Creamery. Located at Sanborn and Long Beach boulevards, a siding for the Southern Pacific Railway was eventually extended to the dairy, and it was named the Lynwood siding. A few years later, the Pacific Railroad ran through the area on the way from Los Angeles to Santa Ana, and a depot was constructed at Long Beach Boulevard and Fernwood Avenue. As with the Southern Pacific, the new Depot was also named Lynwood. In 1913, a group known as the Lynwood company began selling off lots for home sites, and the community began to develop.

Paramount (Frame 3)

Paramount was founded in 1948, when the towns of Hynes and Clearwater unified. The name of this new community was taken directly from Paramount Boulevard, which runs north to south through

the middle of the city, which incorporated in 1957. Similar to those communities in Southeast Los Angeles County, Paramount remained generally rural and agricultural throughout the nineteenth century.

According to the city's profile:

> In the first half of the 20th century, the villages of Hynes and Clearwater were the center of Southern California's dairy industry and were known as both "The Milk Shed of Los Angeles" and "The World's Largest Hay Market." Hynes-Clearwater had more cows per square mile than anywhere west of Chicago – a total of 25,000 at its peak. It was home to the Hay Tree, where the price of that commodity was set each morning for the rest of the world. The Hay Tree is a California Historical Landmark (http://www.paramountcity.com/government/city-profile, accessed 4/7/2020)

South Gate (Frame 3)

The City of South Gate was incorporated in 1923 and owes its name to its historic location at the southern gate of Rancho San Antonio (https://www.cityofsouthgate.org/259/History-of-South-Gate, accessed 4/5/2020). As part of this historic Rancho, this community remained primarily agricultural throughout the nineteenth century, divided into large 40-acre tracts that were used as cattle grazing lands and for farming. The downtown area of South Gate was part of the Tweedy family property, who owned 2,000 acres of land in the late 19th century, and the downtown business district is known as the Tweedy Mile for this family.

In the fall of 1917, 0.5 acre lots in "South Gate Gardens" were advertised for sale by Charles B. Hooper, a local realtor. As with its neighboring cities, this community was part of the former Cudahy Ranch Company, which was concerned with selling of the thousands of acres of land purchased by Michael Cudahy in 1893. Despite the lack of paved streets, as well as water and sewer service, and the aforementioned gardens, more than 250 lots were sold. A year later, 125 houses were constructed, streets were being named, street trees planted, and a large lot had been set aside for a school, which was built in 1919. The City incorporated in 1923.

South Gate, like many of its neighbors, remained somewhat rural and unpopulated through the 1920s and 1930s, but saw great expansion of both residential and industrial properties as part of the manufacturing build up to WWII and the post-war population increases. In one example, General Motors built an automobile assembly plant in South Gate in 1935. Known as the South Gate Plant, and located on Tweedy Boulevard, this was first GM plant to build multiple car lines: Buick, Oldsmobile, and Pontiac cars were assembled at this factory; Chevrolet and Cadillac lines were added by 1949 (https://www.southgatecc.org/economic-development/south-gates-business-history/, accessed 4/7/2020). Other companies that made South Gate their home included the Bell Foundry (1923), a Firestone Tire and Rubber Company factory for west coast distribution, U.S. Gypsum (formerly Star Roofing), and American Concrete and Steel Pipe Company. Firestone built their factory on a 40-acre former bean field in 1928, and by the 1950s the plant covered almost a million square feet. The main boulevard through South Gate was named after Harvey Firestone, the founder of the company.

Many of the workers who had moved here to take jobs in those factories remained after the war ended, even when those companies left; according to the Chamber of Commerce, in 1976 there were over 400 industries in South Gate (LA County Library 2020).

Bell (Frame 4)

The City of Bell is located 10 miles to the southeast of downtown Los Angeles, and measures just 2.81 square miles. Incorporated in 1927, the city was originally part of the James Bell ranch, which dated to the late 1800s. Between 1870 and 1890, settlers began to arrive in the area that is now Bell. Among these first settlers was James George Bell, who would later become the city's founder. He acquired nearly 360 acres of land in the area, which he used to develop a small farming and cattle community. After a dispute with the Santa Fe Railroad over use of his land, Bell allowed the railroad access to his land in exchange for naming the station "Bell," where the community would later take its name (City of Bell 2010).

Bell was an exclusively residential community when it incorporated in 1927 with the motto "Key to Industry." The bedroom community supplied a labor pool for neighboring industrial cities and expanded its residential development on a pay-as-you-go basis. Beginning during World War II, Bell began to develop more high-density apartment buildings and would continue this development pattern in the postwar period (Rasmussen 1997).

The City annexed 130 acres of land from the former Cheli Air Force Depot with hopes that the land would later be used for industrial development, which would provide a solid tax base. By 1978, the government released the property and allowed for the first industrial redevelopment project in Bell. At this same time, the city became increasingly desperate for sources of revenue and open the California Bell Card Club, which at its peak added more than $3 million a year to City coffers. The casino closed in 1995, and small-scale business and industry are currently the major economic drivers for Bell (Rasmussen 1997).

Bell Gardens (Frame 4)

Bell Gardens was also named for James George Bell, who also lent his name to the City of Bell, which is separated from it across the I-710 and the LA River to the west. Bell arrived in Los Angeles in 1875 and quickly bought up 360 acres from Ranch San Antonio. As with many real estate prospectors at that time, he subdivided the acreage into smaller land holdings, and sold them primarily for farming. Until the 1930s, the community remained largely agricultural.

The use of "gardens" in the city's name may have derived from the large number of farms and gardens that occupied the acreage even as other nearby communities were beginning to develop into small cities. In 1927, the Firestone Tire Company was one of the first large companies to open a plant in the community, and in 1930s, tracts continued to be subdivided and developed with affordable housing. As with its neighbors, Bell Gardens saw population growth before and after World War II as a result of the number of defense-related industries that came to the county. Incorporation did not occur until 1961. At only 2.5 square miles, it is one of the smallest cities in the United States. Bell Gardens is also home to the oldest house in Los Angeles County—the Casa de Rancho San Antonio, or Henry Gage Mansion—which was started in 1795 and completed in 1815. It is located at 7000 East Gage Avenue and is California Historical Site Number 984.

Commerce (Frame 4)

Although the City of Commerce was not incorporated until 1960, industrial development has been present in the area since the early 1900s. The Simons Brick Company opened the first major industrial plant in the area in 1905. At its peak in the 1920s, the plant employed more than 3,000 people (including women and children) and the plant's bricks were used to build numerous

landmark buildings in Los Angeles, including City Hall and UCLA's Royce Hall. In 1919, Goodyear Tire and Rubber Company opened its first Southern California plant in the area. This was followed by the construction of the Samson Tire and Rubber Company plant in 1929, which was a striking 240,000 square foot Assyrian style plant that employed 2,500 men. Automaker Chrysler opened a plant in the area in 1932, and Ford built a parts depot facility in 1951 (English and GuneWardena 1997).

In the late 1950s, Warren Bedell, an employee of the nearby Firestone plant, conceived of the idea to incorporate the neighbors of Rosewood Park and Bandini into what is now the City of Commerce. With corporate sponsorship and homeowner support, the City of Commerce was officially incorporated on January 28, 1960. During the 1960s, the city added civic amenities such as a library, an "aquatorium," and a new city hall. Commerce had 101 of the nation's 500 largest corporations operating within its city limits by May of 1976. While some of the older industries, such as Chrysler and Goodrich, began to leave the city in the 1970s, it added a number of distribution centers and warehousing facilities (English and GuneWardena 1997).

Commerce underwent major redevelopment in the decades following the 1970s, and new projects included new residential developments and a business park. When the Commerce Casino was open in 1990, it quickly became the City of Commerce's second largest employer. During the same year, the landmark Samson Tire Factory reopened as a specialty retail center, office space, and a 200-room hotel. The city continues to retain its manufacturing identity with nearly 64 percent of the city zoned for industrial use (English and GuneWardena 1997).

Huntington Park (Frame 4)

Huntington Park was originally part of Rancho San Antonio. The first tracts to be developed in the community were called Sunrise Tract, owned by two land developers, A.L. Burbank and E.V. Baker. The tract was subdivided and renamed La Park around 1901. The name was changed soon after to Huntington Park and a railroad right-of-way was set aside as a way to lure Henry Huntington to extend the Pacific Electric Railway to town. The first actual inhabitants of the new town began arriving and by 1906, the city was incorporated, with 526 residents.

Maywood (Frame 4)

Although it is one of the smaller cities in Los Angeles, the City of Maywood had a population of 1,000 when it incorporated in 1924. Originally part of Rancho San Antonio, the first housing tracts were put up for sale in 1919; the community was named after a real estate agent named May Wood agreed to lend it her name. As with the surrounding cities, it slowly developed both a residential and industrial nature through the early decades of the twentieth century before the population of people and factories exploded throughout the pre- and post- World War II era. Both the Chrysler Corporation and the Ford Motor Company built auto assembly plants in Maywood, and Bethlehem Steel had a plant in the community.

Vernon (Frame 4)

Rancher Thomas J. Furlong and merchant John B. Leonis founded and incorporated the City of Vernon in 1905 on land reclaimed from the floodplain of the LA River. The city took its name from Vernon Avenue, which crossed through the center of town. The city founders wanted to take advantage of three major railroads running through the area to create an "exclusively industrial" city. During the early 1900s, Vernon's limited taxation and promise of no political or industrial strife

attracted a handful of firms from downtown Los Angeles. Vernon also provided a respite from the blue laws that took hold in Los Angeles in the first quarter on the twentieth century, with entertainment such as baseball, boxing, nightclubs, and gambling taking hold within the city limits of Vernon (City of Vernon 2010).

The industrial movement to Vernon accelerated during World War I, when oil companies, metal works, lumber yards and building-material manufactures relocated from downtown. By the 1920s and 1930s, companies like U.S. and Bethlehem Steel, Alcoa (aluminum), Owens (glass), American Can, and automaker Studebaker all set up shop in town. Through a bond measure, John Leonis was able to authorize the construction of the city's own light and power plant in order to provide cheaper utility rates to industrial firms (Davis 2001).

Vernon continues to be a major manufacturing and shipping center in Southern California despite the evolution of industry over the last 100 years. The city has embraced smaller industrial establishments, like fashion design, garment making, film production, and waste recycling. The city has also maintained its exclusively industrial nature, which has resulted in one of the lowest tax burdens in the State of California (City of Vernon 2010).

Glendale (Frame 6)

"The City of Glendale consists of approximately thirty square miles located about six miles north of downtown Los Angeles" (Historic Preservation Element of the City of Glendale General Plan, Planning Division, September 1997, p. 12). In 1798 Corporal Jose Maria Berdugo (later changed to Verdugo) established title to the Rancho San Rafael. The Rancho included most of present-day Glendale, Burbank, Eagle Rock and Highland Park. In 1831, Jose Maria Verdugo died and passed the Rancho San Rafael to his son and daughter (Julio and Catalina). It was not until 30 years later (1861) that Julio and Catalina divided the Rancho between them. A series of smaller divisions took place until a court decision known as the "Great Partition" was made in 1871 dissolving the Rancho San Rafael. As smaller parcels were created, many homes and businesses were developed. Six individuals contributed land to create the original 150-acre townsite which was named Glendale. This was platted, filed, and recorded with the County Recorder as the "Town of Glendale" in 1887. In 1906 the city was incorporated. It consisted of 1,486 acres. (City of Glendale 2020.)

Burbank (Frame 7)

The City of Burbank occupies land within the Spanish land grant of Rancho San Rafael. Spanish Governor Pedro Fages awarded the 36,403-acre parcel to Corporal José Maria Verdugo on October 20, 1784 (City of Glendale 1997:10, Cowan 1977:87, 139). The Verdugo family sold 4,603 acres of the property to Jonathan R. Scott, who then sold his acreage in 1866 to Dr. David Burbank, a trained dentist who worked in the Pueblo of Los Angeles (McDaniel and Clark 2012). As an entrepreneur, Burbank continued to purchase adjacent land, using his property for sheep grazing. From 1872 to 1873, Burbank sold the right-of-way of San Fernando Road to the Southern Pacific Railway to construct a new rail line between the downtown area of the City of Los Angeles and the City of Burbank's property. The segment of rail was completed on April 15, 1874 (City of Burbank 2012). In 1886, Burbank sold his entire 9,200 acres to the Providencia Land, Water and Development Company, which plotted a business district and surrounding residential neighborhoods that were for sale by late 1887 (Galvin Preservation Associates, Inc. 2009:27, McDaniel and Clark 2012). Because of the new rail line, many communities in the San Fernando Valley, including the City of Burbank, attained a vital commercial link to the City of Los Angeles. Lots (50- by 150-foot) were

predominantly purchased by farmers who then grew peaches, melons, and alfalfa (Galvin Preservation Associates, Inc. 2009:39). By 1910, the town had a population of 12,225 people with only approximately 700 of them living in the downtown core (Galvin Preservation Associates, Inc. 2009:42).

The City of Burbank was incorporated on July 8, 1911 (Bills 2004). In 1918, the City of Burbank transformed Second Street between Orange Grove and Angeleno Avenues into the main commercial district and the subdivisions of Benmar Hills and Magnolia Park were established as the first large residential subdivisions in the City of Burbank (Galvin Preservation Associates, Inc. 2009:53, 71). New industrial buildings and factories began to replace orchards. Brothers Allan and Malcolm Loughead, founders of the Lockheed Aircraft Company, established an aviation manufacturing plant in the City of Burbank in 1928. The plant produced 50 types of planes and employed a staff of 150 (Galvin Preservation Associates, Inc. 2009:60). Two years later, the United Airport (now the Hollywood Burbank Airport) opened as the largest commercial airport in Los Angeles County (Galvin Preservation Associates, Inc. 2009:90). By 1941, the Lockheed-Vega Aircraft Plant facility became the City of Burbank's biggest employer, employing 44,839 people. The facility's number of staff doubled by the end of the war so that in 1945, 80,800 people were employed producing America's first jet fighter, the Lockheed P-80 Shooting Star (Galvin Preservation Associates, Inc. 2009:106).

In addition to industrial development associated with the aerospace industry, the City of Burbank became a hub for the entertainment industry. First National Pictures constructed its studios on the 75-acre former David Burbank Ranch in 1926. Two years later, First National was bought by Warner Brothers Studio (Galvin Preservation Associates, Inc. 2009:61). Other movie studios followed. Walt Disney established a 51-acre studio 0.5 mile east of Warner Brothers studio, and Columbia Ranch established a 40-acre studio near Hollywood Way and Oak Street (Galvin Preservation Associates, Inc. 2009:91). During World War II, movie studios helped the war efforts by camouflaging the Lockheed-Vega Aircraft plant with faux streets and vegetation on chicken-wired trees covered with feathers, providing the surrounding landscape with a three-dimensional appearance to thwart Japanese attacks (Casey 2012). After the war, the City of Burbank's population increased from 62,348 in 1946 to 78,577 in 1950 (Galvin Preservation Associates, Inc. 2009:128). In 1952, the National Broadcasting Corporation (NBC) established its headquarters in the City of Burbank and developed television sound stages (Galvin Preservation Associates, Inc. 2009:132). NBC's complex was completed by 1962. The airport was purchased from Lockheed through a tri-city authority (Burbank-Glendale-Pasadena) and became known as such until 2003. The city's downtown area was subject to revitalization during the late 1980s; a number of restaurants and shops opened in the area, and the Golden Mall was re-opened, allowing traffic to once again flow down San Fernando Boulevard.

3.4.2.2 Regulatory

This section identified laws, regulations, and ordinances that are relevant to the impact analysis of cultural resources in this PEIR.

Federal

The National Historic Preservation Act (NHPA)

Certified Local Governments (CLG)

The Certified Local Government Program (CLG) was introduced in the 1980 amendment to the NHPA, to encourage and fiscally support local governments with the identification, evaluation, registration, and preservation of historic properties in communities. In addition, local government entities are encouraged to integrate their historic preservation programs with local planning and decision-making processes. The CLG program is administered through a partnership of the local municipality, the State Historic Preservation Officer (SHPO) and NPS.

The primary requirements of the CLG program include:

- Enforcing appropriate state and local laws and regulations for the designation and protection of historic properties
- Establishing a historic preservation review commission by local ordinance
- Maintaining a system for the survey and inventory of historic properties
- Providing for public participation in the local preservation program
- Satisfactorily performing responsibilities delegated to it by the State

Secretary of the Interior Standards

The Secretary of the Interior's (SOI) Standards and Guidelines for the treatment of Historic Properties (Standards) were developed by the National Park Service (NPS) to provide guidance in historic preservation best practices. The Standards were introduced in 36 CFR Part 68, (1995) and while they are advisory and not regulatory practices, they are considered essential in carrying out historic preservation responsibilities at the local, state, and federal levels.

Each approach, be it preservation, rehabilitation, restoration, or reconstruction provide the accepted standards for repair, replacement, alteration and maintenance of historic properties and historic materials. Each of these terms (preservation, rehabilitation, restoration, and reconstruction) have very specific definition as they relate to historic preservation and historic properties. There are specific guidelines for the treatment of historic properties as well as cultural landscapes, sustainability, and rehabilitation.

Standards for Preservation:

1. A property will be used as it was historically or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically

and visually compatible, identifiable upon close inspection and properly documented for future research.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Standards for Restoration

1. A property will be used as it was historically or be given a new use that interprets the property and its restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection and properly documented for future research.
4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archaeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

Standards for Reconstruction

1. Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
2. Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archaeological investigation to identify and evaluate those features and artifacts that are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.
3. Reconstruction will include measures to preserve any remaining historic materials, features and spatial relationships.

4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
5. A reconstruction will be clearly identified as a contemporary re-creation.
6. Designs that were never executed historically will not be constructed.

State

California Register of Historical Resources (CRHR)

§ California Public Resource Code (PRC) Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR also automatically includes all properties listed or determined eligible for listing in the NRHP, including properties evaluated under Section 106, and California Historical Landmarks No. 770 and higher.

The CRHR regulations govern the nomination of resources to the CRHR (California Code of Regulations [CCR], tit. 14 § 4850). The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations. The CRHR criteria closely parallel those of the NRHP. A resource must be determined to be significant at the local, state, or national level under one or more of the four criteria (paraphrased below) in order to be eligible:

- **Criterion 1**—Resources associated with important events that have made a significant contribution to the broad patterns of our history
- **Criterion 2**—Resources associated with the lives of persons important to our past
- **Criterion 3**—Resources that embody the distinctive characteristics of a type, period, or method of construction, or represents the work of a master
- **Criterion 4**—Resources that have yielded, or may be likely to yield, information important in prehistory or history

The CRHR definition of integrity and its special considerations for certain properties are slightly different than those for the NRHP. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The CRHR further states that eligible resources must "retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance," and lists the same seven aspects of integrity used for evaluating properties under the NRHP criteria.

California Environmental Quality Act (CEQA)

PRC Section § 21084.1 defines historical resources as those listed, or eligible for listing, in the CRHR, or those listed in the historical register of a local jurisdiction (county or city) unless the preponderance of the evidence demonstrate that the resource is not historically or culturally significant. NRHP-listed "historic properties" located in California are considered historical resources for the purposes of CEQA and are also listed in the CRHR. The CRHR criteria for listing such resources are based on, and are very similar to, the NRHP criteria.

The CEQA Guidelines Section 15064.5 provides specific guidance for determining the significance of impacts on historical resources (CEQA Guidelines § 15064.5(b)). According to CEQA, a project that causes a *substantial adverse change* in the significance of a *historical resource* or a *unique archaeological resource* has a significant effect on the environment (CCR Title 14 § 15064.5; PRC § 21083.2). CEQA defines a *substantial adverse change* as (CCR Title 14 § 15064.5(b)):

- Physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by the lead agency.

Under CEQA these resources are called "historical resources" whether they are of historic or prehistoric age.

Historical Resources

The term *historical resource* includes, but is not limited to any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of PRC § 5020.1(j). Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC § 5020.1(k))
2. A local survey conducted pursuant to PRC § 5024.1(g)
3. The property is listed in or eligible for listing in the NRHP (PRC § 5024.1(d)(1))

State Owned Historical Resources

PRC § 5024(b) requires every state agency in California to inventory structures over 50 years of age which may be NRHP-eligible, or eligible for registration, or listed, as a California Historical Landmark (CHL) under their jurisdiction. These lists are submitted to the SHPO, whose office establishes the standards for these submittals, and the SHPO maintains a master list of these inventoried structures (PRC § 5024 (d)). The function of PRC § 5024 is to support the formulation of policies to preserve and maintain historical resources under each state agencies jurisdiction (PRC § 5024(a)). For the purposes of PRC § 5024 and 5024.5 (discussed below), "state agency" is defined as

any agency, department, division, commission, board, bureau, officer, or other authority of the State of California.

In line with the requirements to identify and preserve historical resources, PRC § 5024.5 prohibits state agencies from altering the original or significant historical features or fabric, or transfer, relocate, or demolish historical resources on the master list maintained pursuant to subdivision (d) of § 5024 without, early in the process, first giving notice and a summary of the proposed action to the SHPO who will have 30 days after receipt of the notice and summary for review and comment. Similar to both NHPA and CEQA, PRC § 5024.5, if the proposed action is found to have an adverse effect on a listed historical resource, the relevant state agency person in charge and the SHPO will implement prudent and feasible measures to eliminate or mitigate the anticipated adverse effects; the State Historical Building Safety Board will be consulted for advice when appropriate. PRC § 5024.5 also provides guidance for the process of documenting SHPO concurrence, mediation, and information dispersion.

Unique Archaeological Resources

A *unique archaeological resource* is defined in Section 21083.2 of the California Public Resources Code as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

- Contains information needed to answer important scientific research questions and for which there is a demonstrable public interest
- Has a special and particular quality such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of *historical resource*. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR. For the purposes of this CEQA cultural resources study, a resource would be considered significant if it meets the CRHR eligibility (significance and integrity) criteria.

Even without a formal determination of significance and nomination for listing in the CRHR, the lead agency can determine that a resource is potentially eligible for such listing, to aid in determining whether a significant impact would occur. The fact that a resource is not listed in the CRHR, or has not been determined eligible for such listing, and is not included in a local register of historic resources, does not preclude an agency from determining that a resource may be a historical resource for the purposes of CEQA.

Health and Safety Code 7050.5 (HSC 7050.5)/Public Resources Code 5097.9

Health and Safety Code 7050.5 addresses the protection of human remains discovered in any location other than a dedicated cemetery and makes it a misdemeanor for any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law, except as provided in PRC Section 5097.99. It further states that in the event of discovery or recognition of any human

remains in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in PRC Section 5097.98. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she will contact the NAHC by telephone within 24 hours. Whenever the NAHC receives notification of a discovery of Native American human remains from the county coroner, it will immediately notify those people it believes to be the Most Likely Descendants of the deceased Native American. The descendants may inspect the site of the discovery and make recommendations on the removal or reburial of the remains.

California Government Code Section 6254 (r) and 6254.10

California Government Code Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency."

Regional

Los Angeles County

In unincorporated areas of Los Angeles County, the county's Historic Preservation program establishes the criteria and procedures for the designation, preservation and maintenance of landmarks and historic districts. The Historic Preservation Ordinance (HPO) was adopted by the County Board of Supervisors in 2015; as of 2020, there are only three properties listed on the Los Angeles County Historical Landmarks Registry, none of which are designated historic districts. The resources included in Part A, 1-5 can include archaeological sites. Most often, archaeological resources are eligible under Criterion 4 for data potential if:

A. A structure, site, object, tree, landscape, or natural land feature may be designated as a landmark if it is 50 years of age or older and satisfies one or more of the following criteria:

    1. It is associated with events that have made a significant contribution to the broad patterns of the history of the nation, State, County, or community in which it is located;

    2. It is associated with the lives of persons who are significant in the history of the nation, State, County, or community in which it is located;

3. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the nation, State, County, or community in which it is located; or possesses artistic values of significance to the nation, State, County, or community in which it is located;
4. It has yielded, or may be likely to yield, significant and important information regarding the prehistory or history of the nation, State, County, or community in which it is located;
5. It is listed, or has been formally determined eligible by the United States National Park Service for listing, in the National Register of Historic Places, or is listed, or has been formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resources;
6. If it is a tree, it is one of the largest or oldest trees of the species located in the County; or
7. If it is a tree, landscape, or other natural land feature, it has historical significance due to an association with a historic event, person, site, street, or structure, or because it is a defining or significant outstanding feature of a neighborhood.

B. Property less than 50 years of age may be designated as a landmark if it meets one or more of the criteria set forth in Subsection A, above, and exhibits exceptional importance.

C. The interior space of a property, or other space held open to the general public, including but not limited to a lobby, may be designated as a landmark or included in the landmark designation of a property if the space qualifies for designation as a landmark under Subsection A or B, above.

D. Historic Districts. A geographic area, including a noncontiguous grouping of related properties, may be designated as a historic district if all of the following requirements are met:

1. More than 50 percent of owners in the proposed district consent to the designation;
2. The proposed district satisfies one or more of the criteria set forth in Subsections A.1 through A.5, above; and
3. The proposed district exhibits either a concentration of historic, scenic, or sites containing common character-defining features, which contribute to each other and are unified aesthetically by plan, physical development, or architectural quality; or significant geographical patterns, associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of parks or community planning.

The *Los Angeles County General Plan*, adopted on October 6, 2015, does not contain a stand-alone historic preservation element. However, Goal C/NR 14: Protected historic, cultural, and paleontological resources, provides six policies for the protection of these resources:

- **Policy C/NR 14.1:** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- **Policy C/NR 14.2:** Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
- **Policy C/NR 14.3:** Support the preservation and rehabilitation of historic buildings.
- **Policy C/NR 14.4:** Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).

- **Policy C/NR 14.5:** Promote public awareness of historic, cultural, and paleontological resources.
- **Policy C/NR 14.6:** Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

Local

City of Long Beach (Frame 1 and Frame 2)

The City of Long Beach participates in the Certified Local Government (CLG) program. As a CLG, they have the responsibility of reviewing and commenting on development projects for compliance with state (and federal) environmental regulations. It has a Cultural Heritage Ordinance that allows for the designation of individual structures and district. There is a City of Long Beach Cultural Heritage Commission that advises the Planning Commission and City Council on historic preservation issues. The Commission may also administer design guidelines for designated buildings (City of Long Beach 2010).

As a CLG, with a Cultural Heritage Ordinance in place, overseen by a Cultural Heritage Commission, this municipality will require coordination regarding historic resources when a plan is proposed within their borders.

The City of Long Beach has a Historic Preservation Ordinance, located in Chapter 2.63 of Volume 1, Administration and Personnel title of the Long Beach Municipal Code. The purpose of the City of Long Beach Historic Preservation Ordinance is the recognition, preservation, protection and use of cultural resources are necessary to the health, property, social and cultural enrichment, and general welfare of the people.

A resource may be recommended for designation as a landmark or landmark district if it manifests one or more of the following criteria:

A. It possesses a significant character, interest, or value attributable to the development, heritage or cultural characteristics of the City, the Southern California region, the State, or the nation; or

B. It is the site of a historic event with a significant place in history; or

C. It is associated with the life of a person or persons significant to the community, City, region, or nation; or

D. It portrays the environment in an era of history characterized by a distinctive architectural style; or

E. It embodies those distinguishing characteristics of an architectural type or engineering specimen; or

F. It is the work of a person or persons whose work has significantly influenced the development of the City or the Southern California region; or

G. It contains elements of design, detail, materials, or craftsmanship which represent a significant innovation; or

H. It is a part of or related to a distinctive area and should be developed or preserved according to a specific historical, cultural, or architectural motif; or

I. It represents an established and familiar visual feature of a neighborhood or community due to its unique location or specific distinguishing characteristic; or

J. It is, or has been, a valuable information source important to the prehistory or history of the City, the Southern California region, or the State; or

K. It is one of the few remaining examples in the City, region, State, or nation possessing distinguishing characteristics of an architectural or historical type; or

L. In the case of the designation of a tree(s) based on historic significance, that the tree(s) is (are) associated with individuals, places and/or events that are deemed significant based on their importance to national, State and community history; or

M. In the case of the designation of a tree(s) based on cultural contribution, that the tree(s) is (are) associated with a particular event or adds (add) significant aesthetic or cultural contribution to the community. (ORD-09-0003, § 1, 2009)

Archaeological resources are included in the list of potential resources which could be designated as a landmark or landmark district by the Cultural Heritage Commission and meeting criteria described in the *City of Long Beach General Plan* Part 2.63.040.

City of Los Angeles (Frames 1, 5, 6, 7, 8, and 9)

The City of Los Angeles has a historic preservation ordinance: Ordinance No. 185472 (passed in 1962), which amended the Los Angeles Administrative Code to clarify the criteria for designation of local historic resources, known as Historic-Cultural Monuments (HCMs). It established the Cultural Heritage Commission and related rules and qualifications, and provided the definition of an HCM:

"…any site (including significant trees or other plant life located on the site), building or structure of particular historic of cultural significance to the City of Los Angeles."

HCMs may be designated by the City Council after a recommendation by the Cultural Heritage Commission if meets one or more of the following criteria: (Section 22.171.7, revised 2018)

1. Is identified with important events of national, state, or local history or exemplifies significant contributions to the broad cultural, economic, or social history of the nation, state, city, or community;

2. Is associated with the lives of historic personages important to national, state, city, or local history; or

3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose individual genius influenced his or her age.

In addition to HCMs, the city has an ordinance that establishes local historic districts, known as Historic Preservation Overlay Zones (HPOZs). The HPOZ program began in 1983, and to date more than 20 HPOZs have been designated throughout the city. The Los Angeles Municipal Code, Ordinance No. 184903, Section 12.20.3, established that each HPOZ would have a historic resources survey, which would identify contributing and non-contributing elements, included a context statement, and established the criteria for consideration as Contributing Element:

1. Adds to the Historic architectural qualities or Historic associations for which a property is significant because it was present during the period of significance, and possesses historic integrity reflecting its character at that time; or

2. Owing to its unique location or singular physical characteristics, represents an established feature of the neighborhood, community, or city; or

3. Retaining the building, structure, Landscaping, or Natural Feature, would contribute to the preservation and protection of an historic place or area of historic interest in the City (Section F[3][C]).

Section 3, *Archaeological and Paleontological*, of Chapter II*, Resource Conservation and Management,* in the *City of Los Angeles General Plan* states that the city has a primary responsibility in protecting significant archaeological resources. Under the Archaeological and Paleontological objective, policy, and program, the policy is to continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.

The Conservation Element of the *City of Los Angeles General Plan* (aka OurLA), adopted in September 2001, states the following on page II-7:

> Under the city's CEQA guidelines, an environmental assessment must be prepared for any proposed demolition, destruction or significant modification of an Historic-Cultural Monument or resource listed on the national or state registers, or on the Community Redevelopment Agency list, or cited as a proposed historical resource by a community plan or historic preservation overlay zone survey, or which are over 50 years old and are substantially intact examples of an architectural style important in Los Angeles or are associated with an architect or other person of importance in Los Angeles history. Under the 1998 amendment, buildings less than 50 years old may also be considered.

This document identifies the City of Los Angeles's policy to continue to protect historic and cultural sites and/or resources that may be potentially affected by proposed land development, demolition, or property modification activities, and provides a general list of mandated activities or processes to meet this policy's requirements:

> Program 1: development permit processing, monitoring, enforcement and periodic revision of regulations and procedures (II-9).

Responsible City of Los Angeles departments include Building and Safety, City Planning, Cultural Affairs and Community Redevelopment Agency (which has been eliminated since 2001) and/or the lead agency responsible for the permit implementation.

In addition, there are 35 community plans in the City of Los Angeles, of which the following 14 apply to the project study area:

1. Wilmington – Harbor City [Frame 1]
2. Southeast Los Angeles [Frame 4, 5]
3. Central City [Frame 5]
4. Boyle Heights [Frame 5]
5. Central City North [Frame 5]
6. Northeast Los Angeles [Frame 5, 6]
7. Silver Lake -Echo Park – Elysian Valley [Frame 6]
8. Hollywood [Frame 6, 7]
9. North Hollywood – Valley Village [Frame 7, 8]
10. Sherman Oaks – Studio City – Toluca Lake – Cahuenga Pass [Frame 7, 8, 9]

11. Van Nuys – North Sherman Oaks [Frame 8]
12. Encino – Tarzana [Frame 8, 9]
13. Reseda – West Van Nuys [Frame 9]
14. Canoga Park – Winnetka – Woodland Hills -West Hills [Frame 9]

City of Carson (Frame 2)

The City of Carson does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, a dedicated historic preservation commission or staff, an active landmark designation, or a citywide historic resources survey. Additionally, there are no specific archaeological or cultural resource ordinances.

City of Compton (Frames 2 and 3)

The City of Compton does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. Additionally, there are no specific archaeological or cultural resource ordinances.

City of Cudahy (Frame 3)

The City of Cudahy does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, dedicated historic preservation commission or staff, or active landmark designation. A survey of "old" houses in the community was completed in 1984, but no updated or recent historic resources surveys have been completed since that time. Additionally, there are no specific archaeological or cultural resources ordinances in Cudahy.

City of Downey (Frame 3)

The City of Downey does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. Additionally, there are no specific archaeological or cultural resources ordinances.

City of Lynwood (Frame 3)

The City of Lynwood does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. Additionally, there are no specific archaeological or cultural resources ordinances.

City of Paramount (Frame 3)

The City of Paramount does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. However, the City of Paramount does have Resource Management Policies that pertain to historic preservation and cultural resources. The Resource Management Element focuses on four key issue areas: cultural resources (historic and archaeological), ecological resources (plant and animal life), natural

resources (air, water, and minerals), and open space resources used for recreation. The Resource Management Policy addresses the maintenance and preservation of important natural and cultural resources for the enjoyment and use of future generations.

- **Resource Management Element Policy 20** – The City of Paramount will identify and preserve those sites/buildings that are important to the community for the benefit of the future generations that will reside or work in the city.

City of South Gate (Frame 3)

Chapter 7.68 of the South Gate Municipal Code, "Preservation of Cultural Heritage," sets forth the method for the City of South Gate's city council to designate culturally significant landmarks if a site or improvement meets one or more of the following criteria:

A. It possesses a significant character, interest, or value attributable to the development, heritage or cultural characteristics of the city, the Southern California region, the state of California or the United States of America or if it is associated with a person whose life is historically significant; or

B. It is the site of an historic event with a significant place in history; or

C. It exemplifies the cultural, political, economic, social, or historical heritage of the community; or

D. It portrays the environment in an era of history characterized by a distinctive architectural style; or

E. It embodies those distinguishing characteristics of an architectural type or engineering specimen; or

F. It is the work of a person or persons whose work has significantly influenced the development of the city or the Southern California region; or

G. It contains elements of design, detail, materials, or craftsmanship which represent a significant innovation; or

H. It is a part of or related to a distinctive area that is developed according to a specific historical, cultural, or architectural motif; or

I. It represents an established and similar visual feature of a neighborhood or community due to its unique location or specific distinguishing characteristics; or

J. It is, or has been, a valuable information source important to the prehistory or history of the City of South Gate, the Southern California region, the state of California or the United States of America.

However, as of 2020, the city does not have a designated historic preservation commission, preservation staff, ability to designate historic districts, or historic resource survey.

Adopted in 2009, *South Gate General Plan 2035* does not address cultural resources within the city's jurisdiction. However, the general plan notes that 13.8 percent of its housing stock was built in 1939 or earlier, 48.2 percent was constructed between 1940 and 1959, and an additional 17.7 percent of these buildings date to between 1960 and 1969.

City of Bell (Frame 4)

The City of Bell has included a Historic Preservation Element in the *City of Bell 2030 General Plan* (City of Bell 2018), and it has identified a list of identified significant sites. There are seventeen in total, all commercial structures and all located on Gage Avenue. The City of Bell does not have a

historic preservation ordinance, dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. Additionally, there are no specific archaeological or cultural resources ordinances.

City of Bell Gardens (Frame 4)

The City of Bell Gardens has a historic preservation ordinance; however, it does not have dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. The *City of Bell Gardens General Plan 2010* does not include a historic preservation element. Additionally, there are no specific archaeological or cultural resources ordinances.

City of Commerce (Frame 4)

The City of Commerce has a historic preservation ordinance; however, it does not have dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. The City of Commerce does not include a historic preservation element in its general plan. However, Section 1.6.2, *Cultural Resources*, in the *City of Commerce 2020 General Plan* lists four resource management policies related to cultural resources and historic preservation.

- **Resource Management Policy 2.1 –** The City of Commerce will strive to preserve the history of the city and any historical places in the city, such as the railroad station and the rubber tree in the vicinity of Olympic and Goodrich Boulevards.
- **Resource Management Policy 2.2 –** The City of Commerce will evaluate other potential significant sites in the community and will continue to recognize the city's cultural and historical resources.
- **Resource Management Policy 2.3 –** The City of Commerce will document local historic sites and promote the public's awareness of these resources.
- **Resource Management Policy 2.4 –** The City of Commerce will explore opportunities for the development of a city museum and cultural center.

City of Huntington Park (Frame 4)

The City of Huntington Park has a historic preservation ordinance, dedicated preservation staff, a designated historic preservation commission, and a historic resources survey from 2006 that has not been updated since that time. None of the resources surveyed in 2006 are in the project study area. The *City of Huntington Park 2030 General Plan* does not include a historic preservation element. Additionally, there are no specific archaeological or cultural resource ordinances.

Title 9 (Zoning), Chapter 3, Article 18 (9-3.1806) of the Huntington Park Municipal Code provides the Criteria for designation of historic resources to the Huntington Park Historic Register:

A. Historic Resource. A Historic Resource is a building, structure, site, object, landscape, sign, or contributing member to a Historic District that is significant in American history, architecture, engineering, archeology, or culture and is designated by the City according to the following criteria:

    1. Associated with events that have made a significant contribution to the broad patterns of the history of the City, Region, State or Nation;

    2. Associated with the lives of persons who are significant in the history of the City, Region, State or Nation;

3. Embodies the distinctive characteristics of a Historic Resource property type, period, architectural style, or method of construction, or that is a representation of the work of an architect, designer, engineer, or builder whose work is significant to the City, Region, State or Nation, or that possesses high artistic values that are of City, Regional, Statewide, or National significance;

4 Has yielded, or may be likely to yield, information important in prehistory or history of the City, Region, State or Nation.

B. A Historic Resource designation may include significant public or semi-public interior spaces and features. The criteria used to determine if an interior is significant includes the following:

1. Historically the space has been open to the public; and

2. The materials, finishes and/or detailing are intact or later alterations are reversible; and

3. The plan, layout and features of the space is illustrative of its historic function; or

4. Its form and features articulate a particular concept of design; or

5. There is evidence of distinctive craftsmanship.

C. Historic Signs. A Historic Sign will include all signs designated historically significant by the Historic Preservation Commission and such sign meets the criteria described in Section 9-3.1806(A)(3). All other regulations described in Title 9, Chapter 3, Article 12 of this Code will also apply.

D. Historic District. A Historic District is an area that is geographically defined as possessing a concentration of Historic Resources or a thematically related grouping of properties which contribute to each other and is designated by the City according to the procedures set forth by the National Register of Historic Places Bulletin #21: "Defining Boundaries for National Register Properties" and the following criteria:

1. The grouping of properties are unified by planned or physical development or a significant and distinguishable entity of citywide importance;

2. The components of the properties may lack individual distinction but are important as a collection representing one or more of a defined historic, cultural, development and/or architectural context(s).

City of Maywood (Frame 4)

The City of Maywood has a historic preservation ordinance, which established a "voluntary historic resource designation program" (Ordinance 10-03). Landowners of potential historic properties, structures or improvements can apply to the City of Maywood's Planning Director to request a historic designation, detailing which of the criteria applies to their specific property (Section 5-45.04). Section 5-45.03 of the Maywood Municipal Code provides the local criteria for the designation of historic resources or historic sites in Maywood:

Prior to any site or specific improvement (or any portion thereof) being designated as an historic resources or historic site, any or all of the following National Register of Historic Places criteria will be applied:

A. It exemplifies or reflects special elements of the city's cultural, social, economic, civic aesthetic, engineering, architectural, or natural history.

B. It is identified with persons or events significant in local, regional, state, or national history.

C. It embodies distinctive characteristics of a style, type, period, design ideology, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship.

D. It is representative of the work of a notable builder, designer, or architect.

E. It contributes to the significance of an historic area, being a geographically definable area possessing a concentration of not less than fifty (50) percent of historic or scenic properties or thematically related grouping of properties which contribute to each other and are unified aesthetically by plan or physical development.

F. It has a unique location or singular physical characteristic(s) or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the City.

G. It embodies elements of architectural design, detail materials, or craftsmanship that represent a significant structural or architectural achievement or innovation.

H. It is similar to other distinctive properties, sites, areas, or objects based on an historic, cultural, or architectural motif.

I. It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning.

J. It is one of the few remaining examples in the city, region, state, or nation possessing distinguishing characteristics of an architectural or historical type or specimen.

However, the City of Maywood does not have dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. The *City of Maywood General Plan* does not include a historic preservation element. Additionally, there are no specific archaeological or cultural resource ordinances.

City of Vernon (Frame 4)

The City of Vernon does not include a historic preservation element in its general plan. It also does not have a historic preservation ordinance, dedicated historic preservation commission or staff, active landmark designation, or citywide historic resources survey. Additionally, there are no specific archaeological or cultural resource ordinances.

City of Glendale (Frame 6)

The City of Glendale has a historic preservation ordinance (Title 15.20.050 of the Glendale Municipal Code), which enables the City of Glendale to designate historic resources provided that the proposed historic resource meets one or more of the following criteria:

1. The proposed historic resource is identified with important events in national, state, or city history, or exemplifies significant contributions to the broad cultural, political, economic, social, or historic heritage of the nation, state, or city;

2. The proposed historic resource is associated with a person, persons, or groups who significantly contributed to the history of the nation, state, region, or city;

3. The proposed historic resource embodies the distinctive and exemplary characteristics of an architectural style, architectural type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose genius influenced his or her profession; or possesses high artistic values;

4. The proposed historic resource has yielded, or has the potential to yield, information important to archaeological pre-history or history of the nation, state, region, or city;
5. The proposed historic resource exemplifies the early heritage of the city.

Glendale Municipal Code Section 30.25 establishes the designation and regulation procedures for historic district overlay zones in the city. Historic District Overlay Zones are similar to historic districts, meaning geographically definable areas that possess significant concentrations, linkages, or continuity of properties that constitute more than 60 percent of the total properties in the district, and which are united historically and aesthetically by plan or physical development. The designation criteria are:

A. Exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, architectural or natural history;
B. Is identified with persons or events significant in local, state, or national history;
C. Embodies distinctive characteristics of a style, type, period, method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
D. Represents the work of notable builders, designers, or architects;
E. Has a unique location or is a view or vista representing an established and familiar visual feature of a neighborhood community or of the city;
F. Embodies a collection of elements of architectural design, detail, materials, or craftsmanship that represent a significant structural or architectural achievement or innovation;
G. Reflects significant geographical patterns, including those associated with different eras of settlement and growth, transportation modes, or distinctive examples of park or community planning;
H. Conveys a sense of historic and architectural cohesiveness through its design, setting, materials, workmanship, or association; or
I. Has been designated a historic district in the National Register of Historic Places or the California Register of Historical Resources. (Ord. 5399 Attach. A, 2004)

Chapter 2.76 of the Glendale Municipal Code provides for the creation of a Historic Preservation Commission and covers the requirements for appointment to and qualifications for the commission members, as well as meeting procedures and powers of the commission. The City of Glendale maintains a list of historically important sites in Glendale and historic districts, also known as the Glendale Register of Historic Resources.

The *City of Glendale General Plan*'s Historic Preservation Element includes the following goals and objectives that are specific to this section:

Goal 1: Preserve historic resources in Glendale which define community character

- 1-6 Discourage demolition of historic resources
- 1-7 Encourage the preservation and maintenance of historic landscaped areas
- 1-8 Encourage the preservation of individual historic resources and historic themes and historic geographic districts
- 1-10 Support the preservation and maintenance of historic street furniture including street lights.

Goal 2: Create and continue programs and practices which enable an appreciate of history and historic preservation in Glendale.

- 2-18 Support the preservation of street furniture in its original location
- 2-19 Support the reuse of historic street furniture in historically appropriate settings when its original location is not feasible.
- 2-27 Discourage relocation of historic resources
- 2-30 Establish a program which requires mitigation monitoring to include payment of fees to subsidize preservation of historic resources and storage space for artifacts.

City of Burbank (Frame 7)

The City of Burbank regulates preservation of historic resources through its Historic Resource Management Ordinance (Division 6. Historic Preservation Regulations). City of Burbank Ordinance 3381 was adopted in 1994 and established the Burbank Heritage Commission and local historic preservation regulations. It established the following ten criteria for designation of a property as a Historic Place or a Structure of Merit:

A. It exemplifies or reflects special elements of the city's cultural, social, economic, civic, aesthetic, engineering, architectural, or natural history;

B. It is identified with persons or events significant in local, regional, state, or national history;

C. It embodies distinctive characteristics of a style, type, period, design ideology, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;

D. It is representative of the work of a notable builder, designer, or architect;

E. It contributes to the significance of an historic area, being a geographically definable areas possessing a concentration of not less than fifty percent (50%) of historic or scenic properties which contribute to each other and are unified aesthetically by plan of physical development;

F. It has a unique location or singular physical characteristic(s) or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the City of Burbank;

G. It embodies elements of architectural design, detail materials or craftsmanship that represent a significant structural or architectural achievement or innovation;

H. It is similar to other distinctive properties, sites, areas, or objects based on historic, cultural, or architectural motif;

I. It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning;

J. It is one of the few remaining examples in the city, state, region, or nation possessing distinguishing characteristics of an architectural or historical type of specimen.

The *Burbank2035 General Plan*, adopted on February 19, 2013, includes discussion of historical and cultural sites in several places where goals and policies are mentioned. Within the Land Use Section, Goal 3 relates to community design and character, laying out policies to maintain a strong sense of place and "small town" feeling. Policy 3.10 states," Preserve historic resources, buildings, and sites, including those owned by private parties and government agencies, including the City of Burbank. Alter such resources only as necessary to meet contemporary needs and in a manner that does not affect the historic integrity of the resource." Policy 3.11 states, "Carefully consider the evolution of community character over time. Evaluate projects with regard to their impact on historic character,

their role in shaping the desired future community character, and how future generations will view today's Burbank."

Furthermore, Goal 6 (Open Space Resources), Policy 1.2 in the Open Space and Conservation section describes involving community groups in the identification, acquisition, and management of natural resource areas, recreation facilities, historical and cultural sites, and aesthetic and beautification programs. Policy 6.1 states that it is City policy to recognize and maintain cultural, historical, archaeological, and paleontological structures and sites essential for community life and identity.

3.4.3 Resources Within the Project Study Area

3.4.3.1 Identification Efforts and Methods

This section describes the background literature search and framework for identifying historical resources in the project study area (i.e., the LA River channel and 1 mile on either side of the LA River). Although a cultural resources records search is typically a first step in obtaining all available cultural resources surveys and site records for a site-specific project area of potential impact (API), no formal records search was conducted at the South Central Coastal Information Center, which is located at California State University Fullerton. As this is a program-level analysis, the broad nature of the record search results would have been quickly invalid for use at the project-level; therefore, rather than conduct a records search, location-specific historical research was completed. The South Central Coastal Information Center (SCCIC) is a branch of the California Historical Resources Information Center, which maintains the State of California's official records of previously recorded cultural resource studies, recorded archaeological and historical sites. SCCIC maintains the records for Los Angeles, San Bernardino, Ventura, and Orange Counties. A formal records search will be conducted during environmental analysis of specific subsequent projects and locations when identified as later activities under the *2020 LA River Master Plan*. (See Mitigation Measure CR-1 below.) Archaeological resource data is not publicly available and thus not included in this PEIR analysis, archaeological resource locations will be obtained as subsequent location- and project-specific records searches are conducted for later activities.

Without the basis for a formal record search, the identification of potential historical resources has been completed through a series of steps. If a municipality was identified in the regulations presented in Section 3.4.2.2, *Thresholds of Significance*, to have a historical register or to have conducted surveys of historical resources, a desktop search was completed to obtain that material. These data was available in various forms, such as embedded lists, Microsoft Word, and Adobe Acrobat pdfs (either embedded in a secondary website or available for download), in one case as a Google Map, and through open source ArcGIS data. Using addresses or coordinates (depending on which was available), each historical resource was mapped using Google Earth Pro. These layers, when laid over the project study area, provided the data shown in the tables in Section 3.4.3.2, *Resources Identified in the Project Study Area*.

The following information sources were reviewed as part of the desktop background literature search .

- NRHP National Park Service online website
- Office of Historic Preservation Built Environment Resource Directory (BERD)

- California Historical Landmarks
- California Points of Historical Interest
- California Historical Resource Inventory System
- California Register of Historical Resources
- County of Los Angeles Landmarks List (general plan)
- *City of Bell 2030 General Plan*
- City of Burbank Heritage Commission website
- City of Cudahy Residential Survey (1984)
- *City of Glendale General Plan*, Historic Preservation Element
- City of Glendale Historic Register
- City of Glendale Historic District Master List
- Glendale Register of Historic Resources Google Map
- City of Burbank Historic Preservation Plan
- *City of Long Beach General Plan,* Historic Preservation Element
- City of Long Beach historic context
- City of Long Beach Districts and Landmarks lists (online)
- City of Los Angeles Historic-Cultural Monuments list
- City of Los Angeles Historic Preservation Overlay Zone Program
- SurveyLA historic resource information at historicplacesla.org
- *South Gate General Plan 2035*
- Los Angeles Conservancy Report Card
- Los Angeles Public Library
- Historic Aerials (NETR Online)

Table 3.4-1 through Table 3.4-6 are presented in the next section for informational purposes only based on the best information that could be obtained from the desktop search at the time of preparation of this draft PEIR, and provide some initial insight on potential historical resources for when specific subsequent project locations are identified and are in initial planning or design stages. However, similar to what has been stated above with archaeological resources, a formal records search at the SCCIC will need to be conducted as specific subsequent projects and their locations are identified to be guaranteed the latest available and most accurate data for historical resources.

3.4.3.2 Resources Identified in the Project Study Area

With the aim of identifying historical resources in the project study area, data sources listed in Section 3.4.3.1, *Identification Efforts and Methods,* were reviewed, specifically to establish whether each community had: 1) A historic preservation element in their general plan, 2) A historic preservation ordinance, 3) A historic preservation staff person or commission, and 4) Any historical

resources register or historical resources survey. The results of that literature review are discussed in this section.

The following section provides, in tabular form, the historical resources that are located within 1 mile to either side of the LA River, by community.

LA River Flood Channel (Frames 1 through 9)

Within all frames, there is one common feature: the LA River Flood Channel (Channel), which is part of a larger, countywide flood management system. The Channel could be defined as a structure or a site, or even a district, for the purposes of CEQA, but this linear resource in its entirety has never been evaluated for eligibility for local, state, or federal historic registers. Although segments of the Channel have been evaluated for local, state, and federally funded projects for many years, those evaluations only looked at the relative significance of each segment individually, and/or as part of the larger resource, without explicitly evaluating the Channel as a whole. As discussed above, a formal records search at the SCCIC was not conducted as part of this exercise, so a comprehensive collection of all the recordation of the Channel was not possible. However, several of the most recent evaluations of segments of the river have been summarized below to demonstrate the discussions of potential eligibility, character-defining features, and integrity.

Some of the most recent evaluations of segments of the Channel have resulted in presumptive NRHP and/or CRHR eligibility, under Criterion A/1 and C/3, with one evaluation identifying character-defining features. Excerpts of these evaluations has been included below:

- The most recent was prepared as part of a Phase 1 Cultural Resource Investigation for the Water Wheel Project, north of Downtown Los Angeles (Applied Earthworks 2009). The report recorded a 2,366 foot long segment of the Channel near the Lincoln Heights neighborhood, finding that it appeared to be a contributing element of a potential district that includes the 51-mile-long Channel, under Criterion A/1 for its association with flood management in the greater Los Angeles region and its role in the development of river-adjacent areas in greater Los Angeles. In addition, the authors stated that the Channel appears to be eligible under Criterion C/3 as a significant USACE design and construction project. The period of significance for this potential district was recorded as 1938-1960. The segment of the Channel was found to retain integrity of location, design, materials, and workmanship, and association with the Channel. Furthermore, the distinctive characteristics of the Channel were found to be intact:
    - The trapezoidal reinforced concrete channels,
    - The parapet paved berms, and
    - The central trench at the bottom to guide water flow.
- In 2013, a 7-mile stretch of the Channel in the Glendale Narrows location was evaluated (DPR 2013) and while also considered ineligible for listing in the NRHP under any criteria, maintained integrity of location, design, materials, feeling and association for the period of significance of 1939. This evaluation also stated:

    > While the system as a whole may be viewed as historically important, this particular section of the LA River channel does not possess any special or noteworthy associations with the flood control program developed and implemented by the USACE the organization primarily responsible for its implementation.

- In addition to these most recent evaluations, the American Society for Civil Engineers Los Angeles Section considers the Los Angeles County Total Flood Control System to be a historic civil engineering landmark (Landmark No. 38), which naturally includes the entire LA River (http://67.225.175.217/ASCE/ASCE-Region-9-Landmarks/LosAngelesSection/All-Landmarks/38-LosAngelesCountyTotalFloodControlSystem/los-angeles-county-flood-control-district.htm, accessed June 28, 2020).

For the purposes of this document, therefore, the LA River Flood Channel has a California Historical Resource Status Code "7N," "Needs to be reevaluated – formerly coded as may become NR eligible with specific conditions."

Los Angeles County, Unincorporated (Frames 2 through 4, Frame 7)

Chapter 22.124.130 of the Los Angeles County historic preservation ordinance discusses the designation of county-owned properties as a landmark; there are no landmarked county-owned properties within 1 mile to either side of the LA River.

Long Beach (Frame 1 and Frame 2)

Table 3.4-1. City of Long Beach Historical Resources within 1 mile to Either Side of the LA River

Name	Address/Location	Designation[1]	OHP Status Code[2]
First Congregational Church of Long Beach	241 Cedar Avenue	Local, NRHP -listed	1S[3]
The Willmore	315 W. 3rd Street	Local, NRHP-listed	1S
First National Bank of Long Beach	101 Pine Avenue	Local, NRHP-listed	1S
Long Beach Professional Building	117 E. 8th Street	Local, NRHP-listed	1S
US Post Office – Long Beach Main	300 Long Beach Boulevard	Local, NRHP-listed	1S

[1] Properties listed in these tables have been either been identified in a local survey or listed on a local register, listed in the CRHR, or eligible for listing or listed in the NRHP.

[2] OHP Status codes are used to classify historical resources by providing a shorthand way to understand the level of identification, evaluation, and designation: https://ohp.parks.ca.gov/pages/1068/files/Resource-Status-Codes.pdf. Current as of 3/1/2020.

[3] OHP Status Code 1S: Individual property listed in NRHP by the Keeper. Listed in the CRHR.

City of Los Angeles (Frame 1, Frames 5 through 9)

Table 3.4-2. City of Los Angeles Historical Resources within 1 mile to Either Side of the LA River

Historic Cultural Monument Number	Name	Address	Designation
3	Plaza Church	535 North Main Street and 100–110 Cesar Chavez Avenue	HCM[1], 1D[2]

Historic Cultural Monument Number	Name	Address	Designation
6	Bradbury Building	300–310 South Broadway and 216–224 West 3rd Street	HCM, 1D, 1S
9	Shadow Ranch House	22633 Vanowen Street	HCM, 2S2/3D
17	Saint Vibiana's Cathedral	110–136 East 2nd Street	HCM, 2S2
22	Palms – Southern Pacific Railroad Depot	3800 Homer Street	HCM
26	Site of the First Cemetery of Los Angeles	521 North Main Street	HCM
29	Site of Campo De Cahuenga	3919 Lankershim Boulevard	HCM
32	Saint Saviour's Chapel Harvard School	3700–3946 Coldwater Canyon Avenue	HCM, 3S
37	Fire Station No. 23	225 East 5th Street	HCM, 1S
40	Hale House (Heritage Square)	3800 Homer Street	HCM, 1S
42	San Antonio Winery	738–744 Gibbons Street and 725–749 Lamar Street	HCM
48	Chavez Ravine Arboretum	Elysian Park	HCM
54	6th Street Wooden Bridge Across Hollenbeck Park Lake	Hollenbeck Park Lake	HCM
64	Los Angeles Plaza Park	Alameda Street	HCM, 1D
65	Valley Knudsen Garden and Residence (Heritage Square)	3800 Homer Street	HCM
67	Cedar Trees	Los Feliz Boulevard (between Riverside Drive and Western Avenue)	HCM
82	River Station Area	1231 North Spring Street	HCM, 2S2
97	Residence	1620 Pleasant Avenue	HCM
98	Mount Pleasant House (Heritage Square)	3800 Homer Street	HCM, 1S
101	Los Angeles Union Station Passenger Terminal and Grounds	800–850 North Alameda Street and 357 Aliso Street	HCM, 2D[3]/3S[4]
102	Residence	1030 Cesar E. Chavez Avenue	HCM
108	Beaudry Avenue House	3800 Homer Street	HCM
110	Los Angeles Police Academy Rock Garden	1880 North Academy Road	HCM
111	Hollywood Sign and land underneath (Griffith Park perimeter)	Mount Lee	HCM
123	Lovell House	4616 Dundee Drive	HCM, 1S[5]
124	Tierman House	2323 Micheltorena Street	HCM
126	Franklin Avenue Bridge (Shakespeare Bridge)		HCM, 2S2[6]

Historic Cultural Monument Number	Name	Address	Designation
138	Coca Cola Building	1200–1334 South Central Avenue	HCM, 3S
144	Residence	2054–2056 Griffin Avenue	HCM
145	Residence	3537 Griffin Avenue	HCM
150	Los Angeles City Hall	200 North Spring Street	HCM, 2S2
153	Lincoln Park Carousel	Valley Boulevard and Mission Road	HCM
156	Fire Station No. 1	2230 Pasadena Avenue	HCM
157	Residence	3110 North Broadway	HCM
161	Wolfer Printing Company Building	416–426 South Wall Street and 301–311 Winston Street	HCM
162	William Mulholland Memorial Fountain	Riverside Drive and Los Feliz Boulevard	HCM
163	Animation School for the Walt Disney Studios from 1935-1940	2646–2664 and 2710–2746 Griffith	HCM
164	Glendale-Hyperion Bridge, Bridge #53C-1179		HCM, 2S2
184	Tower of Wooden Pallets	15357 Magnolia Boulevard	HCM
211	Granite Block Paving (Between Alameda and N. Main St.)		HCM
224	Macy Street Viaduct (between Mission and Vignes), Bridge #53C-130	Cesar E. Chavez Avenue (between Mission Road and Vignes Street)	HCM, 2S2
228	Laurelwood Apartments	11833–11847 Laurelwood Drive	HCM
245	Lincoln Avenue Church Building (Heritage Square)	3800 Homer Street	HCM, 3S
261	Lincoln Heights Branch Library	2530 Workman Street	HCM, 1S
271	Farmers and Merchants Bank Building	401–411 South Main Street	HCM, 1D/3S
281	Cathedral High School	1253 Bishops Road	HCM, 2S2
288	Barclay Hotel	103–107 W. 4th Street	HCM, 1D
290	La Reina Theater	14626 Ventura Boulevard	HCM
293	The Magnolia	13242 Magnolia Boulevard	HCM
312	Japanese Union Church of Los Angeles	120–122 North San Pedro Street	HCM
313	Los Angeles Hompa Hongwanji Buddhist Temple	355–369 East 1st Street and 109–119 North Central Avenue	HCM, 1D/2S2
322	Fletcher Drive Bridge over the LA River, Bridge #53C-0096	Fletcher Drive	HCM, 2S2
337	Engine Company No. 56	2838 Rowena Avenue	HCM

Historic Cultural Monument Number	Name	Address	Designation
384	Department of Water and Power Building	2417 Daly Street	HCM, 2S2
388	Edison Electric Company, Los Angeles #3 Steam Power Plant	650 South Avenue 21	HCM, 2S2
396	Federal Bank Building	2201 North Broadway	HCM
401	Feliz Adobe	4730 Crystal Springs Drive	HCM
404	Los Angeles Railway Huron Substation	2640 North Huron Street	HCM
413	Octagon House (Heritage Square)	3800 Homer Street	HCM
422	Silverlake and Ivanhoe Reservoir	Armstrong Avenue	HCM
442	Albion Cottages and Milagro Market	1801–1813 Albion Street	HCM
443	Bowman Residence	2425 Griffin Avenue	HCM
468	Sacred Heart Church	2801 Baldwin Street and 2210–	HCM, 3S
474	Little Nugget (Travel Town – Griffith Park)	5200 Zoo Drive	HCM,
481	Mauer House	932 Rome Drive	HCM
483	J.B. Merrill House	815 Elyria Drive	HCM
488	Canoga Park (original Owensmouth Southern Pacific R.R. Station)	21355 Sherman Way	HCM
533	Residence	2660 Sichel Street	HCM
553	Midtown School	4155 Russell Avenue	HCM
569	Van De Kamp's Holland Dutch Bakery	3016–3020 San Fernando Road and 2900–30 Fletcher Drive	HCM
587	Lincoln Heights Jail / Los Angeles City Jail	401–449 North Avenue 19	HCM, 2S4[7]
590	Brooklyn Avenue Neighborhood Corridor	Cesar E. Chavez Avenue (between Cummings Street and Mott Street)	HCM, 2S2
592	Philosophical Research Society	3341–3351 Griffith Park Boulevard and 3910–3918 Los Feliz Boulevard	HCM
615	San Pedro Firm Building	108–116 North San Pedro Street	HCM, 1D/2S2
638	El Paradiso	11468 Dona Cecilia Drive	HCM
640	Richard and Dion Neutra VDL Research House	2300 Silver Lake Boulevard	HCM
676	Neutra Office Building	2379 Glendale Boulevard	HCM, 1S
683	Chase Knolls Garden Apartments	13401 West Riverside Drive	HCM
691	Carl C. Warden Residence	878 North Rome Drive	HCM
700	Canoga Park Branch Library	7260 Owensmouth Avenue	HCM

Historic Cultural Monument Number	Name	Address	Designation
704	John R. Hunt House	2055 North West Silver Lake Drive	HCM
713	Santa Fe Hospital	610 South Saint Louis Street	HCM
728	San Fernando Building	400 South Main Street	HCM, 1S
729	Hellman Building	411 South Main Street and 410 South Spring Street	HCM, 3D[8]
735	Jeffries House	571 Cypress Avenue	HCM
759	Gerst Residence	3437 Adina Drive	HCM
763	Studio Theatre at the Denis Building	3433 Cahuenga Boulevard West	HCM
770	Red Car Trestle Footings	Fletcher Drive and Riverside Drive	HCM
788	Sears, Roebuck and Co. Mail Order Building	2650 East Olympic Boulevard	HCM, 1S
795	Santa Fe Inbound Freight House	355 South Santa Fe Avenue and 960 East 3rd Street	HCM, 2S3
807	Church of the Epiphany	2808 North Altura Street	HCM, 1S
825	Chinatown West Gate	954 North Hill Street	HCM
826	Chinatown East Gate	945 North Broadway	HCM
828	Harry J. Wolff House	4000 North Sunnyslope Avenue	HCM
839	Paul Landacre Cabin and Grounds	2006 West El Moran Street	HCM
845	Mount Washington Hotel / Self Realization Fellowship International Headquarters	3880 and 3846 San Rafael Avenue	HCM
849	Nickel Leong Mansion	3501–3511 Thorpe Street	HCM
860	Kallis House	3580 North Multiview Drive	HCM
868	O'Neill Duplex No. 1	2342–2344 West Cove Avenue	HCM
869	Bakman House	10623 Riverside Drive	HCM
872	Raphael Junction Block Building	1635–1637 North Spring Street	HCM
873	Higgins Building	108 West 2nd Street	HCM
888	National Biscuit Company Building	1850 Industrial Street	HCM
891	Boyle Hotel – Cummings Block	101–105 North Boyle Avenue	HCM, 1S
892	Nin-Pole Residence	2335 Hidalgo Avenue	HCM
895	How House	2422 North Silver Ridge Avenue	HCM
897	Haven of Rest	2432 North Hyperion Avenue	HCM

Historic Cultural Monument Number	Name	Address	Designation
900	North Spring Street Bridge, No. 53C0859		HCM, 2S2
901	North Main Street Bridge, No. 53C1010		HCM, 2S2
902	Olympic Boulevard Bridge, Bridge No. 53C0163		HCM, 2S2
903	Washington Boulevard Bridge, No. 53C1375		HCM, 2S2
904	Seventh Street Bridge, No. 53C1321		HCM, 2S2
906	Fourth Street Bridge, No. 53C0044		HCM, 2S2
907	North Broadway-Buena Vista Street Bridge, No. 53C0545		HCM, 2S2
908	Riverside-Figueroa Bridge, No. 53C0160		HCM, 6Y[9]
909	First Street Bridge, No. 53C1166		HCM, 2S2
910	Riverside-Zoo Drive Bridge, No. 53C1298		HCM, 2S2
918	Lydecker Hilltop House	3820 Buena Park Drive	HCM
920	Aoyama Tree	119 North Central Avenue	HCM
922	Edward A. "Tink" Adams House	2331 West Cove Avenue	HCM
937	Westinghouse Electric Building	420 South San Pedro Street	HCM
942	Griffith Park	2715 Vermont Avenue	HCM, 2S2
964	Ross House	2123 North Valentine Street	HCM
965	Wilson House	2090 North Redcliff Street	HCM
966	Douglas Building	257 South Spring Street	HCM
972	Shire Art House	2354 South Vista Gordo Drive	HCM
973	Henry Shire Residence	2208 North Princeton Avenue	HCM
976	Corbin Palms House	6118 North Jumilla Avenue	HCM
977	Idle Hour Café	4824 Vineland Avenue	HCM
982	Gless Farmhouse	131 South Boyle Avenue	HCM, 2S2
1004	Richard Henry Dana Branch Library	3320 Pepper Street	HCM, 1S
1009	Heritage Square Museum	3800 Homer Street and 3504 Pasadena Avenue	HCM
1011	McAlmon House	2717 West Waverly Drive	HCM
1014	Ward-Berger House	3156 North Lake Hollywood Drive	HCM
1017	Young-Gribling Residence	3320 North Griffin Avenue	HCM
1024	Lechner House	11600 West Amanda Drive	HCM

Historic Cultural Monument Number	Name	Address	Designation
1025	Durex Model Home	3410 North Amesbury Road	HCM
1026	Sherwood House	3435 Amesbury Road	HCM
1065	McTernan Residence	2226 North Wayne Avenue	HCM
1072	Ray S. Linn House	7820 W Mulholland Drive	HCM
1076	Presburger House	4255 Agnes Avenue	HCM
1082	Laurel Terrace Street Trees		HCM
1101	Naval and Marine Corps Reserve Center	1700 East Stadium Way	HCM, 2D2
1109	Casa De Mi Sueno	3820 East San Rafael Avenue	HCM
1111	Jules Salkin Residence	1430 West Avon Terrace	HCM
1116	Albert Van Luit Complex	4000–4010 East Chevy Chase Drive	HCM
1139	Catalina Swimwear	336 East Winston Street	HCM
1144	Ortiz Taylor House	2650–2656 North Lake View Avenue	HCM
1154	Joannes Brothers Company Building	310 South Hewitt Street	HCM
1159	Albert R. Bell Residence	4217–4221 Agnes Avenue	HCM
1160	Standard Oil Company Sales Department Building / Woman's Building	1727 North Spring Street	HCM
1161	The Ralph G. Walker House	2100 North Kenilworth Avenue	HCM
1163	Corbin Palms Model H-3	6134 North Jumilla Avenue	HCM
1166	Sabsay House	2351 North Silver Ridge Avenue	HCM
1174	Times Mirror Square	100–142 South Broadway	HCM
1189	Hunter Ranch House	1309 Killarney Avenue	HCM
1198	Tokio Florist/Sakai-Kozawa Residence	2718 North Hyperion Avenue	HCM
1205	C.B. Van Vorst Co. Manufacturing Plant/Santa Fe Art Colony	2401 S. Santa Fe Avenue	HCM
1200	Willard Bell Residence	4233 N Agnes Avenue	HCM
1204	Hawk House	2421–2425 Silver Ridge Avenue	HCM
1199	Arthur and Nina Zwebell Residence	4227 N Agnes Street	HCM

[1] HCM: Historic Cultural Monument

[2] OHP Status Code 1D: Contributor to a district or multiple resource property listed in NRHP by the Keeper. Listed in the CRHR.

[3] OHP Status Code 2D: Contributor to a district determined eligible for NRHP by the Keeper. Listed in the CRHR.

[4] OHP Status Code 3S: Appears eligible for NRHP as an individual property through survey evaluation.

[5] OHP Status Code 1S: Individual property listed in NRHP by the Keeper. Listed in the CRHR.

[6] OHP Status Code 2S2: Individual property determined eligible for NRHP by a consensus through Section 106 process. Listed in the CRHR.

[7] OHP Status Code 2S4: Individual property determined eligible for NRHP pursuant to Section 106 without review by SHPO. Listed in the CRHR.

[8] OHP Status Code 3D: Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation.

[9] OHP Status Code 6Y: Determined ineligible for NRHP by consensus through Section 106 process – Not evaluated for CRHR or Local Listing.

Cudahy (Frame 3)

A survey of "old" houses in Cudahy was completed in 1984, but no updated or recent historic resources surveys have been completed since that time. Twenty-one houses in Cudahy's residential neighborhoods were selected for survey on the basis of unique architectural significance. A review of that survey reveals 18 of those "old" houses are located in the project study area.

Table 3.4-3. City of Cudahy "Old Houses" within 1 mile of the LA River

Name	Address/Location	Designation	OHP Status Code
Unknown	8212 Atlantic Avenue	Old House Survey, 1984	N/A
Unknown	7505 Atlantic Avenue	Old House Survey, 1984	N/A
Unknown	5159 Clara Street	Old House Survey, 1984	N/A
Unknown	5224 Clara Street	Old House Survey, 1984	N/A
Unknown	5260 Clara Street	Old House Survey, 1984	N/A
Unknown	4820 Elizabeth Street	Old House Survey, 1984	N/A
Unknown	5000 Elizabeth Street	Old House Survey, 1984	N/A
Unknown	5016 Elizabeth Street	Old House Survey, 1984	N/A
Unknown	5257 Elizabeth Street	Old House Survey, 1984	N/A
Unknown	4728 Live Oak Street	Old House Survey, 1984	N/A
Unknown	5037 Live Oak Street	Old House Survey, 1984	N/A
Unknown	5041 Live Oak Street	Old House Survey, 1984	N/A
Unknown	5309 Live Oak Street	Old House Survey, 1984	N/A
Unknown	4446 Santa Ana Street	Old House Survey, 1984	N/A
Unknown	4768 Santa Ana Street	Old House Survey, 1984	N/A
Unknown	4948 Santa Ana Street	Old House Survey, 1984	N/A
Unknown	4956 Santa Ana Street	Old House Survey, 1984	6U[1]
Unknown	7315 Wilcox Street	Old House Survey, 1984	N/A

[1] OHP Status Code 6U: Determined ineligible for NRHP pursuant to Section 106 without review by Office of Historic Preservation (OHP)

Bell (Frame 4)

The City of Bell maintains a list of identified significant sites. There are 17 in total, all commercial structures and all located on Gage Avenue; two are in the project study area.

Table 3.4-4. City of Bell Significant Sites within 1 mile of the LA River

Name	Address/Location	Designation	OHP Status Code
J & V Auto Repair Services	4612 Gage Avenue	Local	6Y
Rocio's Fashion	4722 Gage Avenue	Local	N/A

Glendale (Frame 6)

There are six structures listed on the Glendale Register of Historic Resources, consisting of two bridges and four buildings. Please see the table below for additional information.

Table 3.4-5. City of Glendale Historic Resources within 1 mile of the LA River

Name	Address/Location	Designation	OHP Status Code
Concord Street Bridge/ Bridge No. 53C-0742	Over Verdugo Flood Control	Local	N/A
Taylor House	1027 Glenwood Road	Local	N/A
Grand Avenue Air Terminal	1310 Air Way	Local, NRHP-listed	1S[1]
Kenilworth Avenue Bridge/ Bridge No. 53C-0741	Over Verdugo Flood Control	Local, NRHP-eligible	2S2[2]
Southern Pacific Rail Depot	400 W. Cerritos Avenue	Local, NRHP-listed	1S
Seeley's Building	1800 S. Brand Boulevard	Local	N/A

[1] OHP Status Code 1S: Individually listed in the NRHP by the Keeper. Listed in the CRHR.

[2] OHP Status Code 2S2: Individually determined eligible for NRHP by consensus through Section 106 process. Listed in the CRHR.

In addition, the City of Glendale has completed the North Glendale Historic Context (2012) and an associated Community Plan and is in the process of completing the South Glendale Community Plan and Historic Context.

Burbank (Frame 7)

There are eight officially designated historic resources in the city, and the City of Glendale maintains a list of potentially significant properties. The city's historic preservation ordinance provides for the City of Glendale Planning Department to maintain this inventory of potentially significant historic places, structures, and improvements. Only one designated historic resource is located in the project study area, and it is listed in the table below.

Table 3.4-6. City of Burbank Historic Resources within 1 mile of the LA River

Name	Address/Location	Designation	OHP Status Code
Bob's Big Boy	4211 Riverside Drive	N/A	7P[1]

[1] OHP Status Code 7P: State Point of Historical Interest that does not meet CR criteria.

Of the remaining ten cities in the project study area, all lacked a historic preservation element in their general plans (with Compton including a historic preservation element in their *Draft Compton General Plan 2030*). The Cities of Bell Gardens, Commerce, Huntington Park, Maywood, and South Gate all have historic preservation ordinances, but only Huntington Park has dedicated preservation

staff or a commission. The Cities of Bell Gardens, Commerce, and Huntington Park have designated historical resources, or conducted a survey of local historical resources, but none of those listed are located in the project study area. These results have been provided in Table 3.4-7 below.

Table 3.4-7. Cities With No Historical Resources within 1 mile of the LA River

City	Historic Preservation Element/Plan	Historic Preservation Ordinance	Historic Preservation Staff or Commission	Historic Register or Survey
Bell Gardens	No	Yes	No	Yes. No resources in the project study area.
Carson	No	No	No	No
Commerce	No	Yes	No	Yes. No resources in the project study area.
Compton	Yes * draft general plan	No	No	No
Downey	No	No	No	No
Huntington Park	No	Yes	Yes	Yes. No resources in the project study area.
Lynwood	No	No	No	No
Maywood	No	Yes	No	No
Paramount	No	No	No	No
South Gate	No	Yes	No	No

3.4.4 Impact Analysis

3.4.4.1 Methods

This analysis qualitatively evaluates the impacts of the proposed Project on existing aesthetic resources as a result of the construction and operations of the proposed Project. The analysis determines if there is the potential for impacts on existing resources in the 18 jurisdictions in the study area during construction and operation. Data from jurisdictions' respective general plans, design guidelines, and municipal codes, as well as site visits to the LA River in March 2020, were used to evaluate impacts on scenic vistas and resources, visual quality, and light and glare. Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories, and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately.

3.4.4.2 Thresholds of Significance

3.4(a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

3.4(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

3.4(c) Disturb any human remains, including those interred outside of dedicated cemeteries.

3.4.4.3 Impacts and Mitigation Measures

Impact 3.4(a): Would the proposed Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would involve site disturbance, movement of construction equipment, and import and export of materials to build facilities such as cafés, pavilions, restrooms, multi-use trails, art/performance spaces. Construction would generally occur along the right-of-way (ROW) and include an area of approximately 3 acres (for Common Elements) or up to 40 acres (for the Multi-Use Trails and Access Gateways) and last 10 to 20 months, respectively. Ground disturbance would include site clearing and excavation. Excavation would be to a maximum depth of 7 feet below ground surface (bgs) to construct pavilions and install footings for bollards, lighting, or fences and generally 2 feet bgs for trails.

Depending on the specific design and location of the project, as well as the type of cultural resource(s) that could be located on or near the site, construction of the Typical Projects may cause a substantial adverse change in historical resources in or near the Typical Project area. As discussed in Section 3.4.3.2, *Resources Identified in the Project Study Area,* segments of the Channel have been found eligible as contributing features of a potential historic district that includes the 51-mile-long Channel; character-defining features of the Channel that have been called out specifically are the parapet paved berms, trapezoidal channels, and central trench at the bottom. New construction has the potential to cause ground disturbance, demolish historical resources or alter character-defining features of historical resources, and/or make changes to the setting of historical resources. These factors may result in an adverse change to a significant historical resource, resulting in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

For later activities under the *2020 LA River Master Plan*, during design and prior to construction, the implementing agency will conduct a cultural resources assessment to determine the potential for presence of historical/built, archaeological, and tribal cultural resources.

As part of this assessment, the implementing agency will identify sensitive historical resources that physically may be outside the construction area, but could be affected by changes in noise levels or alterations to visual continuity, if these features are important to the significance of the historical resources. During the design phase of the Project, the implementing agency will conduct a records search/literature review. The records search will be conducted at the South Coastal Central Information Center and will cover a quarter-mile around the location-specific project study area. The records search will provide background information on cultural surveys and site identification and will be supplemented by reviewing the maps/tables of identified historical resources. For the literature review, additional background research conducted online and in person will be conducted.

Required information sources will include, at a minimum:

- NRHP National Park Service online website (https://www.nps.gov/subjects/nationalregister/database-research.htm and https://www.nps.gov/subjects/nationalregister/database-research.htm)
- Office of Historic Preservation (https://ohp.parks.ca.gov/?page_id=30338)
    - California Historical Landmarks
    - California Points of Historical Interest
    - California Historical Resource Inventory System
    - California Register of Historical Resources (CRHR)
- Local historical societies
- Local registers and general plans
- Sacred Land File Search at Native American Heritage Commission

Supplemental information sources that could be consulted include:

- Sanborn maps (available at the Los Angeles Public Library)
- Historic U.S. Geological Survey (USGS) quadrangles
- Historic aerial maps
- Ethnographic data
- Surface geological data

In addition to conducting literature review and searches, the implementing agency tiering from the PEIR will coordinate with the applicable California Native American Tribe, to verify the presence/absence of tribal cultural resources (TCRs) in the API. The California Native American

Tribe will identify TCRs and provide substantial documentation of the TCR per PRC Section 5024.1. All TCR documentation and information obtained during consultation will be confidential and not included in public documents.

If, following the records search, literature review, sacred land file search, and coordination with the tribe, it is determined that there are no historical/built, archaeological, and TCRs present in the API, then the impact would be less than significant and no further action is required.

If, following the records search, literature review, sacred land file search, and coordination with the tribe, it is determined that historical/built, archaeological, or TCRs are present in the API, then Mitigation Measure CR-1b would be implemented.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

- **Conduct Field Survey of API:** The implementing agency will hire qualified architectural historians and/or historians and archaeologists to physically inspect the API, verify the presence or absence of known historical resources, and document potentially historical resources. This will be accomplished through intensive pedestrian surveys, photo-documentation, and written notes, at a minimum.
- **Record and Identify Cultural Resources:** Each historical resource and archaeological site that has been previously identified will be recorded with an updated California Natural Resources Agency – Department of Parks and Recreation DPR form (Continuation Sheet, DPR 523-L). Newly identified historical resources and archaeological sites will be recorded on DPR 523A (Primary Record), DPR 523B (Building, Structure, Object Record), and DPR 523J (Location Map), with recordation on DPR 523D (District Record), DPR 523E (Linear Feature Record), and DPR 523L (Continuation Sheet) completed as appropriate. DPR forms will be completed by a qualified architectural historian, historian, or archaeologist.
- **Prepare Technical Report and Evaluate Identified Resources**: The report will include the background, research, methods, results, and evaluation of any identified cultural resources. All cultural resources identified in the project area will be evaluated for their inclusion in the CRHR and, if determined to be historical resources (eligible), then a determination of impacts would occur. Each technical report, which includes proposed subsurface work elements, will need to include a buried site sensitivity analysis, which assesses the potential for the location-specific subsequent project study area to contain buried cultural deposits. For areas determined to be sensitive for buried deposits, archaeological monitoring will be required.

If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would not* cause an adverse change in the significance of a significant historical resource, then the impact would be less than significant, and no further action is required.

If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would* cause an adverse change in the significance of a significant historical resource, then the impact would be significant and Mitigation Measures CR-2a through CR-2c will be implemented.

Mitigation Measure CR-2a: Avoid or Relocate Historical/Built Resources.

If significant impacts are identified for historical/built resources after completing Mitigation Measures CR-1a and CR-1b, the implementing agency will implement one of the following measures:

- **Avoidance/Redesign:** Avoid historical resource impacts during the design process and require redesign of the Project to avoid impacts.
- **Relocation**: If a historical resource cannot be avoided but can be relocated (if location, setting, and association are not important aspects of its integrity or support the significance of the resource), then the following actions are required:
    - Contact local historical societies, community resource groups, and/or local groups with an interest in the type and/or style of the historical resource who may have a suitable site for relocation.
    - Contact specialized movers of historical resources to develop a plan for preparing of and moving of the resource from its original location and for conducting groundwork necessary for the transplanting of the resource to the new location.
    - Conduct photo documentation of the resource in the original and new locations.

Mitigation Measure CR-2b: Prepare and Implement a Historical Resources Mitigation Plan during Construction.

If historical resources are present in the API and cannot be avoided in the design stages, nor relocated, then the implementing agency will prepare a Historical Resources Mitigation Plan (HRMP) for Construction. The following actions are required in the preparation of the HRMP:

- Survey or photographic documentation of the historical resource before construction begins as a baseline condition for assessing damage
- Preparation of protocols for the documentation of inadvertent damage, should it occur, as well as notification to the appropriate owner and/or jurisdiction
- Strategy for repair of historical resource in accordance with the SOI's Standards

Mitigation Measure CR-2c: Prepare Noise and Vibration Plan for Construction.

If noise and/or vibration are considered a potential significant impact of construction, then instrumentation that will capture those impacts will be installed at a suitable location, as necessary (i.e., noise and/or vibration monitors), and qualified preservation architects and/or historic preservation specialists will review the feedback from those instruments on a regular basis. These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, or inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A preconstruction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially affected features. Instrumentation may be physically attached to building/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, preconstruction noise surveys will establish base levels of noise if a quiet setting is a

character-defining features of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds will be determined on a case-to-case basis. If impacts are discovered due to noise and vibration, then a strategy for repair in accordance with the Standards would be required. See Mitigation Measure CR-2b.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Activities related to the operation of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects have the potential to cause substantial adverse change in the significance of historical resources. For example, impacts could include damage to historical resources due to water and/or waste leakages from hygiene facilities, restrooms, and/or water features; if historical resources are integrated into the design of the proposed Project, increased foot traffic could affect the integrity of material. Depending on the project design and location, presence or absence of historical resources, and the character-defining features of the historical resource, the impact could be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure CR-3a: Avoid Impacts on Historical/Built Resources During Operations.

If historical resources are identified within a project API during design of subsequent projects, indirect effects during operations will be avoided, including redesigning project elements. Specific steps to be taken during operations include but are not limited to the following:

- Secure resource from accessibility or visitation.
- Prepare an operations and maintenance/restoration plan to avoid degradation of resource. Identify a baseline of conditions (e.g., photo-documentation, written documentation) that is stored with the appropriate jurisdiction (e.g., Los Angeles County or other implementing agency) in the plan, with a requirement that the implementing agency or project proponent conduct visual inspection of the historical resource at least twice a year. The baseline condition report must be supplemented with yearly photographs, yearly updates on condition, and any additional reports related to vandalism, accidental damage due to humans or animals, and damage due to weather or earthquakes.

Mitigation Measure CR-3b: Prepare and Implement Historical Resources Mitigation Plan for Operations.

If historical resources are present in the API and potential effects cannot be avoided in the design stages or the resource cannot be relocated, then the implementing agency will prepare an HRMP for operations. The following actions will be implemented for the HRMP.

- Survey or photographic documentation of the historical resource will be completed before construction begins as a baseline condition for assessing damage.
- Protocols for the documentation of inadvertent damage, should it occur, will be prepared, and notification made to the appropriate owner and/or jurisdiction.
- Strategy for repair of historical resource will be developed in accordance with the SOI's Standards.

Mitigation Measure CR-3c: Prepare Noise and Vibration Plan for Operations.

If it is determined that noise and/or vibration are considered a potential significant impact of operations, then instrumentation that will capture those impacts will be installed (i.e., noise and/or vibration monitors), and the feedback from those instruments will be reviewed on a regular basis by qualified preservation architects and/or historic preservation specialists.

These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, or inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A preconstruction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially affected features. Instrumentation may be physically attached to buildings/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, preconstruction noise surveys will establish base levels of noise if a quiet setting is a character-defining feature of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds would be determined on a case-to-case basis. If impacts are discovered, then a strategy would be required for repair in accordance with the Standards. See Mitigation Measure CR-2b.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOPs only. Each of the KOPs is analyzed separately where differences in impacts exist; KOPs with similar impacts are grouped together. Appendix E presents a summary table of potential construction and operations impacts under each KOP category.

KOP Categories 1 through 6

Construction

Construction activities for KOP Categories 1 through 6 would be similar and involve a variety of tasks and features, ranging from trail modifications to development of facilities, habitat corridors, flood management infrastructure, channel access ramps, affordable housing, and solar fields anywhere in the project study area. Design components of these KOPs may cause a substantial adverse change to historical resources in or near the project area. New construction has the

potential to cause ground disturbance, demolish historical resources, or alter character-defining features of historical resources and/or make changes to the setting of historical resources. These factors may result in an adverse change in the significance of an historical resource. Therefore, construction of KOP Categories 1 through 6 could result in potentially significant impacts associated with ground disturbance and changes to the setting, as well as alteration or demolition of historical resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

Mitigation Measure CR-2a: Avoid or Relocate Historical/Built Resources.

Mitigation Measure CR-2b: Prepare and Implement Historical Resources Mitigation Plan during Construction.

Mitigation Measure CR-2c: Prepare Noise and Vibration Plan for Construction.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Potential impacts from operation of the design components under the KOPs would vary depending on the specific design component and its intended function, as well as on the specific location, including whether it is in-channel or off-channel. The specific location and design for these components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description,* operation of the KOPs could result in direct and indirect impacts on historical resources, including physical damage to historical resources within or along the proposed trails, due to intentional (i.e., vandalism) or inadvertent (i.e., accidental collision) actions. For example, the introduction of an amphitheater could affect the integrity of a sensitive historical resource due to the increase in noise, vibration, light, and/or glare. Considering the KOPs include a range of flood management, recreation, and ecological functions, and would involve landscapes, parks, and recreational facilities, operation of the KOPs could include such impacts as ground disturbance and changes to the setting, as well as alteration or demolition of historical resources.

These activities also could result in exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded significant archaeological resources. Other KOP operations that include off-channel water features, floodplain storage, and

wetlands could expose previously undocumented surface-exposed or buried cultural resources through stream or off-channel degradation processes and water erosional processes related to floodplain storage activities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-3a: Avoid Impacts on Historical/Built Resources During Operations.

Mitigation Measure CR-3b: Prepare and Implement Historical Resources Mitigation Plan for Operations.

Mitigation Measure CR-3c: Prepare Noise and Vibration Plan for Operations.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the proposed Project's nine objectives. These would include Typical Projects that would be implemented in specific spacing along the river and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together comprise the entirety of the *2020 LA River Master Plan*. As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large project (150+ acres/10+ miles in size).

Construction

Construction impacts would be the same as for the *2020 LA River Master Plan* KOP categories. Some subsequent projects would cover more area than others, but the same general construction equipment and activities would be involved (e.g., the use of backhoes, trucks, hand-held power equipment, generators). As noted, some subsequent projects would be larger than others and include a wide variety of design components. Similar to the reasons identified above for the Typical Projects, the location, design details, and construction phasing of subsequent projects under the *2020 LA River Master Plan* are not known. Therefore, it is possible that construction activities could result in an adverse change to a significant historical resource, resulting in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

Mitigation Measure CR-2a: Avoid or Relocate Historical/Built Resources.

Mitigation Measure CR-2b: Prepare and Implement Historical Resources Mitigation Plan during Construction.

Mitigation Measure CR-2c: Prepare Noise and Vibration Plan for Construction.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

The operations impacts for the *2020 LA River Master Plan* would be the same as for Typical Projects and KOPs described above. When constructed and operational, the 107 projects would include a range of flood management, recreation, and ecological functions, and would involve landscapes, parks, and recreational facilities, and could include such impacts as ground disturbance and changes to the setting, as well as alteration or demolition of historical resources. Activities related to these 107 projects have the potential to cause a substantial adverse change in the significance of historical resources, including damage to historical resources; if historical resources are integrated into the design of the Project, then increased foot traffic could affect the integrity of material. Therefore, the impact could be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-3a: Avoid Impacts on Historical/Built Resources During Operations.

Mitigation Measure CR-3b: Prepare and Implement Historical Resources Mitigation Plan for Operations.

Mitigation Measure CR-3c: Prepare Noise and Vibration Plan for Operations.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.4(b): Would the proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Typical Projects

Construction

Construction of the Typical Projects would generally involve site disturbance, movement of construction equipment, and import and export of materials. Construction would occur along the ROW and include an area of approximately 3 acres (for Common Elements) or up to 40 acres (for the Multi-Use Trails and Access Gateways) and last about 10 to 20 months, respectively. Ground disturbance would include site clearing and excavation. Excavation would be to a maximum depth of 7 feet bgs to construct pavilions and install footings for bollards, lighting, or fences, and generally 2 feet bgs for trails. Previously recorded or unrecorded CRHR-eligible archaeological resources could be present within the API of subsequent projects. Therefore, the construction of the Typical Projects could destroy, remove, disturb, and alter surface-exposed and buried archaeological resources, resulting in an adverse change in the significance of the resource.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

If it is determined that the Project would cause an adverse change to a significant historical/built archaeological resource or TCR, then the impact would be significant, and the following mitigation measures will be implemented in the order detailed below.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

The implementing agency will retain a qualified archaeologist defined as an archaeologist who meets the SOI's Standards for professional archaeology to carry out all mitigation measures related to prehistoric and historic period archaeological resources. The qualified archaeologist will be the subsequent project's Principal Investigator and will oversee and direct all archaeologists working on the subsequent project. For TCRs, a Native American Monitor, as determined by the appropriate Native American Tribe(s) during consultation, will coordinate with the Qualified Archaeologist as needed for mitigation measure implementation.

Mitigation Measure CR-4b: Avoid Significant Archaeological Sites or TCRs through Establishment of Environmentally Sensitive Areas.

If significant archaeological sites or TCRs are identified in the API, avoidance, where feasible, is the preferred method of treatment. Impacts on significant archaeological resources can be

avoided through establishing fencing around the known boundaries of these resources and delineating these locations as Environmentally Sensitive Areas (ESAs). Preservation in place of archaeological materials will maintain the critical relationship between archaeological artifacts and their archaeological context. Additionally, should sacred objects or objects of religious importance to Native American groups be identified, preservation in place avoids conflicts with traditional values of groups who ascribe meaning to these resources.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

If avoidance is not feasible, and if the subsequent project-related ground disturbance is anticipated to occur at archaeological sites identified as a result of the archaeological fieldwork and inventory efforts, an archaeologist will be present to monitor ground-disturbing activity. If ground-disturbing activities are to proceed at archaeological sites that contain Native American cultural materials, a Native American monitor will be retained, in addition to an archaeological monitor. Prior to the commencement of fieldwork, an Archaeological Monitoring Plan (AMP) will be developed to guide archaeological monitoring work during ground-disturbing activities.

The AMP will be prepared and the Native American Consulting Tribes will be provided the opportunity to review and provide comments. The AMP will outline the requirement to conduct Cultural and Tribal Cultural Resource Awareness Training for construction workers and the qualifications necessary for archaeological monitors. The plan must also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP must include roles and responsibilities for cultural resources staff and contact information for the Archaeological Principal Investigator, archaeological and Native American monitors, and appropriate management staff.

The AMP must detail monitoring procedures, discovery protocols, and general procedures for documenting and recovering archaeological materials, artifact identification, repository institution identification, associated repository fees, guidelines for preparing the archaeological monitoring, and the mitigation final report. The AMP must also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present.

The AMP must require attendance by construction personnel at a preconstruction meeting led by a Qualified Principal Investigator/Project Archaeologist. The Principal Investigator/Project Archaeologist will explain the likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (who to call, construction diversion away from the find, etc.). The AMP must include a sample proposed letter regarding transfer of salvaged materials to an appropriate museum curation facility, a sample daily monitoring report form, and recordation and analysis forms for all other pertinent archaeological resources.

The Native American monitor should be affiliated with a local Native American tribe. At a minimum, the archaeological monitor will meet the Society for California Archaeology professional qualification standards for an archaeological crew leader and will work under the direction of an individual that meets the Secretary of the Interior's Standards and Guidelines for Archaeology.

If unanticipated discoveries are made during archaeological monitoring, then the unanticipated discoveries protocol described in Mitigation Measure CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consultation with the lead agency and Native American representatives (if the find is Native American in origin), development of a mitigation plan, and potential development and implementation of a data recovery plan. In the event of an unanticipated discovery of human remains, the archaeological monitor will follow the HSC 7050.5 (Mitigation Measure CR-7), described in Section 3.4.2.2, *Regulatory*.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

If an existing archaeological resource cannot be avoided and has not been evaluated for the CRHR, then evaluation, testing excavations, recovery, and treatment will be needed to reduce the impacts on the resource. The implementing agency will develop an Archaeological Evaluation and Treatment Plan (AETP) that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. Implementation of such a plan may include mechanical and/or manual excavations to provide data on the cultural constituents at the site and the depositional context of such materials (if found to exist). These data can be used to determine the integrity of the site and make a formal evaluation based on the eligibility criteria set forth in CEQA and Section 106 of the National Historic Preservation Act for inclusion in the CRHR and NRHP. The AETP should define the parameters of archaeological testing at the site and the extent of excavation and analysis of any materials recovered. The AETP must also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the AETP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment will be completed. The AETP will be approved by the implementing agency and should involve consultation and review by interested Native American groups, if applicable.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

If buried cultural resources of potential significance are discovered inadvertently during ground-disturbing activities, work will be temporarily halted in the area and within 50 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the implementing agency. If the find is prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest and concern regarding the proposed Project will be undertaken.

The implementing agency's Principal Investigator will notify the implementing agency to discuss the significance determination and will also submit a letter indicating next steps required. If the discovery is determined to be not significant in consultation with the implementing agency, work will be permitted to continue in the area. If, in consultation with the implementing agency, a discovery is determined to be significant, the implementing agency will prepare a mitigation plan to be carried out in accordance with state guidelines. If the resource cannot be avoided, the implementing agency will develop a data recovery plan to ensure collection of sufficient information to address archaeological and historical-period research questions, with results presented in a technical report describing field methods, materials collected, and conclusions. The qualified archaeologist will treat recovered items in accordance with current professional

standards by properly proveniencing (i.e., establishing the *in-situ* location at the time of archaeological discovery), cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the SOI's Standards, as promulgated in 36 CFR 79.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Operational activities related to the Common Elements and Multi-Use Trails and Access Gateways Typical Projects could include new single-story structures, such as pavilions and cafes, and restrooms, or lower-profile infrastructure, such as multi-use trails, signs, lighting, benches, and other associated recreational facilities that could introduce activities that may directly affect archaeological resources. Operation elements, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users near new facilities associated with the Typical Projects near a CRHR-eligible archaeological resource could directly affect the resources either through exposure and removal from unanticipated disturbance or increased looting potential due to increased use, and otherwise negatively affect the integrity of the resource.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

In addition, apply the following mitigation measure.

Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas During Operations.

The implementing agency will avoid significant archaeological resources through establishment of ESAs specific to Typical Projects' operations. If physical portions of previously identified archaeological resources are left in place after construction, then ESAs will be established to protect any remaining physical portions of the resource from further direct or indirect effects that may result as part of operations of Typical Projects. The implementing agency will establish ESAs in coordination and consultation with Native American Tribes, as necessary. As part of the operational avoidance activities, the implementing agency will:

- Prepare an operations and maintenance plan to minimize degradation of archaeological resources still extant in the API.
- Design and develop interpretive exhibits to provide education and understanding of the importance to avoid the resource.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

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KOP Categories 1 through 6

Construction

Similar to the Typical Projects, construction of the KOPs would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in an adverse effect on a significant archaeological resource. Impacts may be direct through proposed ground disturbance that could destroy, remove, disturb, or alter surface-exposed and buried CRHR-eligible archaeological resources.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

Mitigation Measure CR-4b: Avoid Significant Archaeological or TCRs Sites through Establishment of Environmentally Sensitive Areas.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Potential impacts from operation of the design components under the KOPs would vary depending on the specific component and its intended function, as well as on the specific location, including in-

channel or off-channel. The specific location and design for these components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description*, and under the construction section above, the KOPs include a variety of construction scenarios that include ground-disturbing activities. The operation of the KOPs could result in significant impacts on CRHR-eligible archaeological resources, which include increased erosion along proposed trail alignments, facilities, and recreational areas due to increased public use, as well as increased potential for looting. These activities could result in exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded archaeological resources. Other KOP operations that include off-channel water features and floodplain storage and wetlands could expose previously undocumented surface-exposed or archaeological resources through stream or off-channel degradation processes and water erosional processes related to floodplain storage activities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas During Operations.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

The construction impacts of the 107 projects for the overall *2020 LA River Master Plan* implementation would be similar to impacts for the KOPs. Some projects would cover more area than others, but the same general construction equipment and activities would be involved (i.e., the use of backhoes, trucks, hand-held power equipment, generators, etc.). As noted, the projects are expected to be constructed over a 25-year period. Therefore, it is possible that construction activities could result in an adverse change to the significance of an archaeological resource, resulting in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

Mitigation Measure CR-4b: Avoid Significant Archaeological or TCRs Sites through Establishment of Environmentally Sensitive Areas.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

The operations impacts of the 107 projects under the *2020 LA River Master Plan* would be similar to the impacts of the KOPs, which could result in significant impacts on CRHR-eligible archaeological resources. These impacts include increased erosion along proposed trail alignments, facilities, and recreational areas, due to increased public use and increased potential for looting. These activities could result in exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded archaeological resources. Other KOP operations, which include off-channel water features and floodplain storage and wetlands, could expose previously undocumented surface-exposed or archaeological resources through stream or off-channel degradation processes and water erosional processes related to floodplain storage activities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas During Operations.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.4(c): Would the proposed Project disturb any human remains, including those interred outside of dedicated cemeteries?

Typical Projects

Construction

Existing known cemeteries are not anticipated to be affected under any of the proposed project scenarios for the Typical Projects. However, there is potential for previously unknown prehistoric to historic period burials and unmarked cemeteries to be located in the project study area. Holocene-aged alluvial deposits, which could contain burials and previously unknown human remains, are located in the project study area. This is not uncommon where burials and human remains are located concurrently with certain archaeological site types; therefore, areas with increased sensitivity for containing archaeological deposits maintain an elevated sensitivity for containing human remains.

Construction of the Typical Projects would generally involve site disturbance, movement of construction equipment, and import and export of materials. Construction would occur along the ROW and include an area of approximately 3 acres (for Common Elements) or up to 40 acres (for the Multi-Use Trails and Access Gateways). Ground disturbance would include site clearing and excavation up to a maximum depth of 7 feet bgs for pavilions, footings for bollards, lighting, or fences, and generally 2 feet bgs for trails. Any disturbance of human remains is considered significant. Therefore, construction of the Typical Projects could result in potentially significant impacts on human remains.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure CR-7: Avoid or Minimize Impacts on Human Remains and Associated or Unassociated Funerary Objects.

If human remains are found, no further disturbance will occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98 (State of California Health and Safety Code Section 7050.5). In the event of an unanticipated discovery of human remains, all work within 50 feet of the find will be halted until the remains have been evaluated by the county coroner, and appropriate action taken in coordination with the NAHC, in accordance with Section 7050.5 of the California Health and Safety Code or, if the remains are Native American, Section 5097.98 of the PRC. If the human remains are determined to be prehistoric, the county coroner will notify the NAHC, which will determine and notify a Most Likely Descendant. The Most Likely Descendant will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Operational activities related to the Typical Projects could introduce or increase public use activities, such as increased erosion along proposed trail alignments, facilities, and recreational areas. Additionally, introducing recreationists and trail users near new facilities associated with the Typical Projects near buried human remains could indirectly affect the resources either through exposure and removal from unanticipated disturbance or increased looting potential due to increased use and could otherwise negatively affect the integrity of the resource.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure CR-7: Avoid or Minimize Impacts on Human Remains and Associated or Unassociated Funerary Objects.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

Similar to the Typical Projects, construction of the KOPs would generally involve site disturbance, movement of construction equipment, use of construction staging areas, and import and export of materials, all of which could disturb human remains, resulting in significant impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure CR-7: Avoid or Minimize Impacts on Human Remains and Associated or Unassociated Funerary Objects.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Similar to the Typical Projects, potential impacts from operation of the design components under the KOPs could result in increased human activity, landscape use, and channel erosion, which could result in potentially significant impacts on human remains. Operational activities related to the Typical Projects could introduce or increase public use activities, leading to increased erosion along proposed trail alignments, facilities, and recreational areas. Additionally, introducing recreationists and trail users near new facilities associated with the KOPs near buried human remains could indirectly affect the resources, either through exposure and removal from unanticipated disturbance, or increased looting potential due to increased use, and could otherwise negatively affect the integrity of the resource.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas During Operations.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

Similar to the KOPs, construction of all 107 projects under the *2020 LA River Master Plan* would generally involve site disturbance, movement of construction equipment, use of construction staging areas, and import and export of materials, all of which could disturb human remains, resulting in significant impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-1a: Conduct a Cultural Resources Assessment for Historical/Built Archaeological and Tribal Cultural Resources to Determine the Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological and Tribal Cultural Resources, and Implement Findings.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

Mitigation Measure CR-4b: Avoid Significant Archaeological or TCRs Sites through Establishment of Environmentally Sensitive Areas.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Mitigation Measure CR-7: Avoid or Minimize Impacts on Human Remains and Associated or Unassociated Funerary Objects.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Similar to the KOPs, potential impacts from operation of the design components for all 107 projects under the *2020 LA River Master Plan* could result in increased human activity, landscape use, and channel erosion, which could result in potentially significant impacts on human remains. Operational activities related to the 107 projects could introduce or increase public use activities, leading to increased erosion along proposed trail alignments, facilities, and recreational areas. Additionally, introducing recreationists and trail users near new facilities associated with the projects near buried human remains could indirectly affect the resources either through exposure and removal from unanticipated disturbance or increased looting potential due to the increased use and could otherwise negatively affect the integrity of the resource.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Mitigation Measure CR-6: Avoid Archaeological Resources by Establishing Environmentally Sensitive Areas During Operations.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on cultural resources would be the greater Los Angeles region, which is rich with historic and archaeological resources. Any project that adversely affects a historic and archaeological resource in this geographic area would contribute to a cumulative impact. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on cultural resources, if, in combination with other projects within the greater Los Angeles region, it would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5; cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or disturbance of human remains, including those interred outside of dedicated cemeteries.

Cumulative Condition

Historic and archaeological resources are important parts of the region's identity. These resources are nonrenewable and irreplaceable. Cumulative land use and transportation projects located in the Southern California region would have the potential to result in a cumulative impact associated with the loss of cultural resources. Due to the regional scale of the cumulative plans and programs in the Los Angeles region and the potentially large number of cultural resources that could be disturbed as a result of their implementation, a significant cumulative impact would result through the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (SCAG 2020). These projects are regulated by federal, state, and local regulations, including PRC Section 5097, the Mills Act, State Health and Safety Code 18950–18962, and the SOI's *Standards for Rehabilitation and Standards for the Treatment of Historic Properties*, and they are required to comply with the regulations. City, County, and regional goals and policies also aim to preserve and protect significant cultural resources to the extent practicable. Even with regulations in place, individual historical resources could still be affected or degraded (e.g., from demolition, destruction, alteration, structural relocation) as a result of new private or public development or redevelopment and implementation of land use strategies under cumulative plans and projects (SCAG 2020). Notification and inventory of archaeological resources, implementation of an unanticipated discovery plan, and compliance with the PRC and the California Health and Safety Code mandatory processes that are required to be followed in the event of a discovery of any human remains would help mitigate potentially significant impacts, but they are expected to remain significant when considered cumulatively due to the large number of archaeological resources within the greater Los Angeles region and the likelihood of yielding undiscovered human remains (SCAG 2020). Therefore, a cumulative condition exists for cultural resources.

Contribution of the Project to Cumulative Impacts

The proposed Project could result in impacts on historic resources or archaeological resources (e.g., uncover buried artifacts or features). Such resources include, but are not limited to, prehistoric stone tools, hearths, and midden soils; historic-period refuse deposits, privies, building foundations, basements, and structural materials; and historic-period infrastructure, such as water and electrical

conveyance systems and utility vaults. Deeper excavation may be required for utility relocations and trenching under the *2020 LA River Master Plan*. In most cases, a project that follows the SOI's standards for an affected historical resource would result in a less-than-significant impact on that historical resource, pursuant to CEQA Guidelines Section 15064.5. However, although uncommon, there are cases when the SOI's standards cannot be followed or a substantial material change in the significance of a historical or archaeological resource occurs even after following SOI's standards. Considering the existing significant cumulative impacts for cultural resources in the greater Los Angeles region, it would be reasonable to infer that the proposed Project could result in localized significant impacts on cultural resources. Mitigation measures would be implemented to reduce the Project's individual impacts (Mitigation Measures CR-1a-b, CR-2a-c, CR-3a-c, CR-4a-d, CR-5, CR-6, and CR-7). However, the impacts would remain significant and unavoidable despite implementation of mitigation. Therefore, the proposed Project's contribution to cumulative cultural resources impacts is considerable.

Section 3.5
Energy

3.5.1 Introduction

This section describes the geographic and regulatory setting for energy, discusses energy-consumption-related impacts (i.e., natural gas, electricity, and transportation fuels) that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of those impacts. The analysis assesses the proposed Project's estimated consumption of energy resources during construction and operation and evaluates the proposed Project's consistency with State and local plans for renewable energy and energy efficiency. Where needed, this section identifies feasible mitigation measures that would reduce or avoid any significant impacts.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.5.2 Setting

3.5.2.1 Geographic

Regional Setting

Energy usage is typically quantified using the British thermal unit (BTU).[1] Because other units of energy can be converted into equivalent BTU, the BTU is used as a basis for comparing the consumption of different types of energy resources. California has a diverse portfolio of energy resources. In 2018, the State ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in conventional hydroelectric power generation. California is also the seventh-largest producer of crude oil in the nation, and, as of January 2019, it ranked third in oil refining capacity. Other energy production sources in the State include natural gas, nuclear electric power, and biofuels (U.S. Energy Information Administration 2020a).

[1] A *British thermal unit* (BTU) is a standard unit of energy measure, which is the quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit at or near the temperature at which water has its greatest density (39.2 degrees Fahrenheit). A *therm* is a unit of heat equivalent to 100,000 BTUs.

Energy efficiency efforts have dramatically reduced statewide per capita energy consumption relative to historical averages. While California consumed approximately 7,881 trillion BTUs of energy in 2017, which ranked second in the country, the per capita energy consumption (i.e., total energy consumption divided by the population) in 2017 was 200 million BTU, which ranked 48th among all states. Natural gas accounted for the majority of energy consumption (28 percent), followed by motor gasoline (22 percent), distillate and jet fuel (16 percent), interstate electricity (8 percent), hydroelectric power and other renewables (12 percent), biomass (3 percent), and a variety of other sources. The transportation sector consumed the highest quantity of energy (40 percent), followed by the industrial and commercial sectors. (U.S. Energy Information Administration 2020a.)

The project study area is located within a highly urbanized area of Los Angeles County. The energy consumption of electricity, natural gas, and transportation fuels (i.e., gasoline and diesel fuel) in California and the County in 2018 is shown in Table 3.5-1.

Table 3.5-1. Energy Consumption in California and Los Angeles County in 2018

Energy Resource	California Consumption		Los Angeles County Consumption		
	Mass	Million BTUs	Mass	Million BTUs	Percent of Total California Consumption
Electricity	255,224 GWh	870,824,288[a]	68,486 GWh	233,674,870[a]	27%
Natural Gas	2,207.4 million therms	2,207,400,000[b]	2,921 million therms	292,144,664[b]	13%
Gasoline[c]	15,471 million gallons	1,698,282,612[d]	3,638 million gallons	399,350,536[d]	24%
Diesel Fuel[c]	1,777 million gallons	226,496,420[e]	253 million gallons	32,247,380[e]	14%

Source: California Energy Commission 2019, 2020; U.S. Energy Information Administration 2019, 2020b.

[a] Estimated based on conversion factor of 3,412,000,000 BTU per 1 Gigawatt-hour (GWh).

[b] Estimated based on conversion factor of 100,000 BTU per therm.

[c] Estimated fuel sales based on data obtained from retail transportation fueling stations in California by the California Energy Commission.

[d] Estimated based on conversion factor of 109,772 BTU per 1 gallon of gasoline.

[e] Estimated based on conversion factor of 127,460 BTU per 1 gallon of diesel.

BTU = British Thermal Unit

As shown in Table 3.5-1, Los Angeles County's consumption of electricity and natural gas made up approximately 27 and 13 percent, respectively of the State's consumption in 2018. During that year, the estimated gasoline and diesel fuel consumption in the County consisted of approximately 24 and 14 percent, respectively, of the State's fuel consumption.

Natural Gas

Natural gas throughout the project study area is provided almost exclusively by Southern California Gas Company (SoCalGas), with the City of Long Beach providing natural gas service to its residents and businesses from its publicly owned natural gas utility. Additionally, natural gas service in the City of Vernon is provided by both SoCalGas and the City of Vernon's own natural gas system. The

discussion below identifies the natural gas providers for all frames; where providers differ, select frames are described separately.

Frames 1 through 9

SoCalGas, Pacific Region, is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange, and storage services as well as procurement services to most retail core customers. As the nation's largest natural gas distribution utility, SoCalGas is responsible for providing energy to its 21.8 million consumers over a 24,000-square-mile service area throughout central and Southern California. The company maintains 5.9 million meters in more than 500 communities. SoCalGas is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery and electric generation customers in Southern California. As a public utility, SoCalGas is under the jurisdiction of federal and State regulatory agencies (SoCalGas 2020). Within the project study area, SoCalGas provides natural gas services to all the cities, with the exception of the City of Long Beach, and unincorporated County areas.

Aliso Canyon, located in Los Angeles County, is California's largest underground natural gas storage facility and has a total working capacity of 86 billion cubic feet of natural gas, or about 64 percent of SoCalGas' total storage capacity. On October 23, 2015, a natural gas leak in well SS25 was detected at the Aliso Canyon natural gas storage facility owned by SoCalGas. The leak was stopped on February 11, 2016, and well SS25 was permanently sealed on February 18, 2016 (SoCalGas 2018). Following the leak, the facility's maximum working gas storage level is limited to 23.6 billion cubic feet, about 28 percent of the facility's maximum capacity. Because of the limited maximum storage of Aliso Canyon, the company's natural gas supply has dropped significantly. Nevertheless, a study commissioned by the County found that the storage facility was not necessary to maintain electricity reliability in the area, as demand response, energy storage, and energy efficiency could alleviate market supply issues (EES Consulting, Inc. 2017).

SoCalGas' total natural gas consumption in 2018 was approximately 515,607,894 million BTUs (California Energy Commission 2020). According to the *2019 California Gas Report Supplement*, SoCalGas projects total gas demand to decline at an annual rate of 0.74 percent from 2018 to 2035 (California Gas and Electric Utilities 2018). The decline in throughput demand is due to modest economic growth, California Public Utilities Commission (CPUC)-mandated energy efficiency standards and programs, tighter building code standards (Title 24), renewable electricity goals, the decline in commercial and industrial demand, and conservation savings linked to Advanced Metering Infrastructure. Table 3.5-2 summarizes the projected annual gas requirements in Southern California through year 2035.

Table 3.5-2. Southern California Projected Annual Gas Requirements Through Year 2035

2020		2025		2030		2035	
MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day
2,566	2,566,000	2,422	2,422,000	2,310	2,310,000	2,313	2,313,000

Source: California Gas and Electric Utilities 2018.

Note: Assumes average temperature and normal hydro year.

BTU = British Thermal Unit; MMcf = million cubic feet

SoCalGas expects it will be able meet their forecasted demand with a combination of in- and out-of-state gas sources (California Gas and Electric Utilities 2018).

Frames 1 through 2

Within the City of Long Beach, the natural gas utility under the Energy Resources Department (formerly known as the Long Beach Oil & Gas Department) provides natural gas service to its residents and businesses. The publicly owned natural gas utility has been established since 1924 and has over 1,800 miles of gas pipelines (City of Long Beach 2020). Serving approximately 150,000 customers, Long Beach is the largest California municipal gas utility and the fifth largest municipal gas utility in the United States, with a service territory that includes the Cities of Long Beach and Signal Hill, and sections of surrounding communities including Lakewood, Bellflower, Compton, Seal Beach, Paramount, and Los Alamitos (California Gas and Electric Utilities 2018).

Long Beach currently receives approximately 5 percent of its gas supply from local production fields that are located within Long Beach's service territory, as well as offshore. The majority of Long Beach supplies are purchased at the California border, primarily from the southwestern U.S. As a wholesale customer, Long Beach receives intrastate transmission service for this gas from SoCalGas. (California Gas and Electric Utilities 2018)

Long Beach's total natural gas consumption in 2018 was approximately 8,830,055 million BTUs (California Energy Commission 2020). According to the *2019 California Gas Report Supplement*, Long Beach's gas use is expected to decline slightly from 9 billion cubic feet (Bcf) in 2017 to 8 Bcf by 2035 (California Gas and Electric Utilities 2018).[2] Table 3.5-3 summarizes the projected annual gas requirements in Southern California through year 2035.

Table 3.5-3. City of Long Beach Energy Resources Department Projected Annual Gas Requirements Through Year 2035

2020		2025		2030		2035	
MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day
23.8	23,800	24.0	24,000	24.4	24,400	24.7	24,700

Source: California Gas and Electric Utilities 2018.
Note: Assumes average temperature.
BTU = British Thermal Unit; MMcf = million cubic feet

Frame 4

Natural gas service in the City of Vernon is currently provided by both SoCalGas and the City of Vernon's own natural gas system. The City of Vernon's municipal gas service was initiated in 2005, and since that time there has been a gradual increase of commercial/industrial gas demand as customers within the city boundaries have left the SoCalGas retail system and interconnected with Vernon's municipal gas system (California Gas and Electric Utilities 2018). Both Vernon's gas system and the SoCalGas system comprise an extensive network of underground piping and above-ground meters that transport natural gas to customers in the city.

The City of Vernon's total natural gas consumption in 2018 was approximately 3,580,437 million BTUs (California Energy Commission 2020). The forecasted natural gas supply throughput in 2017

[2] 1 Bcf = 1.027 trillion BTU.

was at 8.6 Bcf and is anticipated to increase to 9.2 Bcf by 2035 as new customers are expected to request retail service from Vernon (California Gas and Electric Utilities 2018).

Electricity

Electricity throughout the project study area is provided almost exclusively by Southern California Edison (SCE), with City of Los Angeles Department of Water and Power (LADWP), City of Burbank Water and Power, City of Glendale Water and Power, and Vernon Public Utilities providing electricity to the Cities of Los Angeles, Burbank, Glendale, and Vernon, respectively. Accordingly, the frames where these cities are located are discussed separately.

Frames 1 through 9

Southern California Edison

As one of the nation's largest electric utilities, SCE provides electricity to approximately 15 million people in a 50,000-square-mile service area that includes portions of 15 counties and hundreds of cities and communities within Central, Coastal, and Southern California (Southern California Edison 2019a). In 2019, SCE's power system experienced a peak demand of 22,009 megawatts (MW), and the annual electricity sale to customers was approximately 84,654,000 megawatt-hours (MWh) (Edison International and Southern California Edison 2019). Within the project study area, SCE would be the retail seller of electricity to the Cities of Long Beach, Carson, Compton, Cudahy, Downey, Lynwood, Paramount, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, Maywood, and unincorporated County areas.

Under California's Renewables Portfolio Standard (RPS) program, all electricity retail sellers in the State must meet established renewable procurement targets in their retail electricity supply. The use of renewable energy sources by electricity retail sellers include wind, solar photovoltaic (PV), solar thermal, hydroelectricity, geothermal, and bioenergy. The RPS program was initially established in 2002 by Senate Bill (SB) 1078, which required that 20 percent of electricity retail sales must be served by renewable resources by 2017. The program was subsequently accelerated in 2015 with SB 350, which mandated a 50 percent RPS by 2030 and included interim annual RPS targets with 3-year compliance periods that also required 65 percent of RPS procurement to be derived from long-term contracts of 10 or more years. In 2018, SB 100 was signed into law, which increased the RPS to: (1) 50 percent of retail sales by 2026 (moved up by 4 years from SB 350), (2) 60 percent of retail sales by 2030, and (3) 100 percent of retail sales by 2045 (carbon-free goal for 2045). Thus, SCE would be required to meet the renewable procurement targets under the RPS program. SCE's energy resource mix used for electricity generation as of 2018 is shown in Table 3.5-4. As shown, renewable sources currently make up 36 percent of SCE's power mix, which is greater than the statewide power mix.

Table 3.5-4. SCE Energy Resources for Electricity Generation in 2018

Energy Resource	2018 SCE Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	36%	31%
Biomass and Biowaste	*1%*	*2%*
Geothermal	*8%*	*5%*
Eligible Hydroelectric	*1%*	*2%*
Solar	*13%*	*11%*
Wind	*13%*	*11%*
Coal	0%	3%
Large Hydroelectric	4%	11%
Natural Gas	17%	35%
Nuclear	6%	9%
Other	0%	<1%
Unspecified sources of power[b]	37%	11%
Total	100%	100%

Source: Southern California Edison 2019b.
[a] Percentages are estimated annually by the California Energy Commission.
[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

City of Los Angeles Department of Water and Power

LADWP's service territory covers a 465-square-mile area in Los Angeles and much of the Eastern Sierras in Owens Valley. LADWP supplies more than 26 million MWh of electricity per year for its 1.5 million residential and business customers. The department is responsible for the maintenance of over 10,000 miles of overhead distribution lines and underground distribution cables and 15,452 transmission towers. They also maintain 160 distributing stations, 21 receiving stations, and over 50,000 substructures. About 70 percent of the electricity in the City of Los Angeles is consumed by business and industry, with the remaining 30 percent by residential uses averaging about 500 kilowatt hours of usage per month (Los Angeles Department of Water and Power 2020). LADWP's total electricity consumption in 2018 was 22,078,000 MWh (California Energy Commission 2020). The energy resource mix used by LADWP for electricity generation as of 2018 is shown in Table 3.5-5. As shown, renewable sources currently make up 32 percent of SCE's power mix, which is greater than the statewide power mix. Within the project study area, LADWP provides power and electrical services to the City of Los Angeles.

Table 3.5-5. LADWP Energy Resources for Electricity Generation in 2018

Energy Resource	2018 LADWP Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	32%	31%
Biomass and Biowaste	*0%*	*2%*
Geothermal	*7%*	*5%*
Eligible Hydroelectric	*2%*	*2%*
Solar	*13%*	*11%*
Wind	*11%*	*11%*
Coal	18%	3%
Large Hydroelectric	3%	11%
Natural Gas	30%	35%
Nuclear	10%	9%
Other	0%	<1%
Unspecified sources of power[b]	6%	11%
Total	100%	100%

Source: Los Angeles Department of Water and Power 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

In the 2017 *Power Strategic Long-Term Resource Plan*, which serves as a comprehensive 20-year roadmap that guides the LADWP's Power System in its efforts to supply reliable electricity in an environmentally responsible and cost effective manner, a forecast of future growth in annual peak energy demand was prepared. LADWP's Load Forecast incorporates updates to reflect the latest load forecast, fuel price and projected renewable price forecasts, and other numerous modeling assumptions. A summary of the projected growth in annual peak energy demand for LADWP's service area through 2040 is shown in Table 3.5-6.

Table 3.5-6. LADWP Forecasted Growth in Annual Peak Energy Demand

Fiscal Year	Base Case Peak Demand (MW)	Growth Rate Base Year 2010–2011	One-in-Ten Park Demand (MW)
2021–2022	5,889	0.5%	6,423
2026–2027	6,129	0.7%	6,640
2036–2037	6,716	0.8%	7,288
2040–2041	6,998	0.8%	7,600

Source: Los Angeles Department of Water and Power 2017.
MW = megawatts

Frame 4

Vernon Public Utilities

Within the City of Vernon, Vernon Public Utilities (VPU) serves about 2,000 mainly commercial and industrial customers with electric sales of approximately 1,128 gigawatt-hours (GWh) annually and peak loads of approximately 184 MW in the summer and 174 MW in the winter. Large and small commercial and industrial load comprises 99 percent of VPU's demand and energy sales. The VPU

electric system has an annual average load factor of over 70 percent due to its predominantly industrial customer mix (Vernon Public Utilities 2018). VPU's total electricity consumption in 2018 was 1,025,571 MWh (California Energy Commission 2020).

The energy resource mix used by VPU for electricity generation as of 2018 is shown in Table 3.5-7. As shown, renewable sources currently make up 35 percent of VPU's power mix, which is greater than the statewide power mix.

Table 3.5-7. VPU Energy Resources for Electricity Generation in 2018

Energy Resource	2018 VPU Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	35%	31%
Biomass and Biowaste	*15%*	*2%*
Geothermal	*0%*	*5%*
Eligible Hydroelectric	*0%*	*2%*
Solar	*18%*	*11%*
Wind	*2%*	*11%*
Coal	0%	3%
Large Hydroelectric	1%	11%
Natural Gas	29%	35%
Nuclear	5%	9%
Other	0%	<1%
Unspecified sources of power[b]	30%	11%
Total	100%	100%

Source: Vernon Public Utilities 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

VPU = Vernon Public Utilities

In 2018 VPU developed an integrated resource plan (IRP) that is designed to provide a long-term strategy to meet the electric service needs of its customers and comply with State and federal policies. The VPU IRP represents a road map charting a resource acquisition strategy favoring the procurement of more renewable energy resources and fewer carbon-emitting resources in compliance with SB 350 and SB 100 requirements. To meet these requirements, the VPU IRP identified a need to acquire additional renewable resources starting in 2021. Additionally, the plan identified a Preferred Portfolio that represents a diversified, least-cost resource plan that satisfies VPU's system reliability, compliance with RPS requirements, and reduction of greenhouse gas (GHG) emissions. The Preferred Portfolio recommends procuring 65 MW of solar in 2021, 20 MW in 2023, and an additional 20 MW in 2026 for a total cumulative solar investment of 105 MW by 2030. The Preferred Portfolio also includes the acquisition of 27 MW of wind in 2025 and 20 MW of geothermal in 2029 to provide resource diversity. The VPU IRP indicated that the Preferred Portfolio would comply with RPS and GHG reduction mandates by 2030.

Frame 6

City of Glendale Water and Power

Within the City of Glendale, Glendale Water and Power (GWP) serves nearly 89,000 electrical customers providing service to virtually all homes, businesses, and institutions within its limits. GWP's annual retail electrical load obligation is approximately 1.45 million. GWP relies on a combination of both local and remote generation, coupled with open market purchases. GWP's local electrical system exists in what is known as a "load pocket," meaning GWP has very limited capacity to transmit power from outside the Los Angeles basin to Glendale's load. The local peak demand was 344 MW in 2018 while the only two inbound transmission lines have a combined reliable capacity of 200 MW, necessitating local generation capability. Additionally, due to the eventual retirement of GWP's Grayson power plant in 2021, GWP indicated that it would have insufficient resources to reliably meet the energy needs of Glendale. While GWP initially proposed a plan to build 262 MW of combined cycle and combustion turbine gas-powered resources at the Grayson location, it is currently evaluating potential cleaner alternatives to reduce the GHG impacts of the plan (City of Glendale Water and Power 2019).

GWP's total electricity consumption in 2018 was 1,043,000 MWh (California Energy Commission 2020). The energy resource mix used by GWP for electricity generation as of 2018 is shown in Table 3.5-8. As shown, renewable sources currently make up 36 percent of GWP's power mix, which is greater than the statewide power mix.

Table 3.5-8. GWP Energy Resources for Electricity Generation in 2018

Energy Resource	2018 GWP Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	36%	31%
Biomass and Biowaste	*11%*	*2%*
Geothermal	*2%*	*5%*
Eligible Hydroelectric	*6%*	*2%*
Solar	*2%*	*11%*
Wind	*15%*	*11%*
Coal	4%	3%
Large Hydroelectric	9%	11%
Natural Gas	29%	35%
Nuclear	6%	9%
Other	6%	<1%
Unspecified sources of power[b]	10%	11%
Total	100%	100%

Source: City of Glendale 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

GWP = Glendale Water and Power

In 2019 GWP developed its IRP to meet the State's power reliability requirements. In developing its resource portfolio, GWP plans to replace the local capacity lost from retirement of the Grayson power plant with a diverse mix of energy resources, with a goal of providing the cleanest power

possible while maintaining reliability at a reasonable cost in a transmission-constrained location. The proposed power plan includes the following.

- 28 MW of energy efficiency and demand response, including behind-the-meter batteries
- 23 MW of distributed solar and storage
- 75 MW / 300 MWh of local, utility-scale batteries
- 93 MW of internal combustion engines to provide flexible and local back-up generation

GWP indicates that the recommended portfolio in its IRP would outperform standards for reliability, GHG emissions, and renewable portfolio content while simultaneously saving over $125 million in costs and reducing thermal capacity by 169 MW compared to GWP's previous 2015 power plan.

Frame 7

Burbank Water and Power

Within the City of Burbank electricity is provided by Burbank Water and Power (BWP). BWP is a publicly owned municipal utility that generates, transmits, and distributes power to Burbank customers (Burbank Water and Power 2018). BWP's total electricity consumption in 2018 was 1,073,059 MWh (California Energy Commission 2020). The energy resource mix used by BWP for electricity generation as of 2018 is shown in Table 3.5-9. As shown, renewable sources currently make up 32 percent of BWP's power mix, which is greater than the statewide power mix.

Table 3.5-9. BWP Energy Resources for Electricity Generation in 2018

Energy Resource	2018 BWP Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	32%	31%
Biomass and Biowaste	*2%*	*2%*
Geothermal	*2%*	*5%*
Eligible Hydroelectric	*2%*	*2%*
Solar	*12%*	*11%*
Wind	*13%*	*11%*
Coal	28%	3%
Large Hydroelectric	1%	11%
Natural Gas	30%	35%
Nuclear	5%	9%
Other	0%	<1%
Unspecified sources of power[b]	3%	11%
Total	100%	100%

Source: Burbank Water and Power 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

BWP = Burbank Water and Power

In December 2018, BWP adopted its 2019 IRP to serve as a long-term planning document designed to provide policy guidance for BWP's electric supply to its customers for 20 years, from 2019 through 2038, that meets the State's policies. As a long-term plan, the IRP is directional rather than

determinative, where the IRP is meant to help BWP see the broad contours of its energy future and the general direction BWP should head to reach that future; it is not a roadmap for decision-making beyond the near-term. Through the IRP process, BWP found that while the business of providing Burbank with reliable, affordable, and sustainable electric service is changing rapidly, the policy guidelines for its business remain largely the same as approved in the previous 2015 IRP. These policy guidelines are as follows:

1. BWP should continue to meet electricity demand growth from energy efficiency and conservation, then renewables. BWP does not plan any new fossil-fueled power generation, except as needed to cost-effectively integrate renewable energy and maintain reliability.
2. BWP should optimize cost-effective energy efficiency and conservation programs.
3. BWP should add renewable energy to the extent needed.
4. BWP should plan to achieve greenhouse gas emissions reductions consistent with State goals.
5. BWP should maintain low cost of service, including striving to maintain rate increases at or below the long-run rate of inflation.

To fulfill the policy direction of the IRP, the following primary action items, which include activities on both the customer-side and the supply-side of the meter, were indicated in the IRP:

a. **Rate Design.** Design time-varying rates that encourage customers to shift their consumption away from higher cost periods to lower cost periods.

b. **Demand Response.** Consider cost-effective BWP customer Demand Response programs.

c. **Beneficial Electrification.** Enhance and extend BWP efforts to encourage growth in beneficial electrification that reduces GHG emissions, including electric vehicles.

d. **Disadvantaged Communities.** Develop and implement a program to target disadvantaged communities with selected BWP energy efficiency, demand response, and beneficial electrification programs.

e. **Intermountain Power Project (IPP) Coal Replacement.** Work with LADWP and other IPP participants to determine resources that will replace the IPP coal plant when it is retired in 2025. Particular focus should be given to BWP's share in the Southern Transmission System transmission line from the IPP site in Utah to Southern California.

f. **Transmission Delivery for Renewables.** Identify options and costs for transmission delivery of large quantities of renewable energy resulting from SB 100.

g. **Solar Over-Generation.** Work to mitigate the impact of solar generation (including morning and afternoon ramping, overgeneration, and instantaneous intermittency) such that reliability and affordability are maintained.

h. **Energy Imbalance Market (EIM) Participation.** Evaluate possible participation in the California Independent System Operator's EIM if and when BWP's Balancing Authority, LADWP, joins the EIM.

i. **Resource Positioning.** Position BWP's resources to work with the Duck Curve to the greatest extent possible to minimize costs and maximize reliability for Burbank. In this connection, evaluate further improvement in the operational flexibility of the Magnolia Power Project.

Overall, the IRP positions BWP to provide reliable, affordable, and sustainable electric service to Burbank for decades to come.

3.5.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of energy in this PEIR.

Federal

The Energy Policy and Conservation Act of 1975

The Energy Policy and Conservation Act of 1975 (EPCA) is a U.S. Act of Congress that responded to the 1973 oil crisis by creating a comprehensive approach to federal energy policy. The primary goals of EPCA are to increase energy production and supply, reduce energy demand, provide energy efficiency, and give the executive branch additional powers to respond to disruptions in energy supply.

Alternative Motor Fuels Act of 1988

The Alternative Motor Fuels Act of 1988 amended a portion of the EPCA to encourage the use of alternative fuels, including electricity. This act directed the Secretary of Energy to ensure that the maximum practicable number of federal passenger automobiles and light duty trucks be alcohol-powered vehicles, dual-energy vehicles, natural gas-powered vehicles, or natural gas dual-energy vehicles. The act directed the Secretary to conduct a study regarding such vehicles' performance, fuel economy, safety, and maintenance costs, and report to Congress the results of a feasibility study concerning the disposal of such alternative-fueled federal vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 establishes a comprehensive, long-term federal energy policy to be implemented by the U.S. Department of Energy. The Energy Policy Act addresses energy production in the U.S., including oil, gas, coal, and alternative forms of energy and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy efficient homes, production or purchase of energy efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases.

Energy and Independence Security Act of 2007

The Energy Independence and Security Act was signed into law in 2007 and consists of provisions designed to increase energy efficiency and the availability of renewable energy. Key provisions of this act include the following:

- The Corporate Average Fuel Economy (CAFÉ) standards, which set a target of 54.5 miles per gallon for the combined fleet of cars and light trucks by model year 2025
- The Renewable Fuels Standard, which sets a modified standard that starts at 9.0 billion gallons in 2008 and rises to 36 billion gallons by 2022

- The Energy Efficiency Equipment Standards, which include a variety of new standards for lighting and for residential and commercial appliance equipment
- The Repeal of Oil and Gas Tax Incentives, which include repeal of two tax subsidies in order to offset the estimated cost to implement the CAFÉ provision

Leadership in Energy and Environmental Design

Leadership in Energy and Environmental Design (LEED) is a rating system devised by the U.S. Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design. The system is credit-based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building. LEED was launched in an effort to develop a "consensus-based, market-driven rating system to accelerate the development and implementation of green building practices." The program is not rigidly structured; that is, not every project must meet identical requirements to qualify.

State

Assembly Bill 2076, Reducing Dependence on Petroleum (2000)

The California Energy Commission (CEC) and California Air Resources Board (CARB) are directed by Assembly Bill (AB) 2076 to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15 percent less than 2003 demand by 2020.

Senate Bill 1389 (2002) and California Integrated Energy Policy Report

SB 1389 requires the CEC to develop an integrated energy report that contains an assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors. This report, known as the Integrated Energy Policy Report (IEPR), is adopted by the CEC every 2 years and updated every other year. The IEPR provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety. The current 2019 IEPR covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

Senate Bill 1078

In 2002, SB 1078 (Public Utilities Code Chapter 2.3 § 387, 390.1, and 399.25) implemented a Renewable Portfolio Standard, which established a goal that 20 percent of the energy sold to customers be generated by renewable resources by 2017. The goal was accelerated in 2006 under SB 107 and expanded in 2011 under SB 2, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Senate Bill 100

In 2018, SB 100 (Public Utilities Code Chapter 312 § 399.11, 399.15, 399.30 and 454.53) increased the Renewable Portfolio Standard target and established State policy that renewable energy resources and zero-carbon resources supply all electricity procured to serve California end-use customers and the State Water Project by 2045. The bill requires the CPUC, CEC, Department of Water Resources, and CARB to incorporate this policy into all relevant planning, and use existing programs to achieve this policy.

California Building Standards Code, Title 24

California Building Energy Efficiency Standards, Title 24, Part 6

Title 24, Part 6 of the California Code of Regulations (also known as the *California Building Energy Efficiency Standards*) establishes energy conservation standards for new construction and additions and alterations to existing buildings. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality. The CEC is responsible for adopting, implementing, and updating the standards every 3 years. The current 2019 California Building Energy Efficiency Standards became effective on January 1, 2020, and improve upon the previous 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. It is estimated that single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (California Energy Commission 2018).

California Green Building Standards Code, Title 24, Part 11

The California Green Building Standards Code (CALGreen) is a statewide mandatory green building code that applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects by all cities in California. Adopted as part of the California Building Standards Code (Part 11), CALGreen established voluntary standards that became mandatory under the 2010 edition of the code. These involved sustainable site development, energy efficiency (in excess of CEC requirements), water conservation, material conservation, and internal air contaminants. The current energy efficiency standards were adopted in 2019 and took effect on January 1, 2020.

Regional

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Los Angeles County Board of Supervisors on October 6, 2015. The general plan provides the policy framework for how and where the unincorporated County areas will grow through the year 2035, while recognizing and celebrating the County's wide diversity of cultures, abundant natural resources, and status as an international economic center. The *Los Angeles County General Plan* accommodates new housing and jobs within

the unincorporated areas in anticipation of population growth in the County and the region. The goals and policies associated with energy resources from the general plan that are applicable to the proposed Project are listed in Table 3.5-10.

Table 3.5-10. Applicable Los Angeles County General Plan Goals and Policies Related to Energy Resources

Element	Goals and Policies
Air Quality Element	**Goal AQ 3:** Implementation of plans and programs to address the impacts of climate change. • **Policy AQ 3.2:** Reduce energy consumption in County operations by 20 percent by 2015. • **Policy AQ 3.5**: Encourage energy conservation in new development and municipal operations.
Conservation and Natural Resources Element	**Goal C/NR 12:** Sustainable management of renewable and non-renewable energy resources. • **Policy C/NR 12.1:** Encourage the production and use of renewable energy resources. • **Policy C/NR 12.2:** Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands. • **Policy C/NR12.3:** Encourage distributed systems that use existing infrastructure and reduce environmental impacts.
Economic Development Element	**Goal ED 1:** An economic base and fiscal structures that attract and retain valuable industries and businesses. • **Policy ED 1.2:** Encourage and foster the development of the renewable energy economic sectors.
Land Use Element	**Goal LU 11:** Development that utilize sustainable design techniques. • **Policy LU 11.1:** Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies. • **Policy LU 11.4:** Encourage subdivisions to utilize sustainable design practices, such as maximizing energy efficiency through lot configuration; preventing habitat fragmentation; promoting stormwater retention; promoting the localized production of energy; promoting water conservation and reuse; maximizing interconnectivity; and utilizing public transit. • **Policy LU 11.8:** Encourage sustainable subdivisions that meet green neighborhood standards, such as Leadership in Energy and Environmental Design–Neighborhood Development (LEEDND).

Element	Goals and Policies
Parks and Recreation Element	**Goal P/R 1:** Enhanced active and passive park and recreation opportunities for all users. • **Policy P/R 1.9:** Offer more lighted playing fields using energy efficient light fixtures to extend playing time, where appropriate (e.g., not in areas adjacent to open space or natural areas that can be impacted by spillover lighting). **Goal P/R 6:** A sustainable parks and recreation system. • **Policy P/R 6.2:** Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks. • **Policy P/R 6.4:** Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy. • **Policy P/R 6.5:** Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.
Public Services and Facilities Element	**Goal PS/F 6:** A County with adequate public utilities. • **Policy PS/F 6.5:** Encourage the use of renewable energy sources in utility and telecommunications networks. • **Policy PS/F 6.8:** Encourage projects that incorporate onsite renewable energy systems.

Source: Los Angeles County 2015a.

Los Angeles County's Community Climate Action Plan

Los Angeles County's *Community Climate Action Plan* (CCAP), adopted in 2015, supplements the *Los Angeles County General Plan* and describes the County's efforts to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated County areas by at least 11 percent below 2010 levels by 2020 (Los Angeles County 2015b). The CCAP is set to expire in 2020, and current efforts are underway to approve an updated plan (refer to the subsequent subheading).

Among the CCAP's actions prescribed to reduce GHG emissions are those that fall under the Green Building and Energy strategy area. As part of this strategy area, the County identified previously developed energy efficiency and renewable energy programs that would continue to be implemented, including rebates and incentives for efficiency projects, innovative financing mechanisms to fund energy efficiency upgrades, sustainable policies for new building design, and implementation of projects to accelerate use of compressed natural gas as an alternative fuel. Additionally, the following new actions that are relevant to energy were identified in the CCAP under the Green Building and Energy strategy area to achieve additional GHG reductions:

- **BE-1:** Green Building Development. Encourage energy reductions in new development.
- **BE-2:** Energy Efficiency Programs. Sets goals for energy efficiency retrofits for existing development.
- **BE-3:** Solar Installations. Encourages solar installations for new and existing buildings.
- **BE-4:** Alternative Renewable Energy Programs. Promotes alternative renewable energies.
- **BE-5:** Wastewater Treatment Plant Biogas. Encourages renewable biogas projects.

- **BE-6:** Energy Efficiency Retrofits of Wastewater Equipment. Promotes efficient treatment equipment.
- **BE-7:** Landfill Biogas. Encourages renewable biogas projects at regional landfills.

Los Angeles County Climate Action Plan

Los Angeles County's *Community Climate Action Plan* (2020 CCAP), adopted in 2015, supplements the *Los Angeles County General Plan* and describes the County's plan to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated County areas by at least 11 percent below 2010 levels by 2020 (Los Angeles County 2015). The 26 local community actions relate to green buildings and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting (Los Angeles County 2015). On June 6, 2018, the County adopted an ordinance amendment to Title 22 in order to implement the 2020 CCAP actions. This ordinance allows for environmentally friendly roof and pavement materials and electric vehicle infrastructure, requires signs in on-site loading areas to encourage vehicle idle reduction, and regulates secondary land uses under high-voltage power lines in select zones.

As of August 2020, the 2020 CCAP is in the process of being updated. The draft *Los Angeles County Climate Action Plan* (CAP) builds upon the efforts within the 2020 CCAP, as well as the *OurCounty Los Angeles Countywide Sustainability Plan* (described below). The CAP outlines actions that the County plans to take to reduce GHG emissions and adapt to a changing climate in unincorporated County areas. The CAP ties together existing climate change initiatives and provides a blueprint for targeting carbon neutrality by 2045 in unincorporated County areas. In that sense, the CAP is aligned with EO B-55-18, which calls for statewide carbon neutrality by 2045. The CAP was released for public review in March 2020 and received public comments through April 2020 (Los Angeles County 2020). At this time, the anticipated adoption date of the plan is unknown.

Los Angeles Countywide Sustainability Plan

In July 2019, the County adopted the *Los Angeles Countywide Sustainability Plan* (OurCounty; Los Angeles County 2019). OurCounty includes 12 primary goals that have a total of 37 strategies, with a total of 159 actions. The plan identifies lead County entities and partners for each goal. OurCounty is intended to help guide decision-making in unincorporated areas and provide a model for decision-making in the 88 incorporated cities in the County. As a strategic plan, OurCounty does not supersede land use plans that have been adopted by the Regional Planning Commission and Board of Supervisors, including the County's general plan and various community, neighborhood, and area plans. Overall, OurCounty proposes to make the County a more equitable, prosperous, and resilient region in the years ahead. The plan's goals and milestones include the following:

- Powering unincorporated areas and County facilities with 100 percent renewable energy by 2025
- Increasing urban tree canopy coverage by 15 percent by 2035
- Diverting more than 95 percent of waste from landfills
- Developing land-use tools to limit new development in high climate-hazard areas
- Phasing out single-use plastic by 2025 to ensure a cleaner ocean and less landfill waste
- Cutting back on imported water by sourcing 80 percent of water locally by 2045

- Ensuring that all residents have safe and clean drinking water, and that rivers, lakes and the ocean meet federal water quality standards
- Leading efforts to make sure that at least 65 percent of new housing is built within ½ mile of high frequency transit by 2035
- Supporting construction of more than half a million affordable housing units by 2045 to improve public health and community sustainability

Local

Frame 1

Frame 1 of the project study area includes the Cities of Long Beach and Los Angeles. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Long Beach

City of Long Beach General Plan

The *City of Long Beach General Plan* (City of Long Beach 1996) is a policy document that establishes the goals, policies, and directions the City of Long Beach will take to achieve the vision of the community and guide the future development of the city. Goals and policies that are either directly or indirectly related to energy resources can be found within Air Quality, Land Use, and Urban Design Elements of the *City of Long Beach General Plan.* These goals and policies are listed in Table 3.5-11.

City of Long Beach Climate Action and Adaptation Plan

In 2019, the City of Long Beach released a working draft of its *Climate Action and Adaptation Plan* (CAAP). This plan includes mitigation and adaptation strategies for the City to address climate impacts and to reduce the city's impacts on climate change by reducing GHG emissions. Priority mitigation actions in the transportation, energy, and waste sectors are presented and include actions such as expanding and improving pedestrian infrastructure, providing access to renewable generated electricity, and ensuring compliance with waste collection programs. The mitigation actions involving energy resources include the following (City of Long Beach 2019c):

- **BE-1:** Provide access to renewable generated electricity.
- **BE-2:** Develop a home energy assessment program.
- **BE-3:** Provide access to energy efficiency financing, rebates, and incentives for building owners.
- **BE-4:** Promote community solar and microgrids.
- **BE-5:** Perform municipal energy audits.

A final draft plan is expected to be released in 2020 and will ultimately be incorporated into the *City of Long Beach General Plan.*

City of Los Angeles

City of Los Angeles General Plan

The *City of Los Angeles General Plan* is a comprehensive, long-term declaration of purposes, policies, and programs for the development of the City of Los Angeles. It sets forth goals, objectives, and programs to provide a guideline for day-to-day land use policies and meet the existing and future needs and desires of the community while integrating a range of State-mandated elements, including transportation, noise, safety, housing, and conservation. The goals, objectives, or policies from the *City of Los Angeles General Plan* relevant to energy resources are listed in Table 3.5-11.

Table 3.5-11. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 1

Element	Goals and Policies
City of Long Beach General Plan	
Air Quality Element	**Goal 7.0:** Reduce emissions through reduced energy consumption. • **Policy 7.1 Energy Conservation:** Reduce energy consumption through conservation improvements and requirements. *Actions:* o **7.1.1:** Promote the adoption of the best available technology and operational measures for aircraft frequenting Long Beach Airport. o **7.1.2:** Reduce overall energy use in local government facilities. o **7.1.4:** Encourage the incorporation of energy conservation features in the design of all new construction. o **7.1.5:** Encourage the installation of conservation devices and low energy using/water consuming appliances in new and existing development. o **7.1.6:** Encourage energy audits of existing structures, identifying levels of existing energy use, and potential conservation measures. **Goal 8.0:** Educate City residents concerning air quality, energy, and congestion issues, and the need to modify present travel behavior and energy consumption patterns. • **Policy 8.1:** Promote public education programs at the local, subregional, and regional level to encourage residents to modify their behavior to reduce automobile trips. *Actions:* o **8.1.8:** Develop air quality public education programs illustrating the benefits of energy conservation.
Land Use Element	**Goal No. 1:** Implementing Sustainable Planning and Development Practices **Strategy No. 1:** Support sustainable urban development patterns. • **LU Policy 1-1:** Promote sustainable development patterns and development intensities that use land efficiently and accommodate and encourage walking. • **LU Policy 1-2:** Support high-density residential, mixed use and transit-oriented development within the downtown, along transit corridors, near transit stations and at neighborhood hubs. • **LU Policy 1-3:** Require sustainable design strategies to be integrated into public and private development projects. • **LU Policy 1-4:** Require electric vehicle charging stations to be installed in new commercial, industrial, institutional and multiple-family residential

Element	Goals and Policies
	development projects. Require that all parking for single-unit and two-unit residential development projects be capable of supporting future electric vehicle supply equipment. • **LU Policy 1-5:** Encourage resources and processes that support sustainable development for adaptive reuse projects, as well as appropriate infill projects. • **LU Policy 1-6:** Require that new building construction incorporate solar panels, vegetated surface, high albedo surface and/or similar roof structures to reduce net energy usage and reduce the heat island effect. • **LU Policy 1-7:** Encourage neighborhood-serving retail, employment and entertainment destinations in new mixed-use projects to create local, walkable daily trip destinations.
Urban Design Element	**Improved Health and Sustainability** **Strategy No. 5:** Integrate healthy living and sustainable design practices and opportunities throughout Long Beach. • **Policy UD 5-5:** Accommodate space for the use of rooftop solar panels and other forms of renewable energy on buildings, underutilized sites, utility plants, and parking facilities through a simplified permitting process, wherever feasible.
City of Los Angeles General Plan	
Air Quality Element	**Goal 5:** Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting. **Objective 5. 1:** It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments. • **Policy 5.1.2:** Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations. • **Policy 5.1.4:** Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling. **Objective 5.2:** It is the objective of the City of Los Angeles ta have a portion of the City's service fleet be comprised of alternative fuel powered vehicles, subject to availability of funding, and practical feasibility. • **Policy 5.2.1:** Reduce emissions from its own vehicles by continuing scheduled maintenance, inspection and vehicle replacement programs; by adhering to the State of California's emissions testing and monitoring programs; by using alternative fuel powered vehicles wherever feasible, in accordance with regulatory agencies and City Council policies.
Conservation Element	**Goal 1:** A city that preserves, protects and enhances its existing natural and related resources. **Objective:** conserve petroleum resources and enable appropriate, environmentally sensitive extraction of petroleum deposits located within the city's jurisdiction so as to protect the petroleum resources for the use of future generations and to reduce the city's dependency on imported petroleum and petroleum products. • **Policy 1:** continue to encourage energy conservation and petroleum product reuse.

Element	Goals and Policies
Housing Element	**Goal 2:** Safe, Livable, and Sustainable Neighborhoods **Objective 2.3:** Promote sustainable buildings, which minimize adverse effects on the environment and minimize the use of non-renewable resources. • **Policy 2.3.3:** Promote and facilitate reduction of energy consumption in new and existing housing.
Framework Element	**Goal 9M:** A supply of electricity that is adequate to meet the needs of Los Angeles Department of Water and Power electric customers located within Los Angeles. **Objective 9.26:** Monitor and forecast the electricity power needs of Los Angeles' residents, industries, and businesses. • **Policy 9.26.1:** The Los Angeles Department of Water and Power (LADWP) shall continue to monitor and forecast its customers' peak load on its system and identify which parts of the system should be upgraded to accommodate expected growth. **Objective 9.27:** Continue to ensure that all electric power customers will receive a dependable supply of electricity at competitive rates. • **Policy 9.27.1:** The LADWP shall continue to generate or purchase electric power to serve its customers. **Objective 9.28:** Provide adequate power supply transmission and distribution facilities to accommodate existing uses and projected growth. • **Policy 9.28.1:** The LADWP shall continue to plan its power supply capability far enough in advance to ensure that it has available capacity to meet customer demand before it is needed. • **Policy 9.28.2:** The LADWP shall continue to ensure that the City's transmission and distribution system is able to accommodate future peak electric demand for its customers. • **Policy 9.28.3:** The LADWP shall continue to advise the Planning and Building and Safety Departments of any construction project that would overload a part of the distribution system during a period of peak demand. **Objective 9.29:** Provide electricity in a manner that demonstrates a commitment to environmental principals, ensures maximum customer value, and is consistent with industry standards. • **Policy 9.29.1:** Develop and deliver services to attract, assist, and retain industries and businesses in Los Angeles. • **Policy 9.29.2:** Promote the responsible use of natural resources, consistent with City environmental policies. • **Policy 9.29.3:** Promote conservation and energy efficiency to the maximum extent that is cost effective and practical, including potential retrofitting when considering significant expansion of existing structures. • **Policy 9.29.7:** Encourage additional markets for electrical energy, such as environmentally friendly alternative fuel for transportation in electric buses and light-duty vehicles.
City of Los Angeles Community Plans (Land Use Element)	
Boyle Heights	• **LU Goal 26:** New development is designed to minimize impacts to the environment and enhance the health and wellbeing of residents. • **LU Policy 26.2:** Encourage projects to include Leadership in Energy and Environmental Design (LEED) Standards.

Element	Goals and Policies
Canoga Park-Winnetka-Woodland Hills-West Hills	The Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan does not contain policies or objectives specifically relevant to energy resources.
Central City	The Central City Community Plan does not contain policies or objectives specifically relevant to energy resources.
Central City North	The Central City North Community Plan does not contain policies or objectives specifically relevant to energy resources.
Encino-Tarzana	The Encino-Tarzana Community Plan does not contain policies or objectives specifically relevant to energy resources.
Hollywood	Other Public Facilities • **Policy 2:** That new equipment for public facilities be energy efficient.
North Hollywood-Valley Village	The North Hollywood-Valley Community Plan does not contain policies or objectives specifically relevant to energy resources.
Northeast Los Angeles	The Northeast Los Angeles Community Plan does not contain policies or objectives specifically relevant to energy resources.
Reseda – West Van Nuys	The Reseda-West Van Nuys Community Plan does not contain policies or objectives specifically relevant to energy resources.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass	The Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan does not contain policies or objectives specifically relevant to energy resources.
Silver Lake-Echo Park-Elysian Valley	The Silver Lake-Echo Park-Elysian Valley Community Plan does not contain policies or objectives specifically relevant to energy resources.
Van Nuys-North Sherman Oaks	The Van Nuys-North Sherman Oaks Community Plan does not contain policies or objectives specifically relevant to energy resources.

Sources: City of Long Beach 1996, 2019a, 2019b; City of Los Angeles 1992, 1995, 1996, 1998a–d, 1999a–c, 2000, 2001, 2003, 2004, 2013, 2014; Los Angeles County 2015a.

City of Los Angeles Sustainable City Plan

On April 8, 2015, the City of Los Angeles released its first-ever *Sustainable City pLAn* (pLAn), establishing short- and long-term targets for the City over the next 20 years in 14 categories to strengthen and promote sustainability of the environment, economy, and equity in Los Angeles. On April 29, 2019, the City released Los Angeles' *Green New Deal* as an update to the 2015 pLAn. This updated plan augments, expands, and elaborates in even more detail the City's vision for a sustainable future and assigns accelerated GHG emission reduction targets and new aggressive goals to place the City on the path to a zero-carbon future by 2050. Many of the City's efforts that would be implemented to meet these goals would also reduce energy consumption and increase energy efficiency. The 2019 updates to the pLAn accelerate the following targets (City of Los Angeles 2019):

- Supply 55 percent renewable energy by 2025, 80 percent by 2036, and 100 percent by 2045.
- Source 70 percent of the City's water locally by 2035, and capture 150,000 acre-feet/year of stormwater by 2035.
- Reduce building energy use per square feet for all types of buildings 22 percent by 2025; 34 percent by 2035; and 44 percent by 2050.
- Reduce vehicle miles traveled per capita by at least 13 percent by 2025, 39 percent by 2035, and 45 percent by 2050.

- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025 and 75 percent by 2035.
- Increase the percentage of zero emission vehicles in the city to 25 percent by 2025, 80 percent by 2035, and 100 percent by 2050.
- Create 300,000 green jobs by 2035 and 400,000 by 2050.
- Convert all City fleet vehicles to zero emission where technically feasible by 2028.
- Reduce municipal GHG emissions 55 percent by 2025 and 65 percent by 2035 from 2008 baseline levels, reaching carbon neutral by 2045.

Overall, the updated plan calls for reducing GHGs to 50 percent below 1990 levels by 2025 and to 73 percent below 1990 levels by 2035, and becoming carbon neutral by 2050. By following the 2019 Green New Deal, the City is expected to reduce an additional 30 percent in GHG emissions above and beyond the 2015 pLAn. Aside from committing LADWP to increase their supply of renewable energy, the Green New Deal also includes further commitments for the City to increase cumulative energy by way of local solar, energy storage capacity, and demand-response programs.

Frame 2

In addition to the City of Long Beach and unincorporated County areas, Frame 2 includes the following cities. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Carson

Carson General Plan

The *Carson General Plan*, which was last updated in 2004, provides the framework for all zoning and land use decisions in the city. Applicable goals and policies related to energy resources within the *Carson General Plan* are listed in Table 3.5-12.

City of Carson Climate Action Plan

The City of Carson's *Climate Action Plan*, adopted in 2017, sets a long-term goal of reducing GHG emissions by 49 and 80 percent below 2005 levels by 2035 and 2050, respectively. The *Climate Action Plan* identifies emission reduction strategies, including those involving land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage. Strategies involve identifying ways to reduce automobile emissions, emphasizing energy efficiency, increasing waste diversion, creating carbon sinks, and implementing clean, renewable energy. General goals identified in the plan addressing energy include increasing energy efficiency in both existing and new residential units and commercial developments as well as municipal buildings and city infrastructure, increasing energy efficiency through water efficiency, decreasing energy demand through reducing urban heath island effect, and participating in education, outreach, and planning for energy efficiency (City of Carson 2017).

City of Compton

Compton General Plan

The 2011 *Draft Compton General Plan 2030* has not yet been adopted. Therefore, Compton's 1991 *General Plan Vision 2010* still serves as the blueprint for planning and development in the city and indicates the community's vision for the future. Applicable goals and policies related to energy resources within *General Plan Vision 2010* are listed in Table 3.5-12.

City of Long Beach

Applicable regulations for the City of Long Beach are described above and presented in Table 3.5-11.

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Table 3.5-12. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 2

Element	Goals and Policies
Carson General Plan	
Housing Element	**Goal 7.0:** Conservation of natural resources and reduction of energy consumption in all areas of residential development. • **Policy 7.1:** Educate the public in the area of energy conservation. • **Policy 7.2:** Promote the use of alternative energy sources.
Open Space and Conservation Element	**Goal: OSC-3:** Conservation of scarce energy resources. • **Policy OSC-3.1:** Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption. • **Policy OSC-3.2:** Support the development of alternative sources of energy such as roof-mounted solar panels, fuel cells or new technology. • **Policy OSC-3.3:** Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.
Transportation and Infrastructure Element	**Goal TI-9:** Promote sustainable energy, communication, and other systems which meet the needs of the community. • **Policy TI-9.1:** Cooperate with the providers of the energy, communication, and other systems in Carson to maintain, improve, expand, and replace (when necessary) these systems throughout the City as good partners. **Goal TI-10:** Provide sustainable civic facilities that are maintained and rehabilitated in a manner that provides an acceptable level of service and is cost-effective. • **Policy TI-10.3:** Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

Element	Goals and Policies
Compton General Plan	
Air Quality Element	**Air Quality Element Goal 4.** Reduce emissions associated with energy consumption. • **Air Quality Element Policy 4.1.** The City of Compton will support the use of energy-efficient equipment and design in City facilities and infrastructure. • **Air Quality Element Policy 4.2.** The City of Compton will encourage incorporation of energy features, including passive solar, in the construction and rehabilitation of new and existing structures. • **Air Quality Element Policy 4.4.** The City of Compton will encourage the use of lower-emission alternate fuels in city-owned vehicles.
Housing Element	**Goal 3**. The City of Compton will support and provide incentives for the maintenance and rehabilitation of the existing housing stock. • **Policy 3.6.** The City of Compton will encourage property maintenance to promote quality design, public safety, and to promote energy conservation.

Sources: City of Carson 2004a, 2004b, 2013; City of Compton 2011.

Frame 3

In addition to the unincorporated County areas, Frame 3 includes the Cities of Compton, Cudahy, Downey, Lynwood, Paramount, and South Gate. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Compton

Applicable regulations for the City of Compton are described above and presented in Table 3.5-12.

City of Cudahy

Cudahy 2040 General Plan

The *Cudahy 2040 General Plan* establishes the basis for zoning regulations, provides guidance in the evaluation of development proposals, and creates the framework for economic development, mobility improvements, and balancing the community's desires regarding sustainability, City services, and parks. Applicable goals and policies related to energy resources within the *Cudahy 2040 General Plan* are listed in Table 3.5-13.

City of Downey

Downey Vision 2025 General Plan

The *Downey Vision 2025 General Plan* serves as a guide to the long-term physical development and growth of the community. Applicable goals and policies related to energy resources within the *Downey Vision 2025 General Plan* are listed in Table 3.5-13.

City of Downey's Energy Action Plan

The 2015 *Energy Action Plan* (EAP) (City of Downey 2015) serves to develop the long-term vision and plan for energy efficiency for the City of Downey. The EAP provides a roadmap for the City of

Downey to reduce GHG emissions through reductions in the energy used in facility buildings and city operations. The following key goals of the EAP are relevant to the proposed Project:

- Meet and exceed the California AB 32 (California Global Warming Solutions Act) energy reduction goals.
- Enhance energy efficiency and operations in existing buildings through systematic commissioning strategies or independent energy efficiency studies.
- Evaluate all suggested energy efficiency action measures presented in the EAP, establish a priority for implementation, and determine possible funding sources.
- Explore the newest "green" technologies and methods to decrease future energy dependency.
- Explore renewable energy recourses (not limited to solar) and possible financing based on available grants/rebates.
- Continue interacting, educating, and informing the community about energy efficiency and greenhouse gas emissions.
- Be an example for energy efficiency and sustainability at City facilities.

The City of Downey's long-term vision for energy efficiency focuses around four primary objectives:

- Reduce the City's carbon footprint and its adverse effect on the environment.
- Conserve energy at the local government facilities.
- Raise energy conservation awareness in local community and improve the quality of life.
- Achieve Platinum Status on the Local Government Agency Partnership.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* contains the plan for the future development and operation of the city. Applicable goals and policies related to energy resources within the *City of Lynwood General Plan* are listed in Table 3.5-13.

City of Paramount

Paramount General Plan

The *Paramount General Plan* serves as the blueprint for planning and development in the city. Applicable goals and policies related to energy resources within the *Paramount General Plan* are listed in Table 3.5-13.

City of South Gate

South Gate General Plan 2035

The *South Gate General Plan 2035* was adopted in December of 2009 and is the primary legal document to guide long-term growth, development, and conservation in the city. Applicable goals and policies related to energy resources within the *South Gate General Plan 2035* are listed in Table 3.5-13.

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Table 3.5-13. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 3

Element	Goals and Policies
Cudahy 2040 General Plan	
Air Quality Element	**Goal AQE-3:** Energy efficiency and conservation practices that reduce air pollution and greenhouse gas emissions • **Policy AQE-3.2:** Update the building and development codes to facilitate infrastructure installation supporting electric vehicle technology and alternative fuels, such as electric vehicle charging stations and alternative fuel filling stations. • **Policy AQE-3.6:** Develop energy consumption regulations for public and private development that meet or exceed California Energy Efficiency Standards and California Green Building Standards Codes (Cal Green).
Open Space and Conservation Element	**Goal OSCE-1:** A sustainable urban environment protects valuable natural resources (water, air, and soil) and limits waste production • **Policy OSCE-1.3:** Promote sustainable landscaping practices that help conserve energy and reduce water consumption. • **Policy OSCE-1.4:** Fulfill the Cal Green Building Code's voluntary tiers in constructing public buildings, when feasible. • **Policy OSCE-1.5:** Promote green building practices with respect to recycling material from building demolition and using recycled building materials in new construction. • **Policy OSCE-1.6:** Support efforts to increase the use of renewable energy and low-emission power sources. Encourage the installation and construction of renewable energy systems and facilities such as solar panels.
Downey Vision 2025 General Plan	
Conservation Element	**Goal 4.6.** Conserve energy resources. • **Policy 4.6.1.** Promote the conservation of energy by residents and businesses to conserve energy. • **Program 4.6.1.1.** Provide incentives for people to use renewal energy sources such as solar energy. • **Policy 4.6.2.** Reduce energy consumption by City operations. • Program 4.6.2.1. Ensure the installation of energy efficient street lights and traffic signals. • **Program 4.6.2.2.** Ensure the installation of energy efficient fixtures, computers and appliances at all public buildings.
City of Lynwood General Plan	
Open Space and Conservation Element	**Goal EC-1:** Promote the conservation of energy resources in new and existing developments. • **Policy WR-2.1:** The City shall ensure that energy conservation measures are implemented in all development projects.

Element	Goals and Policies
Paramount General Plan	
Resource Management Element	Resource Management Programs *Energy Conservation*. The City will continue to enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation, and appliances. Energy needs will be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State of California Environmental Quality Act (CEQA) Guidelines. Other measures that would reduce energy consumption during construction and subsequent operation of new development will be encouraged. The City will continue to work with Southern California Edison and the Southern California Gas Company to promote energy conservation.
South Gate General Plan 2035	
Green City Element	**Goal GC 6:** A robust green building program. **Objective GC 6.1:** Increase the use of green techniques in new buildings, new building sites and building remodels and retrofits. • **Policy P.1:** All new municipal buildings should meet or exceed silver in the appropriate LEED Rating System, or a comparable green building standard. • **Policy P.2:** The City should encourage green building techniques efforts in single-family homes as well as in new municipal, commercial, mixed-use or multifamily residential projects. • **Policy P.3:** The City should encourage and create incentives for green building techniques in existing building retrofits as well as new buildings. • **Policy P.5.** New buildings should meet or exceed California Title 24 energy efficiency requirements. • **Policy P.7:** The City should assess all new development's use of green building techniques as a formal stage of design review. • **Policy P.8:** The City may finance energy efficiency retrofits and on-site renewable energy installation through a local assessment district, or provide administrative or financial support in other ways. • **Policy P.9:** On an ongoing basis, city staff should be trained to implement the green building program and to provide advice and expertise about green building to residents, particularly small-scale developers or homeowners that may have less access to green building expertise. **Goal GC 7:** To mitigate against and adapt to climate change. **Objective GC 7.1:** Reduce South Gate's production of greenhouse emissions and contribution to climate change, and adapt to the effects of climate change. • **Policy P.4:** The City will reduce greenhouse gas emissions and adapt to climate change with efforts in the following areas: • **Energy.** Major mitigation and adaptation strategies will include incentivizing renewable energy installation, facilitating green technology and business, and reducing community-wide energy consumption through the strategies described here. • **Buildings.** Major mitigation and adaptation strategies will include green building incentives, assessment of green building techniques as a formal stage of city design review, and development of a green building

Element	Goals and Policies
	ordinance. Adaptation strategies will also include increased water efficiency in buildings. • **Government Operations.** Major mitigation strategies will include green procurement and energy saving in operations and maintenance.
Public Facilities and Services Element	**Goal PF 5:** A water system that meets the projected demand for all users and seeks ways to reduce demand. **Objective PF 5.3:** Promote coordination between land use planning and water facilities and service. • **Policy P.4:** The City will manage energy use for all water facilities and upgrade water system pumps, motors and other devices to improve energy efficiency to reduce costs.

Source: City of Cudahy 2018, City of Downey 2005, City of Lynwood 2003, City of Paramount 2007, City of South Gate 2009.

Frame 4

In addition to the unincorporated County areas, Frame 4 includes the Cities of Bell, Bell Gardens, Commerce, Huntington Park, Maywood, and Vernon. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Bell

City of Bell 2030 General Plan

The *City of Bell 2030 General Plan* (City of Bell 2018) functions as a framework to guide the city's future growth and development plans. Applicable goals and policies related to energy resources within *the City of Bell 2030 General Plan* are listed in Table 3.5-14.

City of Bell Gardens

City of Bell Gardens General Plan 2010

The *City of Bell Gardens General Plan 2010* is a comprehensive, long-range plan meant to guide the city's future growth and development. Applicable goals and policies related to energy resources within the *City of Bell Gardens General Plan 2010* are listed in Table 3.5-14.

City of Commerce

City of Commerce 2020 General Plan

The *City of Commerce 2020 General Plan* is meant to serve as the blueprint for future planning and development in the city. Applicable goals and policies related to energy resources within the *City of Commerce 2020 General Plan* are listed in Table 3.5-14.

City of Huntington Park

City of Huntington Park 2030 General Plan

In 2017, a Focused General Plan Update for the City of Huntington Park was underway. The *City of Huntington Park 2030 General Plan* is meant to serve as a long-range comprehensive plan to regulate land uses and development in the city for the next 10 to 20 years. Applicable goals and policies

related to energy resources with the *City of Huntington Park 2030 General Plan* are listed in Table 3.5-14.

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan* is intended to guide and influence long-term planning and development in the city. Applicable goals and policies related to energy resources within the *City of Maywood General Plan* are listed in Table 3.5-14.

City of Vernon

City of Vernon General Plan

The *City of Vernon General Plan* is intended to serve as a guide for the future of the city. Applicable goals and policies related to energy resources within the *City of Vernon General Plan* are listed in Table 3.5-14.

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Table 3.5-14. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 4

Element	Goals and Policies
City of Bell 2030 General Plan	
Land Use and Sustainability Element	**Issue:** To promote sustainability in the planning, design, and construction of new and rehabilitated development throughout the City. • **Land Use and Sustainability Element Policy 9.** The City of Bell shall require ongoing and future land uses to employ sustainable practices to conserve water, waste, energy, and other resources. As part of this policy, new development must conform to current low-impact development requirements and Leadership in Energy and Environmental Design protocols. **Issue:** To promote energy efficiency and conservation in all existing and future development. • **Land Use and Sustainability Element Policy 31.** The City of Bell shall promote energy efficiency and renewable energy strategies in the review of new developments. Examples include, but are not limited to, solar panels, natural lighting, vehicle charging stations, etc. • **Land Use and Sustainability Element Policy 32.** The City of Bell shall collaborate with utility providers to identify new strategies to promote energy and water conservation. The City of Bell shall sponsor periodic meetings with the utility and service providers. • **Land Use and Sustainability Element Policy 34.** The City of Bell shall permit land uses and development that involve the use of alternative fuels and related technology.

Element	Goals and Policies
City of Bell Gardens General Plan	
Housing Element	Energy Conservation Measures • The City of Bell Gardens encourages the incorporation of the state required energy conservation measures as well as the installation of energy conserving appliances, fixtures and other devices into the design of new residential units or rehabilitated units wherever feasible.
Conservation Element	**Policy 2:** The City of Bell Gardens shall, to the extent possible, protect remaining ecological resources and enhance those resources through programs in the Open Space and Recreation Element and the Circulation and Transportation Element. • **Energy Conservation Guidelines.** The City shall enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation and appliances. Energy needs shall be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State CEQA Guidelines and Appendix J of the City CEQA Guidelines. Also, the City shall promote the use of new technologies on energy conservation in new development, as may be appropriate. Other measures that would reduce energy consumption during construction and operation of the structures shall be encouraged.
City of Commerce 2020 General Plan	
Resource Management Element	• **Resource Management Policy 3.1.** The city of Commerce will assist local utility companies with their public education energy conservation programs. • **Resource Management Policy 3.2.** The city of Commerce will encourage public employees to follow energy conservation procedures designed to reduce energy consumption. • **Resource Management Policy 3.4.** The city of Commerce will promote reduced energy consumption by existing land uses within Commerce. • **Resource Management Policy 3.5.** The city of Commerce will cooperate with the Department of Building and Safety to enforce State energy conservation guidelines that require the incorporation of energy-saving designs and features into new and refurbished buildings. • **Resource Management Program – Energy Conservation:** The city shall continue to enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation, and appliances. Energy needs shall be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State of California Environmental Quality Act (CEQA) Guidelines. Other measures that would reduce energy consumption during construction and subsequent operation of new development shall be encouraged. The city will continue to work with Southern California Edison and the Southern California Gas Company to promote energy conservation.

Element	Goals and Policies
City of Huntington Park 2030 General Plan	
Resource Management Element	• **Resource Management Element Policy 4.** The City of Huntington Park shall encourage the use of energy conservation devices in project design and construction to increase energy efficiency and decrease pollution emissions from energy production and use. • **Resource Management Element Policy 9.** The City of Huntington Park shall encourage innovative site planning and building designs which minimize energy consumption by taking advantage of sun/shade patterns, prevailing winds, landscaping, and building materials. • **Resource Management Element Policy 10.** The City of Huntington Park shall establish, update, and implement building code requirements in accordance with State Title 24 energy and low impact development (LID) regulations. • **Resource Management Element Policy 11.** The City of Huntington Park shall promote the use of solar panels as a mean to reduce electricity usage. • **Resource Management Element Policy 12.** The City of Huntington Park shall promote the use of energy-efficient lighting throughout the City.
City of Maywood General Plan	
Conservation Element	The Conservation Element of the City of Maywood General Plan does not contain goals or policies specifically relevant to energy resources. However, the following goal and policy relevant to air quality would also affect energy resources as well: **Goal 3:** Provide for the proper management of natural resources both in the city and region are so that they may be protected for the benefit of present and future residents. • **Policy 3.1.** Develop and enforce local criteria of air and water quality so that the city may reduce its share of these regional problems.
City of Vernon General Plan	
Resources Element	**Goal R-1:** Conserve and protect the region's water and energy resources. • **Policy R-1.2:** Support the use of energy-saving designs and equipment in all new development and reconstruction projects.

Sources: City of Bell 2018; City of Bell Gardens 1995; City of Commerce 2008; City of Huntington Park 2017; City of Maywood 2008; City of Vernon 2015.

Frame 5

Frame 5 includes the City of Los Angeles.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

Frame 6

Frame 6 includes the Cities of Los Angeles and Glendale. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

City of Glendale

Envision Glendale 2040 General Plan

The *City of Glendale 2040 General Plan* is intended to serve as a guide for development in the city. Applicable goals and policies related to energy resources within the *City of Glendale 2040 General Plan* include the following (City of Glendale 2014):

Housing Element

Goal 6 – A City with Housing that is Livable and Sustainable:

- **Policy 6.7:** Continue implementing the Glendale Water and Power's (GWP) energy and water savings programs for residents, which encourage conservation of nonrenewable resources in concert with the use of alternative energy sources and reduce housing costs.
- **Policy 6.8:** Continue providing brochures and technical assistance that promotes the use of energy conservation features in new and existing dwellings.
- **Policy 6.9:** Continue promoting energy and resource efficiency by implementing the City's residential recycling, bulk item collection, household hazardous waste, horse accounts, backyard composting, chopper rebates, Christmas Tree Recycling, electronics recycling, recycling drop-off and worm composting services/programs.
- **Policy 6.10:** Encourage the use of sustainable building practices in residential developments.

City of Glendale Greener Glendale Plan

The City of Glendale adopted a *Greener Glendale Plan* for municipal operations in 2011 and a *Greener Glendale Plan* for community activities in 2012. The purpose of both plans is to address what steps the City of Glendale can take in its community and local government operations to achieve better sustainability and to meet the State's mandated reduction targets for GHG emissions. The plans include strategies in various sectors, including waste, energy, water, transportation, and building design. Both plans identify energy as an important focus area because it has significant potential to reduce GHGs and to allow the City of Glendale to meet its GHG reduction goal. As such, most of the strategies to reduce GHG emissions in the City of Glendale are centered around measures to increase renewable energy and reduce energy consumption (City of Glendale 2011, 2012).

Frame 7

In addition to the unincorporated County areas, Frame 7 includes the Cities of Los Angeles and Burbank. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

City of Burbank

Burbank2035 General Plan

The *Burbank2035 General Plan* is intended to serve as a guide to City decision-makers on allocating resources and determining the future physical form and character of development in the city. Applicable goals and policies related to energy resources within the *Burbank2035 General Plan* include the following (City of Burbank 2013a):

Land Use Element

Goal 2: Sustainability:

- **Policy 2.6** – Design new buildings to minimize the consumption of energy, water, and other natural resources. Develop incentives to retrofit existing buildings for a net reduction in energy consumption, water consumption, and stormwater runoff.

Open Space and Conservation Element

Goal 10. Energy Resources: Burbank conserves energy, uses alternative energy sources, and promotes sustainable energy practices that reduce pollution and fossil fuel consumption.

- **Policy 10.1**: Incorporate energy conservation strategies in City projects.
- **Policy 10.2**: Promote energy-efficient design features to reduce fuel consumption for heating and cooling.
- **Policy 10.3:** Continue to acquire alternative fuel vehicles like hybrid, natural gas, electric, or hydrogen-powered vehicles when adding to the City's vehicle fleet.
- **Policy 10.4:** Encourage residents and businesses to reduce vehicle use or to purchase alternative fuel vehicles.
- **Policy 10.5:** Promote technologies that reduce use of non-renewable energy resources.
- **Policy 10.6:** Support private sources of sustainable, environmentally friendly energy supplies.
- **Policy 10.7:** Encourage the use of solar energy systems in homes and commercial businesses as a form of renewable energy.

Burbank2035 Greenhouse Gas Reduction Plan

The City of Burbank's climate action plan, *Burbank2035 Greenhouse Gas Reduction Plan*, implements the GHG goals and policies from the Air Quality and Climate Change Element of the *Burbank2035 General Plan* to achieve a communitywide emissions reduction goal of 30 percent by 2035. The *Greenhouse Gas Reduction Plan* identifies emission reduction opportunities within the community, in addition to the incorporation of best practices from other jurisdictions and organizations and State and regional laws, guidance, and recommendations. The plan identifies the primary ways to reduce communitywide GHG emissions in Burbank in five strategy areas: Buildings and Energy, Transportation, Water Conservation, Waste Reduction, and Municipal operations. Measures directed at the Buildings and Energy strategy area to reduce GHG emissions in the City of Burbank involve increasing energy efficiency in existing buildings, enhancing energy performance in new construction, and increasing renewable energy use (City of Burbank 2013b).

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Frame 8

Frame 8 includes the City of Los Angeles.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

Frame 9

Frame 9 includes the City of Los Angeles.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

3.5.3 Impact Analysis

This section describes the impacts related to energy for the two Typical Projects, six kit of parts (KOP) categories, and the *2020 LA River Master Plan* in its entirety. It describes the methods used to determine impacts of the proposed Project and lists the thresholds used to conclude whether an impact would be significant. Measures to reduce or avoid significant impacts accompany each impact discussion, where necessary.

3.5.3.1 Methods

State CEQA Guidelines Appendix F

Appendix F of the State CEQA Guidelines states that the evaluation of energy use should be evaluated in an EIR and provides guidance for consideration in this evaluation. While Appendix F does not provide specific thresholds for energy use, it recommends consideration of the following environmental impacts, to the extent relevant and applicable:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity. The effects of the project on peak and base period demands for electricity and other forms of energy.
3. The degree to which the project complies with existing energy standards.
4. The effects of the project on energy resources.
5. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Transportation Fuels

The State CEQA Guidelines, Appendix F, *Energy Conservation*, requires EIRs to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

Driven by high demand from California's many motorists, major airports, and military bases, the transportation sector is the State's largest energy consumer (U.S. Energy Information Administration 2012). The majority of transportation energy is currently derived from a wide variety of petroleum products. Automobiles and trucks consume gasoline and diesel fuel. The transportation sector consumes relatively minor amounts of natural gas or electricity; however, propelled mainly by air quality laws and regulations, technological innovations in transportation are expected to increasingly rely on compressed natural gas and electricity as energy sources. Energy consumption by on-road motor vehicles reflects the types and numbers of vehicles, the extent of their use (often described in terms of vehicle miles traveled), and their fuel economy (typically described in terms of miles per gallon).

Data from the Department of Motor Vehicles show that gasoline demand is largely driven by Light Duty Vehicles, which represent more than 90 percent of all gasoline consumption in California (California Department of Motor Vehicles and California Energy Commission 2016). Gasoline vehicles made up 92 percent of California Light Duty Vehicles in 2015. Gasoline also fuels hybrid vehicles and accounts for more than 95 percent of the fuel used by flexible-fuel vehicles in California. CAFÉ standards provide for significantly improved fuel economy, and the National Highway Traffic Safety Administration estimates that this trend will continue through 2025. Most of the demand for gasoline in California can be attributed to Light Duty Vehicles in the residential sector. Therefore, the slow growth in population, coupled with improvements in fuel economy, explains an overall decline in demand for gasoline. Overall, though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.6 billion gallons in 2017 to between 12.1 billion and 12.6 billion gallons in 2030, a 19 to 22 percent reduction (California Energy Commission 2018).

The two Typical Projects—the Common Elements Typical Project and the Multi-Use Trails and Access Gateways Typical Project—are analyzed in greater detail than the other KOP design components based on the design components for which the County could make reasonable and informed construction and operations assumptions. As discussed in Chapter 2, *Project Description*, of this PEIR, the analysis of the Common Element Typical Project assumes the most extensive footprint of a Tier III pavilion. Based on the assumptions of construction equipment and worker trips provided by the County for the two Typical Projects, it is possible to quantify the demand for transportation fuels used for construction activities. Fuel consumption from onsite heavy-duty construction equipment and offsite vehicles was calculated based on the GHG emissions predicted by the proposed Project's GHG analysis using the CalEEMod model. In particular, the carbon dioxide (CO_2) emissions predicted by CalEEMod were converted into gallons of fuel based on the amount of CO_2 emissions emitted per gallon of combusted gasoline and diesel fuel. Construction worker commute vehicles were assumed to use gasoline, while vendor/delivery and haul trucks were assumed to use diesel. The Climate Registry's 2019 default emission factors for gasoline and diesel (i.e., kilograms CO_2 per gallon) were used to convert the vehicle emissions into fuel consumption.

The energy consumption associated with mobile sources during operation of the two Typical Projects was also estimated using the aforementioned method. Additionally, operational electricity

and natural gas consumption for the Typical Projects was also drawn from the emission modeling performed in CalEEMod to support the GHG analysis. The CalEEMod outputs directly report the natural gas consumption in BTU and the electricity consumption in kWh for the Typical Projects.

The energy consumption calculations for the two Typical Projects are provided in Appendix E, *Energy Calculations*, of this PEIR. Energy consumption associated with the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level.

Because sufficiently detailed information about the location and extent of the components that could be proposed under any of the KOPs is not currently available, it is not possible to calculate exactly what the energy use would be during construction and operations. Accordingly, it is also not possible to determine exactly what effects the proposed Project would have on local and regional energy supplies, energy resources, and on requirements for additional capacity. The analysis in the following discussions does provide information about the regulatory environment and the degree to which the proposed Project complies with existing energy standards.

Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.5.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.5(a): Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

3.5(b): Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

3.5.3.3 Impacts and Mitigation Measures

Impact 3.5(a) Would the proposed Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Typical Projects

Common Elements

Construction

Project construction for a Common Elements Typical Project would begin as soon as 2021 and would continue for 10 months. The work would be accomplished over six phases to minimize

disruption to existing operations and the community. Construction would involve up to 20 construction workers per day and may include excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, and small cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted hours without permission from the local jurisdiction. Project construction would involve a total area of approximately 3 acres for each Common Elements Typical Project. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would be located primarily in the LA River right-of-way (ROW) for County or Los Angeles County Flood Control District projects; nevertheless, dependent on the location and project proponent, staging areas could be located on local jurisdiction properties.

As discussed in Chapter 2, *Project Description*, the analysis of Common Element Typical Projects assumes the most extensive footprint of a Tier III pavilion. Typically, construction activities would not involve the use of natural gas. Accordingly, natural gas would not be supplied to support the proposed Project's construction activities; thus, there would be no demand generated by construction. Additionally, electric construction tools that would be used during project-related construction would be powered from diesel-operated generators at a site rather than by electricity from the power grid. As such, construction activities associated with Common Element Typical Projects would primarily involve onsite energy demand and consumption related to the use of transportation fuels (i.e., diesel and gasoline) for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources.

Based on the construction equipment and activity assumptions used in the air quality analysis (refer to Section 3.2, *Air Quality*), it is estimated that a Common Elements Typical Project is projected to require 32,194 gallons of diesel and 2,094 gallons of gasoline. Because construction emissions are considered to be relatively short-term emissions that would cease once construction of a Common Elements Typical Project is complete, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Trucks and equipment used during proposed construction activities would also be required to comply with CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Aside from reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Anti-idling regulations would limit the amount of fuel wasted in equipment and trucks that are not in operation. Emissions regulations to control pollutant and toxic air contaminant emissions would also require that engines be more efficient, which results in reduced fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. As such, construction activities associated with Common Elements Typical Projects would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts.

Furthermore, as discussed in Section 3.7, *Greenhouse Gas Emissions*, the construction industry is moving toward cleaner fuels and electrified equipment, which would result in fewer pollutant emissions and the technology would provide greater efficiencies in the equipment's energy consumption over time. As such the use of energy during construction of a Common Elements Typical Project would likely decrease over the lifetime of the proposed Project and be lower than what is analyzed in this PEIR.

Overall, construction activities related to a Common Elements Typical Project would comply with relevant energy efficiency standards and not result in a wasteful, inefficient, and unnecessary usage of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

A Common Elements Typical Project, once constructed and operational, could attract up to 500 new daily users and 10 daily full-time employee operations and maintenance staff, resulting in additional demand for energy. Components of a Common Elements Typical Project would require energy for the conveyance of water for landscaping, restrooms, and café uses; electricity for lighting and appliances; and natural gas for appliances. Based upon the calculations conducted for the air quality analysis, a Common Elements Typical Project is anticipated to consume approximately 2,075 million BTU of natural gas, 318 MWh of electricity, and 434,432 gallons of gasoline per year. In addition to the electricity and natural gas required for the operation of the buildings (e.g. electric lighting and natural gas appliances in the pavilions), landscaping equipment and mobile trips generated by a Common Elements Typical Project would require the consumption of gasoline.

Demand for energy may vary slightly depending on climate zone and intensity of use. Projects in Frames 6, 7, 8, and 9, where temperatures are generally higher than on the coastal side of the Santa Monica Mountains, would likely require greater amounts of electricity for cooling. Conversely, projects in Frames 1 and 2 would be expected to demand less electricity due to the cooling effect of coastal breezes. However, all the Common Elements Typical Projects, regardless of where they are located along the LA River, would not be expected to demand substantial amounts of electricity or natural gas. All project-related buildings would be required to conform to California Title 24 standards for energy-efficiency. Further, a Common Elements Typical Project would be required to comply with CALGreen Code and Title 24 for new building structures. As introduced in the regulatory setting section above, Title 24, Part 6 of the California Code of Regulations (also known as the California Building Energy Efficiency Standards) establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality. The current 2019 California Building Energy Efficiency Standards became effective on January 1, 2020, and improve upon the previous 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. CALGreen is a statewide mandatory green building code that applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects by all cities in California.

Additionally, because the *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, a Common Elements Typical Project would promote non-vehicular modes of travel and reduce the consumption of fuel from passenger vehicles. A Common Elements Typical Project includes installation of bike racks to help promote cyclist trips in place of vehicle trips, and would include improvements such as the striping of bicycle lanes, installing pedestrian-oriented lighting and landscaping, and creating high-visibility crosswalks and pedestrian refuges.

In addition, for specific project development, the *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, Project Description, and included in Appendix B) include provisions to review applicable codes—which may include, but are not limited to, municipal codes, USGBC, LEED, the U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes—and incorporate water, environmental, and construction best practices. The Design Guidelines for the lighting elements also recommend use of LED or a more efficient light source and use of solar-power light fixtures along the river, wherever possible.

The Design Guidelines include the following recommendations with regard to electricity consumption for a Common Elements Typical Project:

- Use renewable energy sources (solar, wind, and water).
- Optimize building orientation for solar exposure, diffused daylight, and passive ventilation.
- Ensure high thermal performance.
- Install energy-efficient appliances.
- Use locally sourced, recycled, and recyclable materials with low embodied energy.
- Install high-albedo roof and paving materials to mitigate heat gain.
- Use green roof and pervious paving.
- Provide fixtures and controls capable of dimming lighting when occupancy loads are low (example: dimmable driver and occupancy sensor).
- Use solar-powered light fixtures along the river wherever possible.
- Use fixtures made with recycled content where possible.
- Ensure fixtures have LED cartridges that are easily replaced.
- Regularly monitor building systems and optimize usage.

These are inclusive of measures pertaining to water and solid waste, but also include measures that are relevant to energy use such as requirements to utilize electric landscaping equipment, Energy Star appliances, electric space and water heating for buildings, and other building energy consumption requirements. Implementation of these Design Guidelines, to the extent feasible, would further serve to minimize additional demand for electricity.

Given compliance with the CALGreen Code and Title 24 Part 6, the operation of a Common Elements Typical Project would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Project construction would begin as soon as 2021 and would continue for 20 months. The work would be accomplished over six phases to minimize existing trail operation and the impacts on the community. Construction would involve 5 to 10 construction workers per day and may include excavators, dump trucks, backhoes, motor graders, hydraulic impact hammers, forklifts, paving machines, and truck-mounted cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted hours. Project construction would involve a total area of approximately 24 acres. Based on the anticipated construction phasing, the average daily construction disturbance area would not exceed 0.5 acre per day. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would occur within the LA River ROW for County or Los Angeles County Flood Control District projects; however, dependent on the location and project proponent, staging areas could be located on local jurisdiction properties.

Multi-Use Trails and Access Gateways Typical Projects would have similar construction impacts as identified for Common Elements Typical Projects, although on a somewhat larger scale. Based on the construction equipment and activity assumptions used in the air quality analysis (refer to Section 3.2, *Air Quality*), a Multi-Use Trails and Access Gateways Typical Project is anticipated to utilize 153,681 gallons of diesel and 1,428 gallons of gasoline during construction. Because construction emissions are considered to be relatively short-term emissions that would cease once construction is complete, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Trucks and equipment used during proposed construction activities would also be required to comply with CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements.

As with the Common Elements Typical Projects, construction activities would not involve the use of natural gas. Similarly, the use of electricity would be minimal because diesel-operated generators would power electric construction tools.

In summary, construction of a Multi-Use Trails and Access Gateways Typical Project is anticipated to require minimal use of electricity and natural gas. With the mandatory compliance with regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-Fueled Fleets regulation) and federal fuel efficiency requirements, the use of construction-related fuels would not cause wasteful, inefficient, or unnecessary use of energy. Therefore, impacts related to energy use would be less than significant during construction.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Multi-Use Trails and Access Gateways Typical Projects, once constructed and operational, could attract up to 1,000 new daily users and 3 daily full-time employee operations and maintenance staff, resulting in the consumption of transportation fuels by visitors and staff. However, the Multi-Use Trails and Access Gateways Typical Projects would not necessarily generate new vehicle trips, as the facilities provided may merely provide an alternative location that is closer for the local community to access outdoor amenities such as bike, equestrian, and pedestrian trails. As with the Common Elements Typical Projects, the Multi-Use Trails and Access Gateways Typical Projects would also accommodate increased biking and pedestrian travel by providing access and connections along the river to adjacent communities and neighborhoods. It should be noted that the Multi-Use Trails and Access Gateways Typical Projects do not include any buildings that would consume electricity or natural gas. While nighttime lighting would be provided at the access gateways and at certain points along the trails, the electricity consumption from such lighting would be minimal as they would only be used during nighttime hours and would be energy-efficient pursuant to Title 24 and CALGreen standards. The Multi-Use Trails and Access Gateways Typical Projects would also have vegetated buffers that would be composed of planted corridors adjacent to pedestrian, bike, equestrian, and multi-use trails as a means of separating high traffic zones from low traffic zones. These vegetated buffers may require the installation of outdoor irrigation systems, which would consume electricity for the delivery of water. Based upon the CalEEMod model calculations conducted for the GHG analysis, a Multi-Use Trails and Access Gateways Typical Project is anticipated to utilize 101 MWh of electricity and 20,947 gallons of fuel.

Similar to the Common Elements Typical Projects, the Multi-Use Trails and Access Gateways Typical Projects would be required to conform to California Title 24 standards for energy-efficiency and the CALGreen Code. In addition, for specific project development, the Design Guidelines include provisions to review applicable codes—which may include, but are not limited to, municipal codes, USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes—and incorporate water, environmental, and construction best practices. The Design Guidelines for the lighting elements also recommend use of LED or a more efficient light source and use of solar-power light fixtures along the river, wherever possible.

Therefore, the operations phase of a Multi-Use Trails and Access Gateways Typical Project would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of a Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 5

Construction

Due to the similarities of the impact analysis for five of the KOP categories during the construction period, the construction impact discussions are combined. The specific location (in-channel or off-channel), configuration and design for the KOP design components has not been determined yet and would depend on numerous factors, including the project proponent and availability of funding. Construction activities for KOP Categories 1 through 5 would be similar to those discussed for the Multi-Use Trails and Access Gateways Typical Projects, above. It is not possible to quantify the specific energy usage that would be required during the construction phase of the KOPs, considering they include a variety of construction activities ranging from trail modifications to development of facilities, habitat corridors, and channel access ramps anywhere in the study area.

As with the Multi-Use Trails and Access Gateways Typical Project, construction activities would not involve the use of natural gas, and the use of electricity would be minimal because diesel-operated generators would power electric construction tools. While there may be more use of construction-related fuels due to the earth-moving and grading associated with the KOPs as compared to the Typical Projects, the equipment used for these earth-moving activities would comply with regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-Fueled Fleets regulation) and federal fuel efficiency requirements. Therefore, construction of KOP Categories 1 through 5 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 1

Operations

Certain design components of the Trails and Access Gateways KOP inform the Multi-Use Trails and Access Gateways Typical Project, and are analyzed above in detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed below include those listed in Chapter 2, Section 2.5.1.2, *Kit of Parts (KOP)* under *KOP Category 1: Trails and Access Gateways*: equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor.

Due to the passive nature of the uses included within KOP Category 1 (trails, vegetated buffers, and habitat corridors), it is not anticipated that its components would result in a significant use of electricity, natural gas, or transportation fuels. Lighting along the trails would be energy-efficient, pursuant to Title 24 and CALGreen standards. Therefore, operation of KOP Category 1 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Operations

Similar to KOP Category 1, many of the design components would be passive during the operations phase and would not utilize energy resources. The primary difference would be the energy required to power the hydraulic pumps for KOP Category 4. The pumps would be used to remove water from the river and/or put water in the river from adjacent floodplains.

It is anticipated that the hydraulic pumps would be powered with electricity but that they would operate seasonally, primarily during the rainy season. Because the pumps would operate intermittently and only as needed, the energy use impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

Off-channel land assets can be used for projects that are essential to the *2020 LA River Master Plan* but cannot be located in the channel or adjacent ROW. Off-channel land assets include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks.

Off-channel land asset projects would likely entail greater levels of construction and operation than the other five KOP categories. As with KOP Category 1, it is not possible to quantify the specific energy usage that would be required during the construction phase. Similar to KOP Category 1, construction activities would not involve the use of natural gas, and the use of electricity would be minimal because diesel-operated generators would power electric construction tools. Also, while there may be more use of construction-related fuels associated with KOP Category 6 compared to the other KOP categories, the equipment used for these activities would comply with relevant energy efficiency standards and regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-Fueled Fleets regulation) and federal fuel efficiency requirements. Because the short-term construction emissions would cease once construction activities have been completed, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Therefore, construction of KOP Category 6 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Similar to construction, the operations phase of KOP Category 6 would likely be more intense than for the other KOP categories due to the off-channel land assets. Energy use could include lighting for sports fields, and delivery of water for urban agriculture and nursery operations. However, this KOP

category would also designate space for solar panel installations to promote renewable energy production along the river.

As with the other KOP categories, (where applicable) operations would comply with California Title 24 standards for energy-efficiency. In addition, the project may comply with USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes, as feasible. Therefore, the operations phase for KOP Category 6 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. These 107 projects are identified in the *2020 LA River Master Plan* in addition to several other planned projects included in other LA River published plans (such as the *2007 LA River Revitalization Master Plan*, the *LA River Ecosystem Restoration Integrated Feasibility Report* and its *Recommended Plan – ARBOR Study*, and the 2017 *Lower LA River Revitalization Plan*). The *2020 LA River Master Plan* includes an opportunity parcel analysis that identifies the 107 projects and the potential opportunities and constraints at sites along the corridor taking into account the LA River ROW, adjacent land assets, and underlying geophysical conditions.

As described in Chapter 2, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large project (150+ acres/10+ miles in size). All of the projects envisioned in the *2020 LA River Master Plan* would improve connectivity across the river, provide new ecological habitat, increase recreation opportunities, and improve flood protection. As the location and extent of projects that could be proposed under any of the KOP categories is unknown at this time, it is not possible to calculate exactly what the energy use would be during construction and operations. However, as discussed above for the two Typical Projects and KOP Categories 1 through 6, each project site would comply with California Title 24 standards and the CALGreen Code for energy-efficiency; in addition, the Design Guidelines recommend that projects consider incorporating requirements of USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-

to-Cradle, and Green Globes codes. Therefore, the overall *2020 LA River Master Plan* implementation would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.5(b) Would the proposed Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Typical Projects

Common Elements

Construction

As discussed above, the energy conservation policies and plans relevant to the entire *2020 LA River Master Plan* include the California Title 24 energy standards, 2019 CALGreen building code, City of Los Angeles Green Building Code, *Los Angeles County General Plan* goals and policies related to energy resources, and all other relevant general plan goals and building codes of the other jurisdictions along the LA River. In addition, where applicable, a Common Elements Typical Project would comply with the USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes.

During construction activities, Common Elements Typical Projects would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. Based on the above, Common Element Typical Projects would not conflict with adopted energy conservation plans, or violate State or local energy standards.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Common Elements Typical Projects would be required to comply with the CALGreen Code and Title 24. As introduced in the regulatory setting above, Title 24, Part 6 of the California Code of

Regulations (also known as the California Building Energy Efficiency Standards) establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient or unnecessary consumption of energy and enhance outdoor and indoor environmental quality.

In addition, as discussed above under Impact 3.5(a), the Design Guidelines include the following recommendations with regard to electricity consumption for a Common Elements Typical Project:

- Utilize renewable energy sources (solar, wind, and water).
- Optimize building orientation for solar exposure, diffused daylight, and passive ventilation.
- Ensure high thermal performance.
- Install energy-efficient appliances.
- Use locally sourced, recycled, and recyclable materials with low embodied energy.
- Install high-albedo roof and paving materials to mitigate heat gain.
- Use green roof and pervious paving.
- Provide fixtures and controls capable of dimming lighting when occupancy loads are low (example: dimmable driver and occupancy sensor).
- Use solar-powered light fixtures along the river wherever possible.
- Use fixtures made with recycled content where possible.
- Ensure fixtures have LED cartridges that are easily replaced.
- Regularly monitor building systems and optimize usage.

These Design Guidelines would further minimize additional demand for electricity, where implemented. In complying with the CALGreen Code and Title 24, the Common Elements Typical Projects would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

As discussed above, the energy conservation policies and plans relevant to the entire *2020 LA River Master Plan* include the California Title 24 energy standards, 2019 CALGreen building code, City of Los Angeles Green Building Code, *Los Angeles County General Plan* goals and policies related to

energy resources, and all other relevant general plan goals and building codes of the other jurisdictions along the LA River. In addition, where applicable, the Multi-Use Trails and Access Gateways Typical Projects would comply with the USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes, as feasible.

During construction activities, the Multi-Use Trails and Access Gateways Typical Project would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. Based on the above, the Multi-Use Trails and Access Gateways Typical Projects would not conflict with adopted energy conservation plans, or violate State or local energy standards. Therefore, project impacts associated with regulatory consistency would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

For the same reason provided under *Common Elements*/*Operations* above, the operation of the Multi-Use Trails and Access Gateways Typical Project would not cause with or obstruct a State or local plan for renewable energy or energy efficiency. The reader is referred to the discussion under *Common Elements Typical Project/Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

Construction activities for all of the KOP categories would be similar to those discussed for Typical Projects above and would not involve the use of natural gas, and the use of electricity would be minimal because diesel-operated generators would power electric construction tools. And while there may be more use of construction-related fuels due to the earth-moving and grading associated with the KOP categories compared to the Typical Projects, the equipment used for these earth-moving activities would comply with regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-

Fueled Fleets regulation) and federal fuel efficiency requirements. Therefore, construction of KOP Categories 1 through 6 would not cause wasteful, inefficient, or unnecessary use of energy. Impacts would be less than significant during construction.

Similar to what was discussed for the Typical Projects, during construction activities, KOP components would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. Therefore, the proposed Project would not conflict with adopted energy conservation plans, or violate State or local energy standards during the construction phase. Therefore, project impacts associated with regulatory consistency would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project, and are analyzed above in more detail. Therefore, for potential impacts of these design components, see above. The design components analyzed in this section include those listed in Chapter 2, Section 2.5.1.2, *Kit of Parts (KOP)* under *KOP Category 1: Trails and Access Gateways*.

Operations

As discussed above, the energy conservation policies and plans relevant to KOP Category 1 include the California Title 24 energy standards, the 2019 CALGreen building code, and the County and City of Los Angeles Green Building codes. As the energy conservation policies are mandatory, the proposed Project would not conflict with applicable plans for renewable energy or energy efficiency. In addition, the proposed Project includes Design Guidelines that state the project components would comply with Title 24, Part 6 Building Energy Efficiency Standards, and local building codes and zoning regulations. With respect to transportation-related energy usage, the proposed Project would comply with the goals of the Southern California Association of Government's (SCAG's) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, and any vehicle trips (e.g., landscaping and maintenance employees) generated during project operations would comply with CAFÉ fuel economy standards.

Based on the above, the proposed Project would not conflict with adopted energy conservation plans, or violate State or local energy standards. Therefore, impacts associated with regulatory consistency would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operation*s for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall *2020 LA River Master Plan* Implementation

Construction and Operations

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. These 107 projects are identified in the Master Plan in addition to several other planned projects included in other LA River published plans (such as the *2007 LA River Revitalization Master Plan*, the *LA River Ecosystem Restoration Integrated Feasibility Report* and its *Recommended Plan – ARBOR Study*, and the *2017 Lower LA River Revitalization Plan*). The *2020 LA River Master Plan* includes an opportunity parcel analysis that identifies the 111 projects and the potential opportunities and constraints at sites along the corridor taking into account the LA River ROW, adjacent land assets, and underlying geophysical conditions.

As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large projects (150+ acres/10+ miles in size). All of the projects envisioned in the *2020 LA River Master Plan* would improve connectivity across the river, provide new ecological habitat, increase recreation opportunities, and improve flood protection. Because the location and extent of projects that could be proposed under any of the KOP categories is unknown, it is not possible to calculate exactly what the energy use would be during construction and operations. However, as discussed above for the two Typical Projects and KOP Categories 1 through 6, each project site would comply with California Title 24 standards for energy-efficiency as well as municipal codes; in addition the Design Guidelines recommend incorporation of best practices from the USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes, where feasible. The *2020 LA River Master Plan* projects would also comply with Design Guidelines pertaining to energy efficiency, as well as all local building codes and green building standards. Therefore, the overall *2020 LA River Master Plan* implementation would not conflict with adopted energy conservation plans, or violate State or local energy standards.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts related to energy would be the collective geographic area covered by the individual service providers. This would include the service areas for SCE, LADWP, and individual jurisdictions' energy providers. This extends beyond the study area to help accurately identify any existing cumulative condition for energy in the greater County area. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2, *Cumulative Impacts*.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact related to energy, if, in combination with other projects within the greater Los Angeles region, it would result in the wasteful, inefficient, or unnecessary consumption of energy.

Cumulative Condition

Cumulative growth and development in the greater Los Angeles region would result in additional demand, resulting in increased consumption of electricity and natural gas. The anticipated power and natural gas demands for the buildout of the *City of Los Angeles Framework Plan* would be considered to be cumulatively significant in the context of future growth in Los Angeles County. Cumulative electricity demands within the County in 2035 would total about 15.1 billion kilowatt hours per year (15,100 gigawatt hours per year). Cumulative natural gas demands in 2035 would total about 232 million therms per year (61.6 million cubic feet of natural gas per day). These demand projections are within the forecasts for the individual utility providers and these cumulative impacts are considered to be less than significant.

Implementation of the Los Angeles County General Plan and the general plans of individual jurisdictions in the study area, as well as transportation projects included in the 2020 Regional Transportation Plan/Sustainable Communities Strategy, when taken into consideration with other development and infrastructure projects within the SCAG region and surrounding areas, would have the potential to increase the consumptive use of energy, constituting a significant cumulative impact. Therefore, there is a cumulative condition related to energy.

Contribution of the Project to Cumulative Impacts

Construction activities under the Project would rely primarily on diesel-powered generators to produce the electricity required to operate electrical equipment. It is anticipated that the utilities would address demands within their respective service territories, which are under the oversight of the CPUC. Furthermore, the proposed Project would not have a detrimental effect on local and regional energy supplies or requirements for additional capacity. In addition, the proposed Project would not impede a local utility's ability to meet the Project's peak- and base-period demand for electricity and other forms of energy.

Construction activities associated with the Project would be relatively short-term and would represent a relatively minor demand on local and regional fuel supplies that would be easily accommodated. Compliance with anti-idling regulations would further reduce fuel consumption. As such, construction activities associated with the Project would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts.

During operation of all subsequent projects under the *2020 LA River Master Plan*, each project site would comply with California Title 24 standards and the CALGreen Code for energy-efficiency. The *2020 LA River Master Plan* implementation would not cause wasteful, inefficient, or unnecessary use of energy. Therefore, the proposed Project would not result in cumulatively considerable contributions to impacts on energy supplies.

Section 3.6
Geology, Soils, and Paleontological Resources

3.6.1 Introduction

This section describes the geographic and regulatory setting, as well as the potential project impacts related to geology, soils, seismicity, and paleontological resources. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.6.2 Setting

3.6.2.1 Geologic Setting

Regional Setting

Geology

The upper portion of the LA River (north of the Hollywood Hills and Santa Monica Mountains) is within the San Fernando Valley. The San Fernando Valley and adjacent mountains are part of the Transverse Ranges geomorphic province that is composed of parallel, east- to west-trending mountain ranges and sediment-filled valleys. The province is one of the most seismically active in the U.S. The distinctive geological structure of the Transverse Ranges is dominated by the effects of north-south compressive deformation resulting in thrust faulting, strike-slip faulting, and bedrock folding (USGS 2016).

The lower portion of the LA River is within the Los Angeles Basin. The present-day Los Angeles Basin is a northwest-trending alluvial plain, sometimes called the coastal plain, about 50 miles long and 20 miles wide, on the coast of Southern California, bounded on the north by the Santa Monica Mountains and the Elysian, Repetto, and Puente Hills and on the east and southeast by the Santa Ana Mountains and San Joaquin Hills. The low land surface slopes gently south or seaward, interrupted by the Coyote Hills near the northeast margin, a line of elongated low hills to the south and west that

extend from Newport Bay northwest to Beverly Hills, and by the Palos Verdes peninsula along the southwest extremity (Ninyo and Moore 2018).

The physiographic basin is underlain by a structural depression, parts of which have been the sites of discontinuous deposition since Late Cretaceous time (last period of the Mesozoic era) and of continuous subsidence and chiefly marine deposition since middle Miocene time. The most distinctive geologic characteristic of the Los Angeles Basin is its structural relief and complexity in relation to its age and size. Continuous subsidence and deposition in late Miocene and Pliocene time caused variations in lithology and thickness in most of the sedimentary rock units; contemporaneous folding and faulting along with erosion resulted in numerous regional and local unconformities, disconformities, and stratigraphic discontinuities across faults. The Los Angeles Basin is California's most prolific oil-producing district in proportion to its size: at the end of 1961, its cumulative production was nearly half that of the entire State. For more information on current oil production in the study area, see Section 3.11, *Mineral Resources.*

Coastal Southern California includes parts of three geomorphic provinces: Coast Ranges, Transverse Ranges, and Peninsular Ranges. The western parts of all three provinces are submerged below the Pacific Ocean. The Coast Ranges province, which extends north from the Transverse Ranges province into central California, and the Peninsular Ranges province, which extends south into Baja California, have conspicuous northwest trends and are transected by the east-trending ridges and valleys of the Transverse Ranges province. The present-day Los Angeles Basin is at the northern end of the Peninsular Ranges province.

The stratigraphic units of southwestern California, including those of the Los Angeles Basin, are separated into two large groups by a pronounced unconformity of mid-Cretaceous age. Below the unconformity are basement rocks composed of metamorphic and igneous crystalline rocks of Precambrian to early Late Cretaceous age; above the unconformity is a thick succession of marine and non-marine sedimentary and volcanic rocks of Late Cretaceous to Recent age, the superjacent rocks (Yerkes et al. 1965).

Surficial deposits identified in the *2020 LA River Master Plan* study area (below) include a general description of their characteristics found within each jurisdiction's specific general plans. However, according to the Natural Resources Conservation Service's Web Soil Survey, primary soil components along and adjacent to the river footprint are classified as Urban Land; secondary soil characteristics vary significantly (Natural Resources Conservation Service 2019). Urban Land typically consists of areas with high population density in a largely built environment, which is the most common description of the land surrounding the LA River corridor. According to the Natural Resources Conservation Service, human-transported materials, human-altered materials, or minimally altered or intact "native" soils can significantly change existing soils and exhibit a wide variety of conditions and properties (U.S. Department of Agriculture 2019).

Faulting and Seismicity

The faults in Southern California are classified as active, potentially active, and inactive. As defined by the California Geological Survey (CGS), active faults are those that have ruptured within Holocene time or approximately the last 11,000 years. Potentially active faults are those that show evidence of movement during Quaternary time (approximately the last 1.6 million years), but for which evidence of Holocene movement has not been established. Inactive faults have not ruptured in the last approximately 1.6 million years (Ninyo and Moore 2018).

Principal Faults

Principal known active faults in the Los Angeles area are listed below:

- Anacapa-Dume
- Hollywood
- Newport–Inglewood
- Northridge
- Oak Ridge
- Palos Verdes
- Puente Hills Blind Thrust
- Raymond
- San Andreas
- San Gabriel
- San Joaquin Hills Blind Thrust
- San Jose
- Santa Monica
- Santa Susana
- Sierra Madre
- Simi-Santa Rosa
- Upper Elysian Park Blind Thrust
- Verdugo
- Whittier

Historic Earthquakes

Surface Rupture

Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. According to CGS's *Earthquake Zones of Required Investigation* (CGS 2016), the Newport–Inglewood and Hollywood fault zones cross the LA River footprint and, although individual projects are not known at this time, it is possible that some sites may be within an Earthquake Fault Zone (EFZ). Figure 3.6-1 identifies the principal faults.

Ground Motion

The Los Angeles area is seismically active, as is the majority of Southern California. Table 3.6-1 lists known active faults in the area and the maximum moment magnitude, as published by the U.S. Geological Survey (USGS). *Magnitude* is a number that characterizes the relative size of an earthquake and is based on measurement of the maximum motion recorded by a seismograph.

Earthquake events from one of the regional active or potentially active faults could result in strong ground shaking, which could affect any site within the LA River area. The level of ground shaking at a given location depends on many factors, including the size and type of earthquake, distance from the epicenter, and subsurface geologic conditions.

Table 3.6-1. Principal Faults and Maximum Moment Magnitude

Fault	Maximum Moment Magnitude (M_{max})
Anacapa–Dume	7.2
Hollywood	6.7
Newport–Inglewood	7.5
Northridge	6.9
Oak Ridge	7.2
Palos Verdes	7.7
Puente Hills Blind Thrust	7.0
Raymond	6.8
San Andreas	8.2
San Gabriel	7.4

Fault	Maximum Moment Magnitude (M_{max})
San Joaquin Hills Blind Thrust	7.1
San Jose	6.7
Santa Monica	7.4
Santa Susana	6.9
Sierra Madre	7.3
Simi–Santa Rosa	6.9
Upper Elysian Park Blind Thrust	6.7
Verdugo	6.9
Whittier	7.9

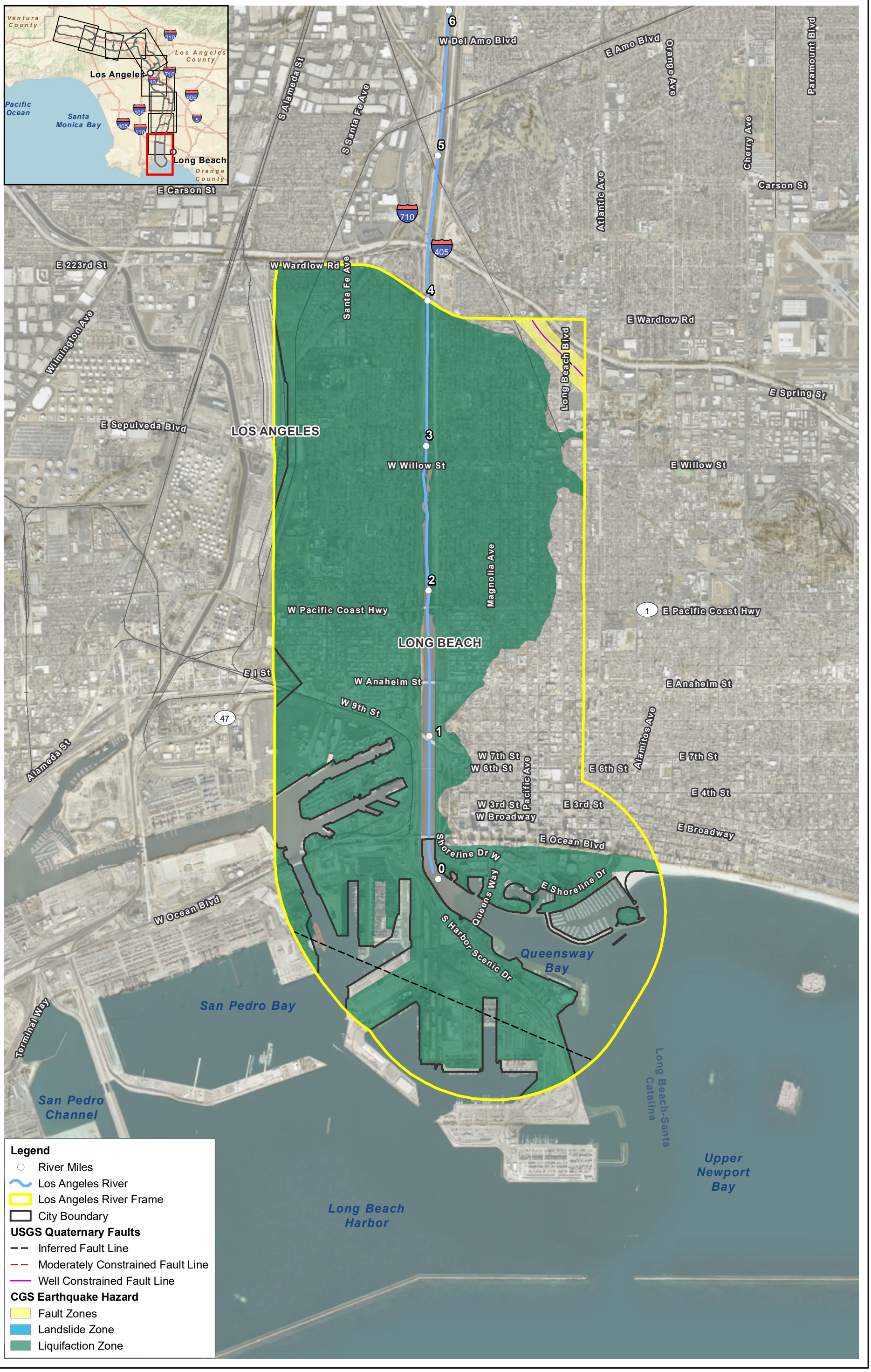
Secondary Seismic Effects

Liquefaction occurs when saturated, low-density, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. Liquefaction more often occurs in areas underlain by silts and fine sands and where shallow groundwater exists. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking. The potential damaging effects of liquefaction include differential settlement, loss of ground support, ground cracking, and heaving and cracking of slabs due to sand boiling or settlement. Portions of the Los Angeles Basin, San Fernando Valley, San Pedro area, and other low-lying areas with shallow groundwater are considered susceptible to liquefaction. According to CGS's *Earthquake Zones of Required Investigation*, a large portion of the LA River is within a liquefaction zone. See Figures 3.6-1 through 3.6-9 for liquefaction zones.

Landslides, slope failures, and mudflows of earth materials generally occur where slopes are steep and/or the earth materials are too weak to support themselves. Earthquake-induced landslides may also occur due to seismic ground shaking. According to CGS's *Earthquake Zones of Required Investigation*, areas adjacent to the LA River near Elysian Park, Glendale, and Burbank are in landslide zones (California Department of Conservation 2019). Figures 3.6-5 through 3.6-9 depict areas that are generally susceptible to landslides.

Subsidence is characterized as a sinking of the ground surface relative to surrounding areas and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground, such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to sidewalks, pipelines, and other improvements. Areas throughout the Los Angeles Basin used for oil extraction have had various degrees of land subsidence.

Compressible soils are generally composed of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. *Soil collapse* is a phenomenon in which the soils undergo a significant decrease in volume with an increase in moisture content, with or without an increase in external loads. Buildings, structures, and other improvements may be subject to excessive settlement-related distress when compressible soils or collapsible soils are present. Given the



Source: County of Los Angeles; ESRI

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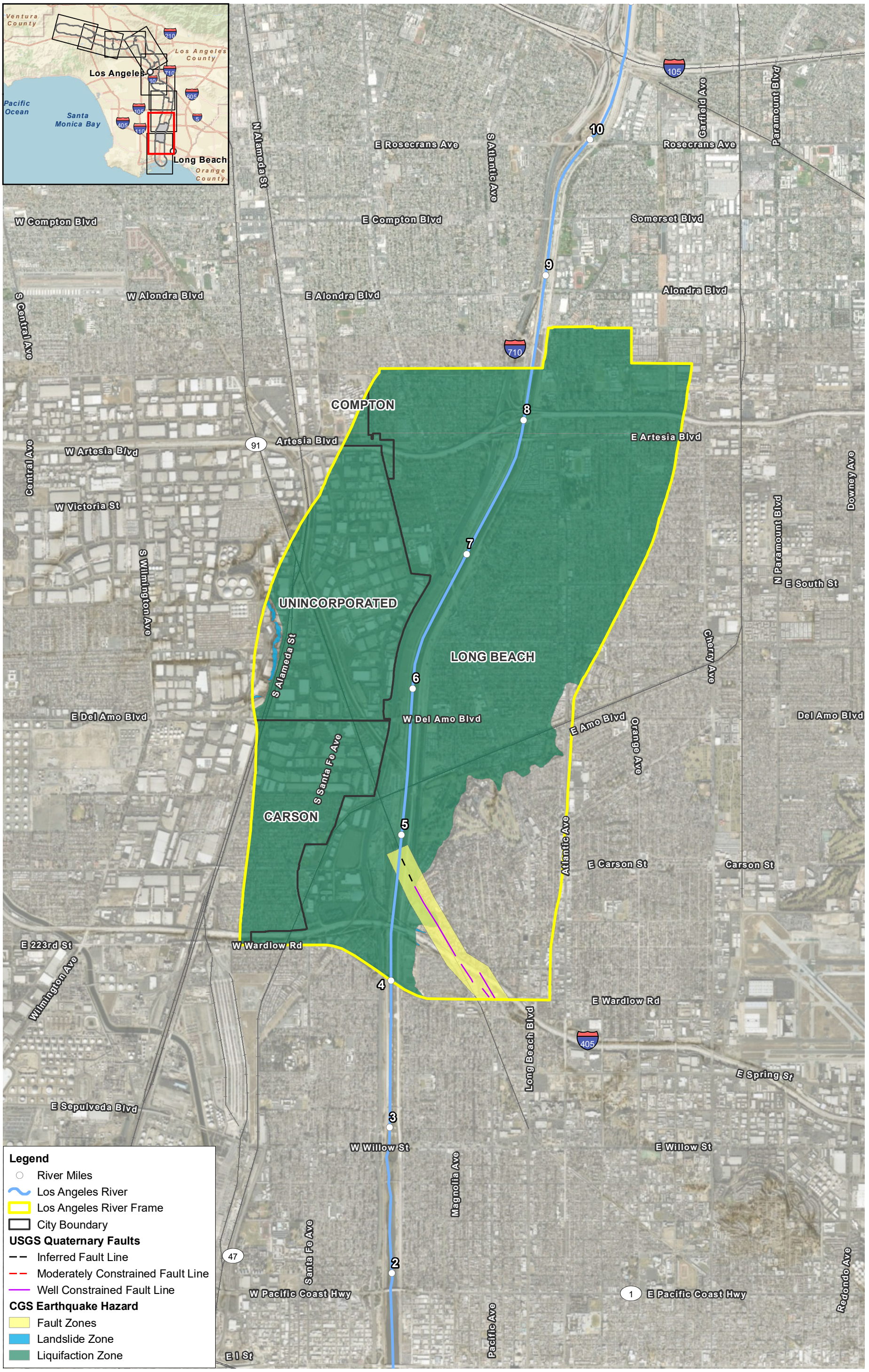
Frame 1 - Estuary
Earthquake Hazard Zones



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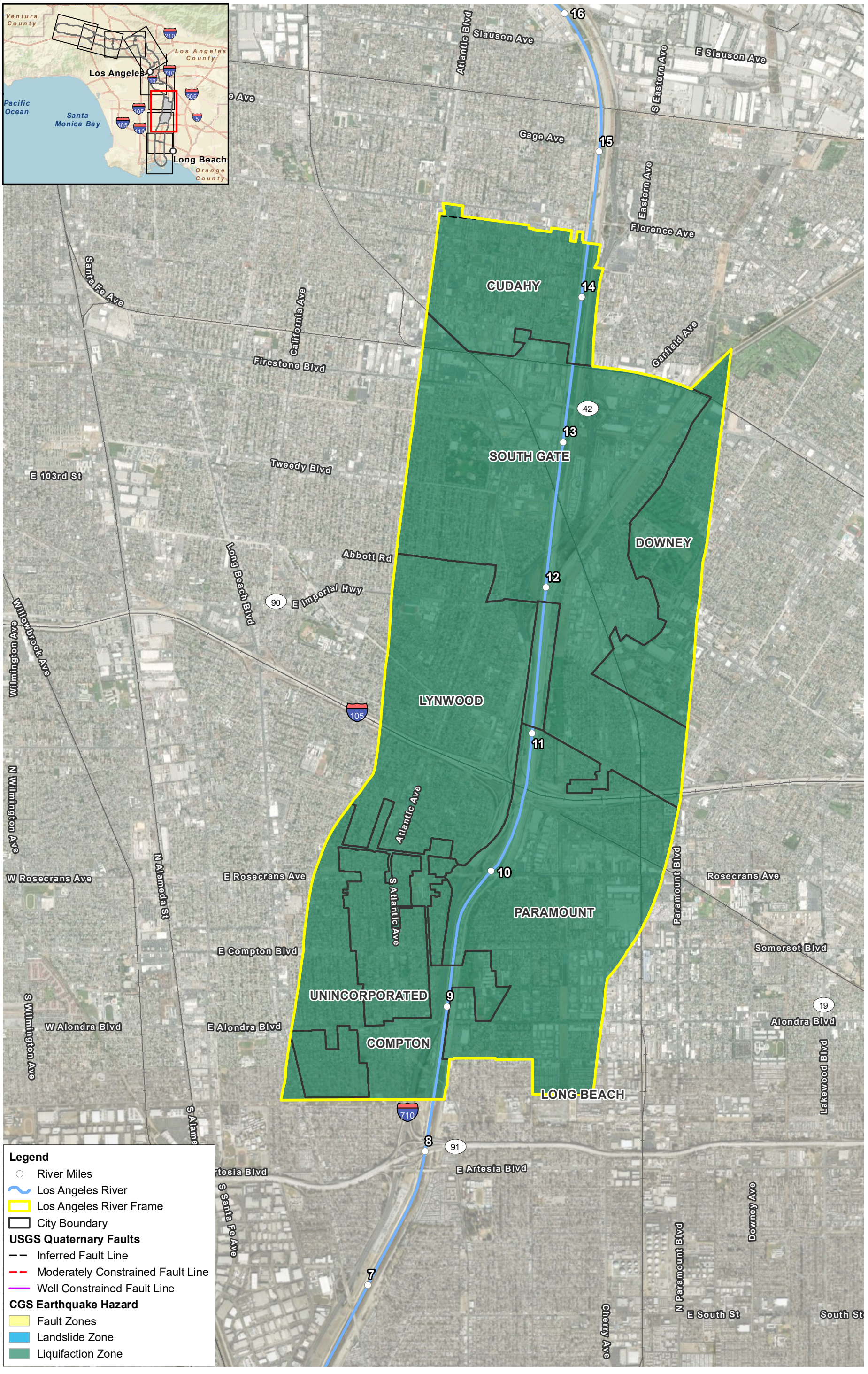
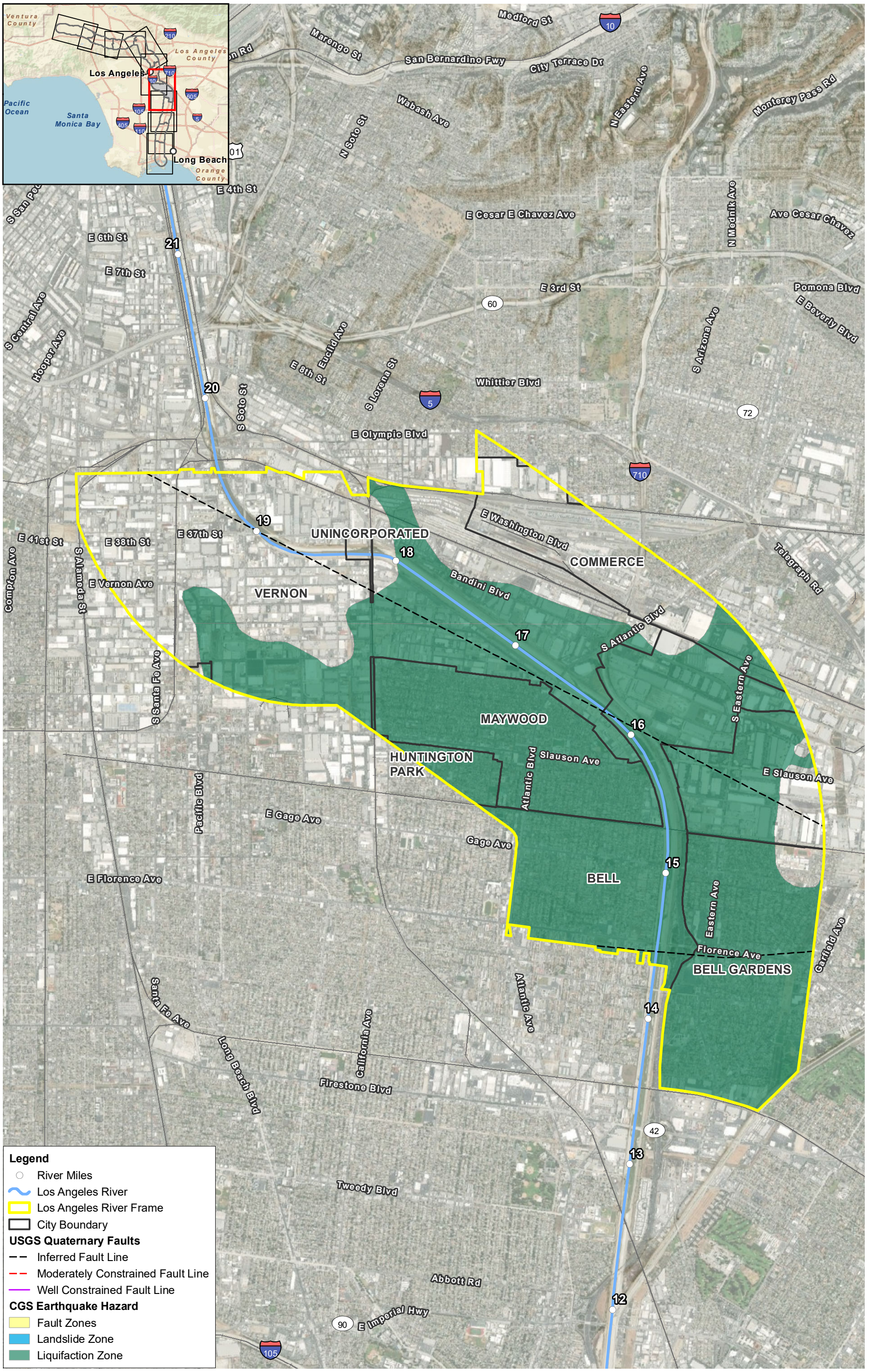
Source: County of Los Angeles; ESRI

Frame 2 - South Plain
Earthquake Hazard Zones



Source: County of Los Angeles; ESRI

Frame 3 - Central Plain Earthquake Hazard Zones



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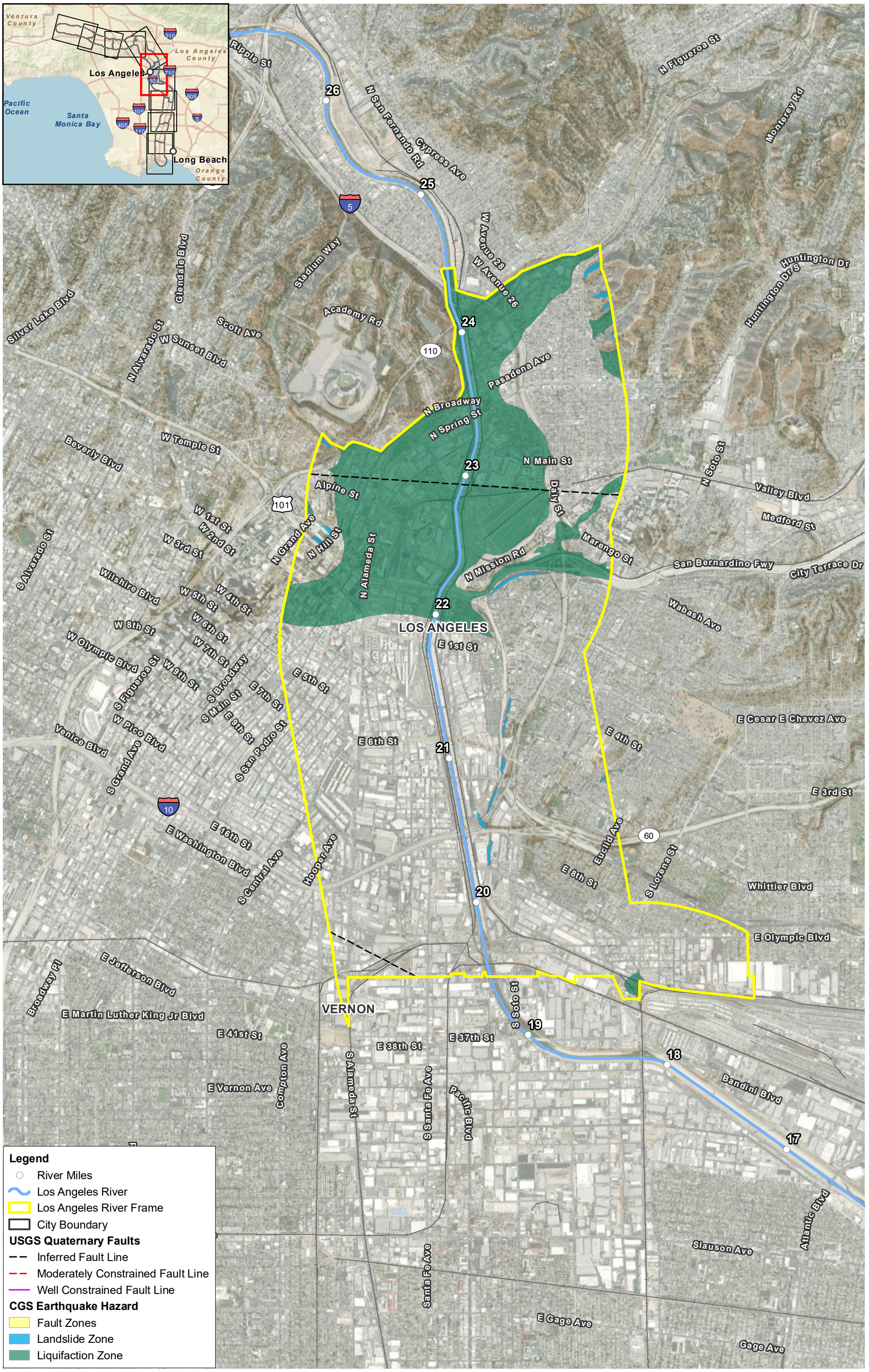
Source: County of Los Angeles; ESRI

Frame 4 - North Plain
Earthquake Hazard Zones



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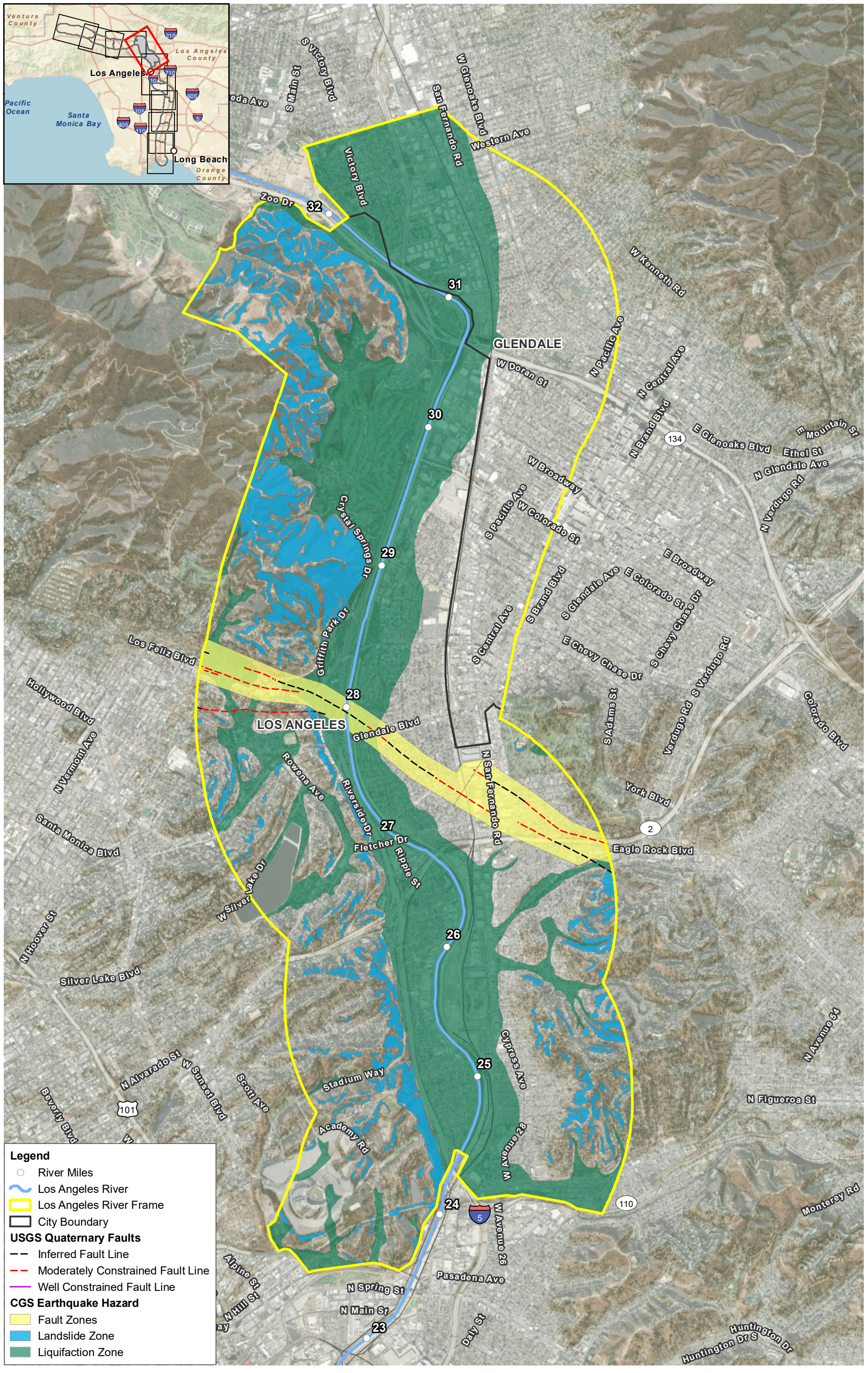
Source: County of Los Angeles; ESRI

Frame 5 - Heights
Earthquake Hazard Zones



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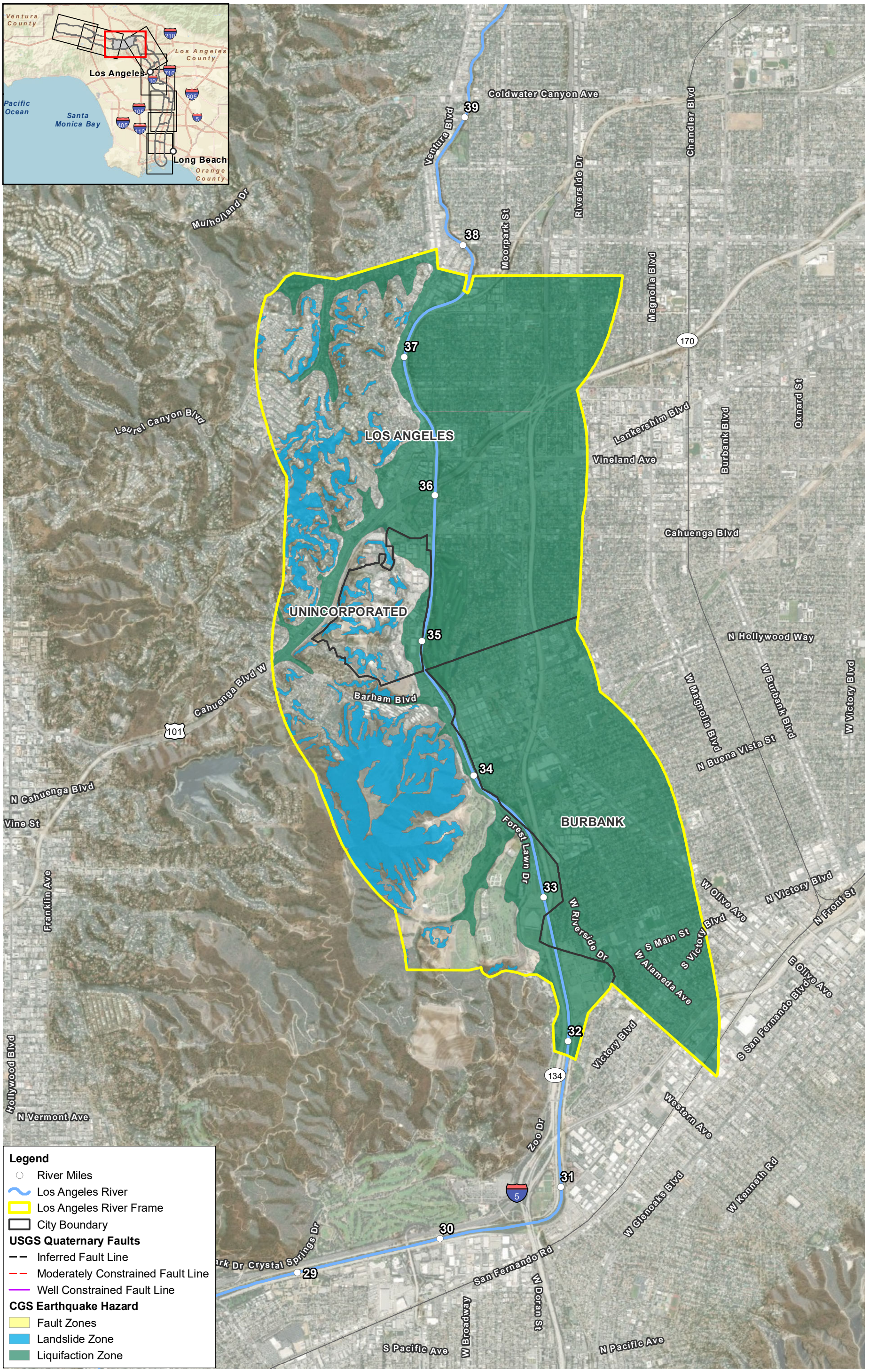
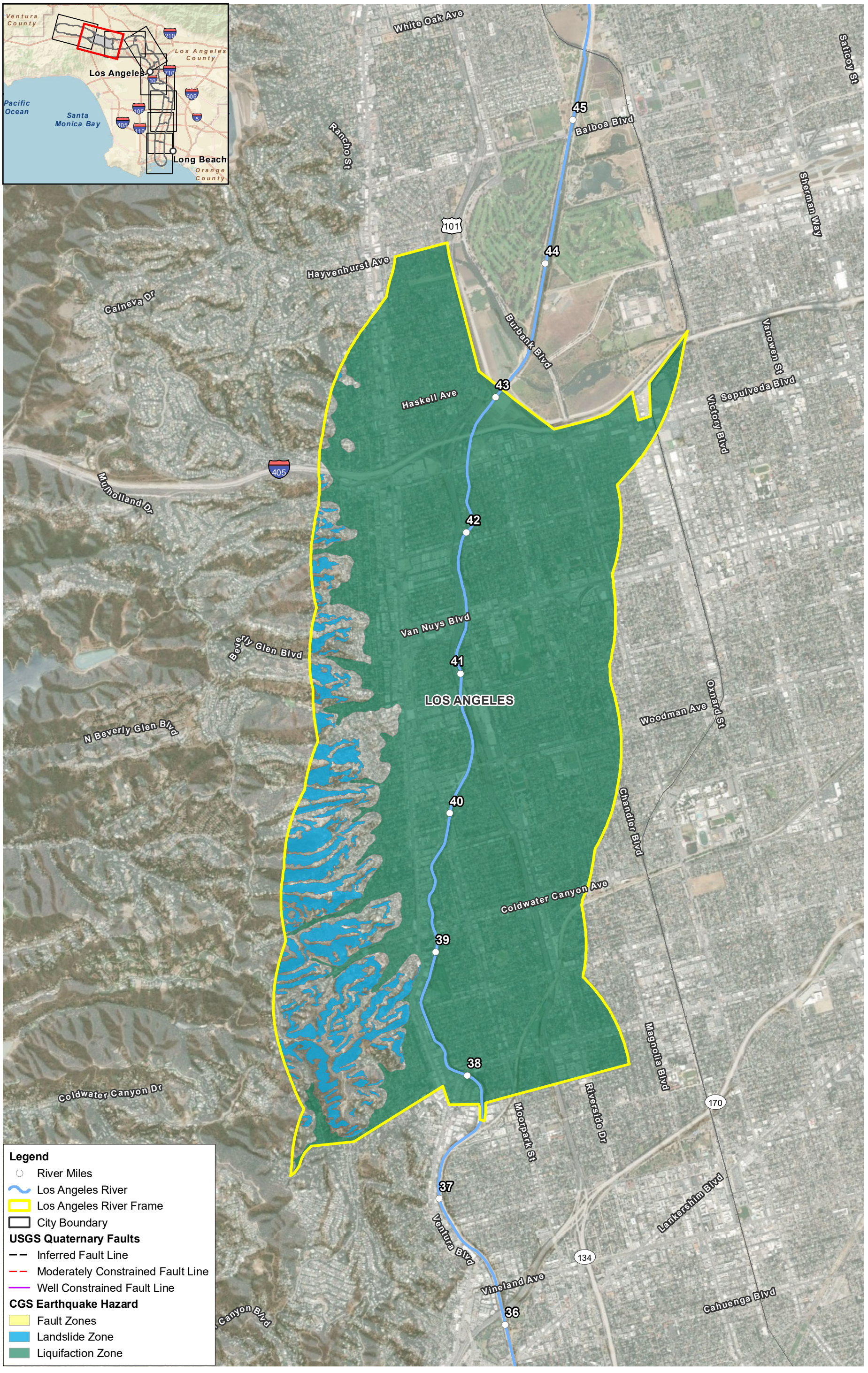
Source: County of Los Angeles; ESRI

Frame 6 - Narrows
Earthquake Hazard Zones



Source: County of Los Angeles; ESRI

Frame 7 - East Valley
Earthquake Hazard Zones



Source: County of Los Angeles; ESRI

Frame 8 - Mid Valley Earthquake Hazard Zones

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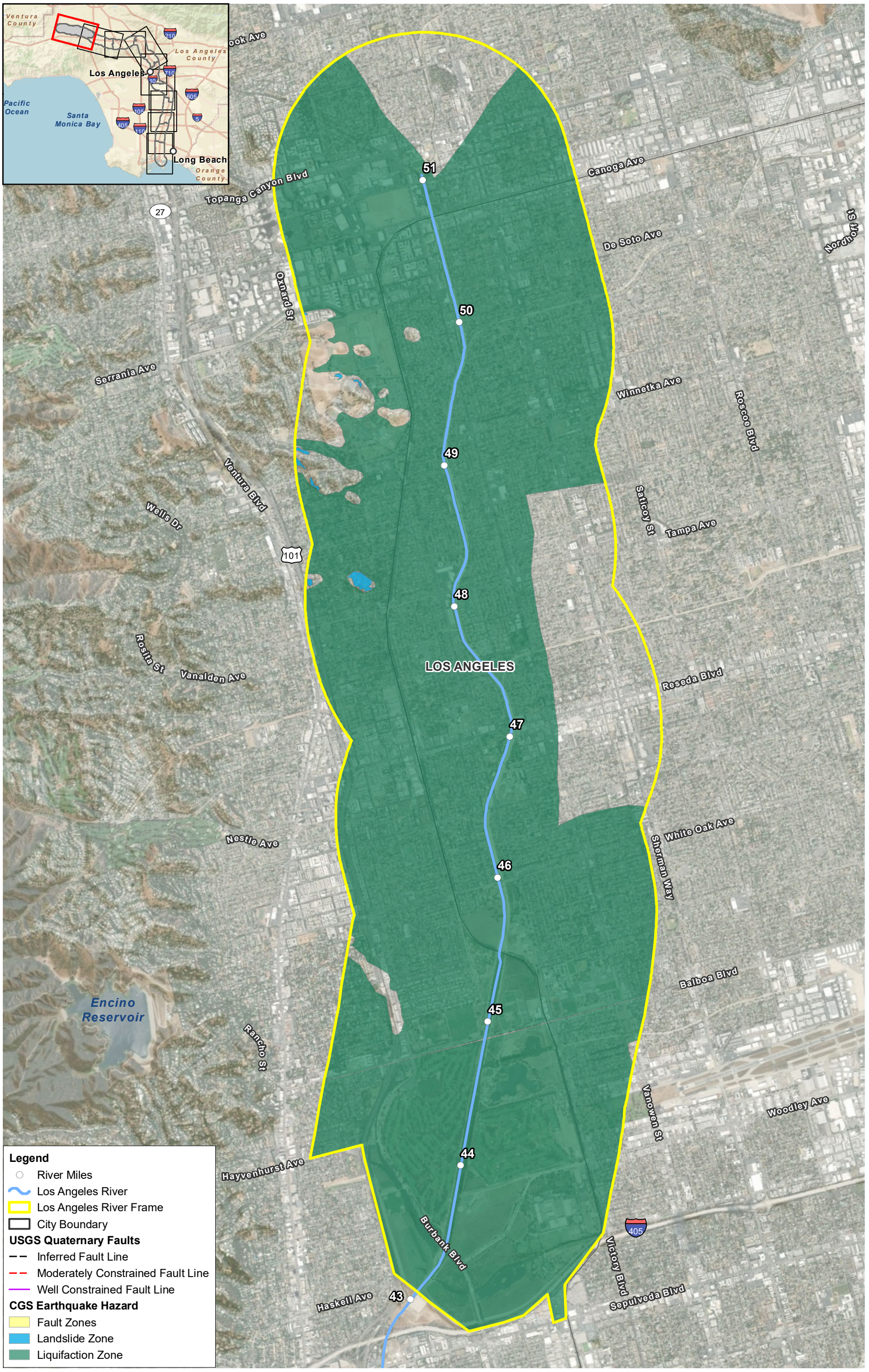

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Source: County of Los Angeles; ESRI

Frame 9 - West Valley Earthquake Hazard Zones

geographic area covered by the LA River, it is possible to encounter compressible soils in some areas.

Expansive soils are fine-grained soils (generally high-plasticity clays) that can undergo a significant increase in volume with an increase in water content, as well as a significant decrease in volume with a decrease in water content. Changes in the water content of highly expansive soils can result in severe distress for structures constructed on or against the soils. Given the geographic area covered by the LA River, it is possible to encounter expansive soils in some areas.

Paleontological Resources

Paleontology is the study of life forms of the past, especially prehistoric life forms, through the examination of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this PEIR, *paleontological resources* are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (i.e., rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the specific locations where fossil remains have been collected, referred to as *collecting localities*, and geologic formations containing those localities.

A paleontological records search was conducted for the study area through the Los Angeles County Natural History Museum on July 20, 2020 (McLeod 2020). The results of the records search indicate that the entire study area contains geologic formations considered sensitive for paleontological vertebrate fossil resources. These deposits range in age from the youngest Quaternary period (2.6 million years ago to present) to the Middle Miocene period (15.97 million years ago). The sensitive sedimentary geologic deposits are generally buried beneath overlying younger alluvial deposits but, depending on location, setting, and previous development, these sensitive deposits can be at or near the existing ground surface. Younger alluvial deposits are not considered sensitive for containing significant paleontological resources because of their recent geologic age and lack of significant fossiliferous deposits; however, the lower zones of the overlying younger alluvial deposits have increased potential for containing significant vertebrate fossils and should be monitored. The depth ranges for the interfaces between geologic deposits is variable across the study area, ranging from the current ground surface to depths of more than 100 feet below ground surface (bgs), depending upon location.

The Impact Mitigation Guidelines Revisions Committee of the Society of Vertebrate Paleontology (SVP) Standard Guidelines include procedures for the investigation, collection, preservation, and cataloguing of fossil-bearing sites, including the designation of paleontological sensitivity (SVP 2010). These guidelines are widely accepted among paleontologists and followed by most investigators and identify the two key phases of paleontological resource protection as (1) assessment and (2) implementation. *Assessment* involves identifying the potential for a project site or area to contain significant nonrenewable paleontological resources that could be damaged or destroyed by project excavation or construction. *Implementation* involves formulating and applying measures to reduce such adverse effects.

For the assessment phase, SVP defines the level of potential as one of four sensitivity categories for sedimentary rocks: High, Undetermined, Low, and No Potential (SVP 2010).

- **High Potential**. Assigned to geologic units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered and to sedimentary rock units suitable for the preservation of fossils ("middle Holocene and older, fine-grained fluvial sandstones…fine-grained marine sandstones, etc. Paleontological potential consists of the potential for yielding abundant fossils, a few significant fossils, or recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data.").
- **Undetermined Potential**. Assigned to geologic units "for which little information is available concerning their paleontological content, geologic age, and depositional environment." In cases where no subsurface data already exist, subsurface site investigations can sometimes assess paleontological potential.
- **Low Potential**. Field surveys or paleontological research may allow determination that a geologic unit has low potential for yielding significant fossils (e.g., basalt flows). Mitigation is generally not required to protect fossils.
- **No Potential**. Some geologic units have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites). Mitigation is not required.

The main geologic units present across the study area are presented in Table 3.6-2, which includes the name of the geologic unit, the geologic age of the deposit, the sensitivity for significant paleontological resources according to the records search, and project frames where considered present (McLeod 2020). Table 3.6-3 provides a brief description of each geologic unit presented in Table 3.6-2.

Table 3.6-2. Geologic Units by Frame and Paleontological Sensitivity in the Study Area

Geologic Unit*	Geologic Unit Symbols*	Geologic Age	Paleontological Sensitivity	Fossil Types	Project Frame
Artificial Fill	Af	Modern	Low Potential	N/A	All frames
Landslide	Qls	Recent	Unknown	Unknown	6, 8
Younger Alluvium	Qg Qa, Qw, Qyf	Quaternary	Undetermined	Unknown	All frames
Older Quaternary Alluvium	Qoa, Qae Qof	Quaternary	High Potential	Non-marine vertebrates	1,2, 3, 4, 5, 6 7, 8
Old Lacustrine	Qol, Qop, Qops	Quaternary	Unknown	Unknown	1 and 2
Fernando Formation	Tfr	Pliocene	High Potential	Marine vertebrates	5
Unnamed Shale	Tud	Miocene	High Potential	Marine vertebrates	8, 7
Unnamed Shale	Tush, Tuss	Miocene	High Potential	Marine vertebrates	9, 5
Monterey Formation	Tm, Tmss Tmsh, Tmsl	Miocene	High Potential	Marine vertebrates	8, 7, 6 5

Geologic Unit*	Geologic Unit Symbols*	Geologic Age	Paleontological Sensitivity	Fossil Types	Project Frame
Upper Topanga Formation	Ttui,Ttusi, Ttus, Ttusc, Ttucg	Middle Miocene	High Potential	Marine vertebrates	8, 7
Middle Topanga	Tvb, Tts	Middle Miocene	Unknown	Unknown	8
Lower Topanga	Ttlc, Ttls	Middle to Early Miocene	Unknown	Unknown	8, 7
Dike Rocks	d	Pre-Tertiary?	No Potential	None	6 and 7
Granitic Rocks - Intrusive	qd, grd	Cretaceous	No Potential	None	6 and 7

Sources: McLeod 2020; Bedrossian et al. 2012; Saucedo et al. 2006; Campbell et al. 2014; Dibblee and Ehrenspeck 1989, 1991a, 1991b, 1991c, 1992a, 1992b; Note: all references to geologic units are based on Dibblee, unless otherwise noted.

Table 3.6-3. Description of Main Geologic Units from the Paleontological Analysis

Geologic Units	Symbol /Description	Age
Artificial Fill	Af – Resulting from human activity and construction; consisting of engineered and non-engineered placement derived from clay, silt, sand, and gravel	Modern
Younger Alluvium	Qg, Qa – Unconsolidated, generally friable, stream-deposited silt, sand, and gravels on floodplains, locally including related alluvial fans and streambeds; deposits clearly related to ongoing depositional processes Qw – Wash deposits Qvf – Young alluvial fan deposits, undivided (Bedrossian et al. 2012; Saucedo et al. 2006)	Quaternary to recent
Older Quaternary Alluvium	Qoa, Qae, – Unconsolidated to moderately indurated gravel, sand, and silt deposited on floodplains, locally including alluvial fans, and streambeds; deposits uplifted or otherwise removed from the locus of recent sedimentation; surfaces possibly dissected in varying degrees and can show moderately to well-developed pedogenic soils Qof – Old alluvial fan deposits, undivided (Bedrossian et al. 2012; Saucedo et al. 2006)	Quaternary to Late Pleistocene
Old Lacustrine	Qol, Qop and Qops – Old lacustrine, playa, and estuarine deposits (Bedrossian et al. 2012; Saucedo et al. 2006)	Quaternary to Pleistocene
Landslide Debris	Qls – Landslide debris	Quaternary

Geologic Units	Symbol /Description	Age
Fernando Formation	Tfr – Interbedded silty sandstone and massive pebble conglomerate of the Los Angeles Basin, primarily marine. In downtown Los Angeles, consolidated but crumbly gray to greenish-gray claystone-siltstone, sandy; vaguely bedded and locally fossiliferous.	Pliocene
Unnamed Shale Formation	Tush – Light gray claystone and siltstone, moderately bedded, crumbly where weathered Tud – White-weathering diatomaceous, clayey shale, thin bedded, soft, chalky to platy, semi-siliceous Tuss – Light gray sandstone, soft, friable, fine to medium grained	Late Miocene
Monterey Formation	Tm – White-weathering, thin bedded, platy, siliceous shale, dark brown where fresh; moderately hard; locally pocelaneous, brittle; in many places included thin interbeds of clay shale, siltstone and of light gray silty to fine grained sandstone Tmss – Light gray to tan semi-friable bedded sandstone, fine to medium grained; includes some inter-bedded siltstone and shale Tmsh – White-weathering, thin bedded, platy siliceous shale, hard to semi-chalky Tmsl – Marine siltstone, sandstone, and shale; includes white-weathering, thin bedded, platy siliceous shale, hard to semi-chalky; some thin bedded, porcelaneous and silty; and includes semi-friable sandstone	Late Miocene
Upper Topanga Formation	Ttui – Tan-weathering, thin-bedded, platy, semi-siliceous shale Ttusi – Mostly gray, micaceous clay shale claystone, crumbly where weathered, and thin interbeds of light gray to tan semi-friable sandstone Ttus – Light gray to tan, moderately hard, bedded sandstone; locally pebbly Ttusc – Light gray massive sandstone with pebble-cobble conglomerate Ttucg – Light gray conglomerate of pebbles and cobbles of granitic and metaporphryitic rocks and of subangular dense black andesite in soft sandy matrix	Middle Miocene
Middle Topanga	Tvb – Basaltic volcanic rocks; dark gray to black, fine grained, massive to locally vesicular and/or pillowed; composed of mafic minerals and plagioclase feldspar Tts – Dark gray sandstone of basaltic grains	Middle Miocene
Lower Topanga	Ttlc – mostly gray cobble conglomerate of granite and some metavolcanic detritus, locally sandstone matrix Ttls – Tan, moderately hard, thick-bedded arkosic sandstone	Early Miocene
Dike Rocks	d – Dark gray, fine-grained andesitic rocks composed of mafic materials; intrusive	Pre-Tertiary

Geologic Units	Symbol /Description	Age
Granitic Rocks - Intrusive Igneous Rocks	qg, grd – Exposures of intrusive igneous rocks do not contain recognizable fossils	Cretaceous

Sources: McLeod 2020; Bedrossian et al. 2012; Saucedo et al. 2006; Dibblee and Ehrenspeck 1989, 1991a, 1991b, 1992a, 1992b

Thirty-two previously recorded paleontological localities were identified in the study area, which identify areas where fossil-bearing deposits are located and where fossils were collected, analyzed, and curated. Twenty-three localities are adjacent to the ***study area*** and provide evidence for the presence of underlying sensitive geologic deposits with the potential to extend into the study area.

Seven of the nine frames contain previously recorded localities; however, all frames are considered sensitive for paleontological resources, due to the presence of fossil-bearing deposits that could be at the surface or buried at variable depths across each frame area. Table 3.6-4 details the previously recorded localities and the associated study area frames. The information from Table 3.6-4 is summarized by frame in the discussion below.

Table 3.6-4. Previously Recorded Paleontological Localities by Frame in the Study Area

Locality Number (LACM)	Depth (in approximate feet below surface)	Geologic Unit	Frame	In/Out[1] of Study Area
1144, 6896	48–100	Older Quaternary Alluvium	1	In
1021, 1022, 1165, 3245, 3319, 3382, 4129, 1919	5–37	Older Quaternary Alluvium	2	Out
1295, 1344, 3266, 3365, 4206	15	Older Quaternary Alluvium	3	Out
7701, 7702	11–34	Older Quaternary Alluvium	4	In
1023, 2032	20–35	Older Quaternary Alluvium	5	In
1755	43	Older Quaternary Alluvium	5	Out
3882, 7507	100	Monterey Formation	5	In
5961, 7990	Various	Monterey Formation	5	Out
3868, 4726, 6971 7730	Various	Fernando Formation	5	Out
1880, 4967	Various	Monterey Formation	6	In
342	14	Older Quaternary	6	Out
1084, 6969	Various	Upper Topanga Formation	7	In
6306, 6385, 6386, 6970	40–80	Older Quaternary Alluvium	7	In
1084, 6969	Various	Upper Topanga Formation	7	In
6306, 6385, 6386, 6970	40–80	Older Quaternary Alluvium	7	In
1229, 1230, 7020	Various	Unnamed Shale Formation	8	In
326	Various	Monterey Formation	8	In
3263, 6208	20	Older Quaternary Alluvium	8	In

Locality Number (LACM)	Depth (in approximate feet below surface)	Geologic Unit	Frame	In/Out[1] of Study Area
3173, 5125, 5657, 6021	Various	Unnamed Shale Formation	9	In
1213, 5878, 3822	75–100	Older Quaternary Alluvium	9	Out

Sources: McLeod 2020; Bedrossian et al. 2012; Saucedo et al. 2006; Campbell et al. 2014; Dibblee and Ehrenspeck 1989, 1991a, 1991b, 1992a, 1992b

[1] Refers to areas outside of the study area boundary but in the study area vicinity.

LACM = Los Angeles County Natural History Museum

Project Study Area Setting

Frame 1

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 1 is identified as Urban land-Metz-Pico complex. The soil unit is composed of well-drained, discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock.

Geologic Setting

Frame 1 includes portions of the City of Long Beach and the City of Los Angeles. The following contains a brief geologic setting along with seismic hazard conditions for each city within Frame 1.

City of Long Beach

The City of Long Beach is on the coastal margins of the Los Angeles Basin, which is underlain by more than 15,000 feet of stratified sedimentary rocks of marine origin. Low areas now occupied by the LA and San Gabriel Rivers represent channels that ancestral rivers cut deeply into marine sediments during the lower sea level stand of the last ice age in late Pleistocene time. Over the past 17,000 years, the rivers have filled these channels to their present levels with relatively unconsolidated sand, silt, and gravel.

Dredging and landfill operation associated with construction of recreational and harbor facilities has highly modified low-lying coastal areas, especially along the seaward portions of the ancestral LA and San Gabriel Rivers (City of Long Beach 1988).

Faulting and Seismicity

The most significant active fault within the City of Long Beach is the Newport–Inglewood fault. According to the *City of Long Beach General Plan*'s Seismic Safety Element, this fault system is considered active: rupture along one of the branches of the Newport–Inglewood fault produced the 1933 Long Beach earthquake. Rupture on another segment of this fault zone caused the 1920 Inglewood earthquake. The Palos Verdes fault is another significant fault near the city. It travels along the northern edge of the Palo Verdes Hills and trends offshore through the Los Angeles Harbor. According to the *City of Long Beach General Plan*'s Seismic Safety Element, the Palos Verdes fault, also believed to be active, is capable of producing severe seismic shaking within the city (City

of Long Beach 1988). It is possible that some sites could be within a California EFZ, which is a regulatory area around an active fault.

Newport–Inglewood Fault

The Newport–Inglewood fault is a right-lateral wrench fault system consisting of a series of en-echelon fault segments and folds. Topographic highs along the zone are surface expressions of individual faulted anticlinal structures; the faults and folds act as groundwater barriers and, at greater depths, form petroleum traps. Active or potentially active faults of the Newport–Inglewood fault zone within the city's boundaries include the Cherry Hill, Northeast Flank, and Reservoir Hill faults (City of Long Beach 1988).

Palos Verdes Fault

Within the City of Long Beach, the Palos Verdes fault lies immediately offshore and is one of several major northwest-trending faults in the region that is tectonically associated with the northwest-trending San Andreas fault system. Most of the mapped length of the Palos Verdes fault is offshore of Southern California, extending northwestward from Lasuen Knoll into San Pedro Bay, through Los Angeles Harbor, across the northern front of the Palos Verdes Hills, and into Santa Monica Bay. The Palos Verdes fault is in the same tectonic environment and nearly parallel to other active faults, such as the Newport–Inglewood, Elsinore, and San Andreas fault zones (City of Long Beach 1988). .

Surface Rupture

The LA River footprint crosses the Newport–Inglewood fault within the City of Long Beach (Figure 3.6-1 and Figure 3.6-2) and, although individual projects are not known at this time, it is possible that some sites could be within a California EFZ. If *2020 LA River Master Plan* projects are constructed in these areas, they could be subject to surface rupture. Figure 3.6-1 depicts the Newport–Inglewood fault zone in relation to the LA River corridor.

Ground Motion

Earthquake events from one of the regional active or potentially active faults within the city could result in strong ground shaking, which could affect sites along the LA River in the area. The level of ground shaking at a given location depends on many factors, including the size and type of earthquake, distance from the earthquake, and subsurface geologic conditions.

Secondary Seismic Effects

According to Plate 7 of the *City of Long Beach General Plan*, Seismic Safety Element, liquefaction potential varies from significant to minimal on the western portion of the city, including where the LA River is located (Figure 3.6-1). In addition, other secondary seismic conditions, such as ground rupture, lurching, and lateral spreading, can occur in areas prone to liquefaction.

In saturated granular soils, built-up water pressure between grains may lead to soil settlement after an earthquake. Areas most susceptible to settlement in the city are the same as those described with potential for liquefaction.

Generally speaking, slopes within the city are not high or steep, and slope instability historically has not been a significant problem. However, according to the general plan Seismic Safety Element, some small portions of the city have been identified as being prone to slope instability, including some areas near the LA River footprint (east of the Interstate [I-] 405 and I-710 connection).

City of Los Angeles

The City of Los Angeles covers a large geographic area, as far south as the community of San Pedro, as far north as the community of Sylmar, and as far west as the Pacific Ocean and Canoga Park to the northwest. Given their geographic proximity to each other and the fact that the City of Los Angeles covers such a large area, geologic conditions among the City of Los Angeles and the rest of the jurisdictions are expected to overlap with each other to some extent and are not expected to vary significantly.

The City of Los Angeles is between the northwestern end of the Peninsular Ranges geomorphic province and extends to a portion of the Transverse Ranges geomorphic province along the Santa Monica Mountains and Hollywood Hills (the Santa Monica Mountains and Hollywood Hills divide the City of Los Angeles into northern and southern portions). The Peninsular Ranges province, which encompasses an area that extends from the Transverse Ranges province, south to the Mexican border, and beyond to the tip of Baja California, is characterized by northwest-trending mountain range blocks separated by similarly northwest-trending faults. The Transverse Ranges are a distinctive unit of east- to west-trending faults and mountain ranges with intervening valleys in Santa Barbara, Ventura, Los Angeles, and San Bernardino Counties, rotated into their current configuration due to a left bend in the San Andreas fault. Associated compression of the region has resulted in folding, reverse/thrust faulting, and uplift of the province (Ninyo and Moore 2018).

Much of the Los Angeles area is composed of low-lying areas comprising the Los Angeles Basin and San Fernando Valley (the Los Angeles Basin and San Fernando Valley are discussed in detail above under *Regional Setting*). Los Angeles lies on a hilly coastal plain with the Pacific Ocean as its southerly and westerly boundaries. The city stretches west to the Santa Monica Mountains, northwest beyond the Hollywood Hills, and is bounded to the north by the San Gabriel Mountains. Numerous canyons and valleys characterize the area.

Faulting and Seismicity

The City of Los Angeles is in a high-seismicity region with numerous local faults. Faults with the highest likelihood to affect the City of Los Angeles are the Newport–Inglewood, Palos Verdes, Puente Hills, San Andreas, and Santa Monica faults (City of Los Angeles Emergency Management Department 2018). Brief descriptions of the Newport–Inglewood and Palos Verdes faults are presented above under the *City of Long Beach*.

Puente Hills

The Puente Hills fault, also known as the Puente Hills thrust system, is an active geological fault that runs about 25 miles in three discrete sections from the Puente Hills region in the southeast to just south of Griffith Park in the northwest. The fault is known as a blind thrust fault due to the lack of surface features normally associated with thrust faults.

San Andreas

The San Andreas fault is a continental transform fault that extends roughly 800 miles through California. It forms the tectonic boundary between the Pacific Plate and the North American Plate, and its motion is right-lateral strike-slip (horizontal). The fault divides into three segments, each with different characteristics and a different degree of earthquake risk, the most significant being the southern segment, which passes within about 35 miles of Los Angeles.

Santa Monica

The Santa Monica fault is one of several northeast- to southwest-trending, north-dipping, reverse faults that extend through the Los Angeles metropolitan area for approximately 50 miles.

Surface Rupture

The Newport–Inglewood and Hollywood fault zones cross the LA River footprint within the City of Los Angeles; however, this occurs within Frame 6. If *2020 LA River Master Plan* projects are constructed in these areas, they could be subject to surface rupture. Figure 3.6-6 depicts the Newport–Inglewood and Hollywood fault zones in relation to the LA River corridor.

Ground Motion

The primary seismic hazard in the City of Los Angeles is potential for ground shaking originating at the aforementioned faults. As *2020 LA River Master Plan* projects can occur anywhere along the study area, seismic shaking originating from any of the faults could affect project implementation.

Secondary Seismic Conditions

According to CGS's *Earthquake Zones of Required Investigation*, portions of the City of Los Angeles are within a liquefaction zone. See Figures 3.6-5 through 3.6-9 for liquefaction zones within the City of Los Angeles. In addition, areas within the City of Los Angeles near Elysian Park, Glendale, and Burbank are in landslide zones (California Department of Conservation 2019). Figures 3.6-6 through 3.6-9 depict areas that are generally susceptible to landslides.

Paleontological Resources

Frame 1 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formation in Frame 1 is the Older Quaternary Alluvium geologic unit. The overlying Younger Alluvium, generally exposed at the ground surface across Frame 1, is not considered sensitive for significant paleontological resources. Two previously recorded paleontological localities have been recorded in Frame 1 at depths ranging from 48 to 100 feet bgs.

Frame 2

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 2 is identified as Urban land-Metz-Pico complex. The soil unit is composed of well-drained, discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock.

Geologic Setting

Frame 2 includes portions of the Cities of Carson, Compton and Long Beach. The following contains a brief geologic setting along with seismic hazard conditions for each city within Frame 2.

City of Carson

The City of Carson is underlain by Holocene-age alluvial deposits consisting of poorly consolidated sand, silt, clay, and gravel.

Faulting and Seismicity

The Newport–Inglewood and Palos Verdes faults, as described above for the City of Long Beach, are considered active and capable of generating earthquakes that could affect the City of Carson. The following faults could also affect the City of Carson.

Avalon–Compton Fault Zone

The Avalon–Compton fault branch, part of the Newport–Inglewood fault zone, is the only active fault in the City of Carson (City of Carson 2004). Historically, the Avalon–Compton fault/regional shear zone has moderate to high seismic activity with numerous earthquakes greater than Richter[1] magnitude 4.0 (USGS 2020).

Surface Rupture

The only active fault within the city limits is the Avalon–Compton fault branch. Although individual projects are not known at this time, it is possible that some sites could be within a California EFZ and experience surface rupture. Figure 3.6-2 depicts the Newport–Inglewood fault zone footprint in relation to the LA River.

Ground Motion

Ground motion within the City of Carson could be caused by any of the active or potentially active faults within or near the project area. The Newport–Inglewood (via Avalon Compton branch) or nearby faults such as Whittier, Santa Monica, and Palos Verdes faults are the active faults most likely to cause high ground accelerations in the city.

Secondary Seismic Conditions

The Newport–Inglewood fault zone is a potential source of ground motion, and liquefaction could occur in the city (a significant portion of the city has been designated as potential liquefaction area). Due to existing conditions in the city, particularly in the alluvial and former slough areas, there is the possibility that liquefaction could affect buildings and/or other structures in the event of an earthquake (City of Carson 2004). Liquefaction zones are identified in Figure 3.6-2.

Given the variation of the alluvial soils underlying Carson, differential settlement could occur as a result of an earthquake. Areas most susceptible to settlement in the city are the same as those described with potential for liquefaction. In addition, other secondary seismic conditions such as ground cracking, lurching, and lateral spreading can occur in areas prone to liquefaction.

Due to lack of significant elevation changes in the city, slope instability in Carson is limited to the slopes adjacent to the flood management channels that intersect the city. The loose, unconsolidated nature of the sediments, exposed in slopes that are not faced with concrete, may cause the slopes to be surficially unstable (City of Carson 2013).

City of Compton

Compton is underlain by alluvial deposits in the region consisting primarily of sand, silt, and gravel, and, to a lesser extent, clay.

[1] The Richter magnitude scale measures the magnitude of an earthquake as determined from the logarithm of the amplitude of waves recorded by seismographs.

Faulting and Seismicity

The Newport–Inglewood fault is the only active fault within the City of Compton. The Newport–Inglewood fault (via the Compton branch) runs through the southwest corner of Compton. The fault runs northwest to southeast between Central Avenue and Avalon Boulevard, crossing Rosecrans Avenue, Compton Boulevard, Alondra Boulevard, Walnut Street, and Artesia Boulevard.

Surface Rupture

The Newport–Inglewood fault extends through Compton and, in the event of an earthquake, the city could be subject to surface rupture or ground breakage along the surface of the fault (City of Compton 2011). However, the Newport–Inglewood fault zone is in the western portion of the city, away from the LA River. Figure 3.6-2 depicts the Newport–Inglewood footprint in relation to the LA River.

Ground Motion

Ground motion within the City of Compton could be caused by the Newport–Inglewood fault or any of the previously described active or potentially active regional faults capable of generating strong ground motion.

Secondary Seismic Conditions

A significant secondary seismic risk in Compton is liquefaction. Historical high groundwater in Compton ranges from 20 feet west of Compton Creek to 8 feet near Compton College, north to the boundaries of the city. Portions of the City of Compton within Frame 2 are within a liquefaction zone (Figure 3.6-2).

Compton's soil is low in clay content, reducing the subsidence caused by clay soil compaction. According to the *Draft Compton General Plan 2030*, there is a potential for slope failure along the southern banks of Compton Creek, near Artesia Boulevard (City of Compton 2011).

Paleontological Resources

Frame 2 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formation in Frame 2 is the Older Quaternary Alluvium geologic unit. The overlying Younger Alluvium geologic unit, generally exposed at the ground surface, is not considered sensitive for significant paleontological resources. Eight previously recorded paleontological localities have been recorded in the vicinity of Frame 2 of the study area at depths ranging from 5 to 37 bgs.

Frame 3

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 3 is identified as Urban land-Metz-Pico complex. The soil unit is composed of well-drained, discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock.

Geologic Setting

Frame 3 includes portions of the Cities of Compton, Cudahy, Downey, Lynwood, Paramount, and South Gate. The following contains a brief geologic setting along with seismic hazard conditions for each city within Frame 3.

City of Cudahy

The City of Cudahy is within the South Gate Quadrangle and the Los Angeles Basin (a geologic description of the Los Angeles Basin is provided under *Regional Setting*). The South Gate Quadrangle is covered by alluvial sediments of Quaternary age. Older alluvial fan sediments of Pleistocene age are associated with the Montebello Hills and Dominguez Hills. Elsewhere across most of the quadrangle are the younger alluvial fan sediments of Holocene and late Pleistocene age. The sediments described consist of varying proportions of sand, gravel, silt, and clay.

Faulting and Seismicity

There are no faults that transect Cudahy. However, as previously described, seismic activity of regional faults can have effects within the city.

Ground Motion

As with all of Southern California, Cudahy lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Cudahy, surface rupture is not likely to occur.

Secondary Seismic Conditions

Due to shallow groundwater and soil characteristics, the entire City of Cudahy is within a liquefaction hazard zone. Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

City of Downey

The City of Downey is within the South Gate Quadrangle and the Los Angeles Basin. Therefore, the geologic setting described for Cudahy is applicable to the City of Downey.

Faulting and Seismicity

There are no faults that transect Downey. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

As with all the cities in Southern California, Downey lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Downey, surface rupture is not likely to occur.

Secondary Seismic Conditions

Downey has a combination of silts and sands and a relatively high water table, conditions that are conducive for liquefaction. Therefore, the entire City of Downey is within a liquefaction hazard zone. Areas susceptible to settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

City of Lynwood

The City of Lynwood is within the South Gate Quadrangle and the Los Angeles Basin. Therefore, the geologic setting described for Cudahy applies to the City of Lynwood.

Faulting and Seismicity

There are no faults that transect Lynwood. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

As with all the cities in Southern California, Lynwood lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Lynwood, surface rupture is not likely to occur.

Secondary Seismic Conditions

Lynwood has historically shallow groundwater conditions along with subsurface characteristics that are conducive for liquefaction. As such, the entire City of Lynwood is within a liquefaction hazard zone. Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

No areas have been designated as zones of required investigation for earthquake-induced landslides within the city. However, the potential for landslides may exist locally, particularly along streambanks margins of drainage channels and similar settings where steep banks or slopes occur.

City of Paramount

The City of Paramount is also within the South Gate Quadrangle and the Los Angeles Basin. Therefore, geologic setting information described for Cudahy applies to the City of Paramount.

Faulting and Seismicity

There are no faults that transect Paramount. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

Paramount lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Paramount, surface rupture is not likely to occur.

Secondary Seismic Conditions

Shallow groundwater conditions, along with subsurface soils characteristics underlying the city, create conditions conducive for liquefaction. As such, the entire City of Paramount is within a liquefaction hazard zone. Areas most susceptible to seismically induced settlement in the city are the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

City of South Gate

The City of South Gate is within the South Gate Quadrangle and the Los Angeles Basin. Therefore, the geologic setting i described for Cudahy applies to the City of South Gate.

Faulting and Seismicity

There are no faults that transect South Gate. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

South Gate lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect South Gate, surface rupture is not likely to occur.

Secondary Seismic Conditions

The alluvial deposits underlying the City of South Gate are deposited by a river as sand, silt, and/or gravel. This type of deposit can be susceptible to liquefaction. As such, the entire City of South Gate is within a liquefaction hazard zone. Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction (City of South Gate 2017).

There are no designated seismically induced landslide zones in South Gate due to its relatively flat topography. However, surficial failures are considered a possibility along the LA River, drainage channels, or other areas where steepened slopes are found.

Paleontological Resources

Frame 3 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formation in Frame 3 is the Older Quaternary Alluvium geologic unit. The overlying Younger Alluvium geologic unit, generally exposed at the ground surface in Frame 3, is not considered sensitive for significant paleontological resources. Five previously recorded paleontological localities have been recorded in the vicinity of the study area at an approximate depth of 15 bgs.

Frame 4

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 4 is identified as Urban land, commercial. The soil unit is characterized as a manufactured layer.

Geologic Setting

Frame 4 includes portions of the cities of Bell, Bell Gardens, Commerce, Huntington Park, Maywood, and Vernon. The following contains a brief geologic setting along with seismic hazard conditions for each city within Frame 4.

City of Bell

The City of Bell is within the South Gate Quadrangle and the Los Angeles Basin. Therefore, the geologic setting described for the City of Cudahy is applicable to the City of Bell.

Faulting and Seismicity

There are no faults that transect Bell. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

Bell lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Bell, surface rupture is not likely to occur.

Secondary Seismic Conditions

Bell has areas of low to high potential for liquefaction. However, the vast majority of the city is identified as having a high liquefaction potential, including the area adjacent to the LA River. Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions such as ground cracking, lurching, and lateral spreading can occur in areas prone to liquefaction.

Bell has relatively flat topography; therefore, hazards associated with slope instability are considered unlikely. The Bandini oil field is under the Cheli Industrial Area of the city and could present subsidence hazards due to extensive oil pumping and withdrawal conducted in this area.

City of Bell Gardens

The City of Bell Gardens is within the South Gate Quadrangle and the Los Angeles Basin. Therefore, the geologic setting described for the City of Cudahy is applicable to the City of Bell Gardens.

Faulting and Seismicity

There are no faults that transect Bell Gardens. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

Bell Gardens lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Bell Gardens, surface rupture is not likely to occur.

Secondary Seismic Conditions

Bell Gardens is on alluvial deposits (consisting of silt, gravel, sand, and clay) from the LA River. These soils are highly susceptible to liquefaction. As such, Bell Gardens is identified as an area with high to moderate risk for liquefaction. Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spread, can occur in areas prone to liquefaction.

Bell Gardens has a relatively flat topography, and hazards associated with seismically induced landsliding are considered unlikely.

City of Commerce

The City of Commerce is primarily within the South Gate Quadrangle, with a portion within the Los Angeles Quadrangle; therefore, setting information related to the South Gate Quadrangle described for Cudahy also applies here.

The Los Angeles Quadrangle lies within the south-central part of the Transverse Ranges geomorphic province. The southeastern corner of the Los Angeles Quadrangle includes the northern part of the Los Angeles Basin. The northwestern quarter of the Los Angeles Quadrangle includes the eastern part of the Ventura Basin and its southeastern extension, the San Fernando Basin. These basins were the sites of very thick accumulations of marine sediments in the late Miocene and Pliocene.

Faulting and Seismicity

There are no faults that transect Commerce. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

Commerce lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Commerce, surface rupture is not likely to occur.

Secondary Seismic Conditions

According to the *City of Commerce 2020 General Plan* Safety Element (City of Commerce 2008), the city would undergo noticeable ground shaking in the event of an earthquake; however, the city would not likely be exposed to secondary seismic hazards, such as seismically induced ground settlement and landsliding. According to CGS's *Earthquake Zones of Required Investigation*, the areas closest to the LA River are in a liquefaction-prone area (California Department of Conservation 2019).

City of Huntington Park

The City of Huntington Park is within the South Gate Quadrangle and the Los Angeles Basin. Therefore, the geologic setting information described for the South Gate Quadrangle under the City of Cudahy above is applicable to the City of Huntington Park.

Faulting and Seismicity

There are no faults that transect Huntington Park. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

Huntington Park lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Huntington Park, surface rupture is not likely to occur.

Secondary Seismic Conditions

According to the *City of Huntington Park 2030 General Plan*'s Health and Safety Element, a study of earthquake hazards by USGS indicated that a majority of the city is subject to liquefaction. According to CGS's *Earthquake Zones of Required Investigation*, the city as a whole is in a liquefaction-prone area. Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

City of Maywood

The City of Maywood is within the South Gate Quadrangle and the Los Angeles Basin (a geologic description of the Los Angeles Basin is described under *Regional Setting*). Therefore, the geologic setting described for the South Gate Quadrangle under the City of Cudahy above applies to Maywood.

Faulting and Seismicity

There are no faults that transect Maywood. However, seismic activity along nearby faults can have effects within the city.

Ground Motion

Maywood lies within a seismically active region and is subject to strong ground shaking from earthquakes generated by regional faults.

Surface Rupture

As no known active faults transect Maywood, surface rupture is unlikely to occur.

Secondary Seismic Conditions

According to CGS's *Earthquake Zones of Required Investigation*, the city as a whole is in a liquefaction-prone area. Areas susceptible to settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking,

lurching, and lateral spreading, can occur in areas prone to liquefaction (California Department of Conservation 2019).

City of Vernon

The City of Vernon is partially within the South Gate and Los Angeles Quadrangles. Setting information described for cities within the South Gate and Los Angeles Quadrangles also applies here, as variation is not expected to be significant. The South Gate Quadrangle is described under the City of Cudahy and the Los Angeles Quadrangle is described under the City of Commerce, above.

Faulting and Seismicity

There are no faults that transect Vernon. However, seismic activity on nearby faults can have effects within the city.

Ground Motion

Vernon lies within a seismically active region and is subject to strong ground shaking from earthquakes generated on regional faults.

Surface Rupture

As no known active faults transect Vernon, surface rupture is not likely to occur.

Secondary Seismic Conditions

Liquefaction is not considered a significant hazard within the City of Vernon; however, some areas of the city are designated as susceptible to liquefaction hazard, particularly the southern and southeastern portions of the city (California Department of Conservation 2019). Areas susceptible to seismically induced settlement can be the same as those described with potential for liquefaction. In addition, other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

Paleontological Resources

Frame 4 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formation in Frame 4 is the Older Alluvial geologic unit. The overlying Younger Alluvium geologic unit, generally exposed at the ground surface in Frame 4, is not considered sensitive for significant paleontological resources. Two previously recorded paleontological localities have been recorded in Frame 4 of the study area at depths ranging from 11 to 34 bgs.

Frame 5

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 4 is identified as Urban land, commercial. The soil unit is characterized as a manufactured layer.

Frame 5 includes only the City of Los Angeles, which is described under Frame 1.

Paleontological Resources

Frame 5 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formations in Frame 5 include Older Quaternary Alluvium, the Fernando Formation, and the Monterey Formation. The overlying Younger Alluvium, generally exposed at the ground surface, is not considered sensitive for significant paleontological resources. Five previously recorded paleontological localities have been recorded in Frame 5. Three of these localities are associated with the Monterey Formation and two with the Older Quaternary geologic unit and were recovered at varying depths.

Six previously recorded localities have been recorded in the vicinity Frame 5 of the study area. Four were associated with the Fernando Formation, one with the Monterey Formation, and one with the Older Quaternary geologic unit and were recovered at varying depths.

Frame 6

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 6 is identified as Urban land-Palmview-Tujunga complex. The soil unit is composed of well-drained, discontinuous human-transported material over alluvium derived from granite.

Geologic Setting

Frame 6 includes portions of the Cities of Glendale and Los Angeles. The following contains a brief geologic setting along with seismic hazard conditions for each city within Frame 6.

City of Glendale

According to the *City of Glendale General Plan*'s Safety Element (2003), the City of Glendale is at the boundary between two of Southern California's geomorphic provinces (Transverse and Peninsular) in an area that is being compressed by geological forces associated with movement on tectonic plates. Geologic units in the Glendale area have fine-grained components that are moderately to highly expansive, typically along faults and fracture zones. Fine-grained sediments also occur along the southern portion of the city in the distal portions of the alluvial fans. These fine-grained units may not be present at the surface but may be exposed in the subsurface. The City of Glendale is within the Burbank Quadrangle. Soils in the Glendale area may have fine-grained components that are moderately to highly expansive, typically along faults and fracture zones, where the bedrock has been ground to a fine-grained, plastic material.

Faulting and Seismicity

According to the *City of Glendale General Plan* Safety Element, main faults in the Glendale area include the Sierra Madre, Verdugo, and Raymond faults. A portion of the Sierra Madre fault extends through Glendale and is zoned under the Alquist-Priolo Earthquake Fault Zoning Act. The Verdugo fault, which extends across the central portion of the city, is a left-lateral strike slip fault, similar to the Raymond fault, which is immediately south of the city. The trace of the Verdugo fault has been mostly obscured by development (City of Glendale 2003).

Ground Motion

The City of Glendale lies within a seismically active region and is subject to strong ground shaking from earthquakes generated on regional faults.

Surface Rupture

The Verdugo fault transects Glendale and underlies extensively developed portions of the city. Therefore, impacts related to fault rupture are possible within the city.

Secondary Seismic Conditions

Shallow groundwater levels have occurred historically in some portions of the City of Glendale, generally along the LA River drainage in the southwestern portion of the city and in the lower reaches of some of the canyons. Shallow groundwater has also been reported in the Verdugo Wash area, north of the Verdugo fault. According to CGS's *Earthquake Zones of Required Investigation,* the area of the city adjacent to the LA River is within a liquefaction zone (California Department of Conservation 2019). Areas susceptible to settlement can be the same as those described with potential for liquefaction. Other secondary seismic conditions, such as ground cracking, lurching, and lateral spreading, can occur in areas prone to liquefaction.

The City of Glendale's hillsides are vulnerable to slope instability due primarily to the fractured, crushed, and weathered condition of the bedrock and the steep terrain. Over-steepened slopes along the large drainage channels are also locally susceptible to slope instability. According to CGS's *Earthquake Zones of Required Investigation,* the southwestern portion of the city lies adjacent to an area prone to seismically induced landslides (also identified as a landslide zone by CGS), including where the LA River runs adjacent to and within the city (California Department of Conservation 2019).

Paleontological Resources

Frame 6 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formation in Frame 6 is the Monterey Formation geologic unit. The overlying Younger Alluvium geologic unit, generally exposed at the ground surface in Frame 6, is not considered sensitive for significant paleontological resources. Two previously recorded paleontological localities have been recorded in Frame 4 of the study area at varying depths. Intrusive igneous rocks are present at the surface of the vicinity of Frame 6, and these geologic deposits are not considered sensitive for paleontological resources.

Frame 7

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 7 is identified as Urban land-Palmview-Tujunga complex. The soil unit is composed of well-drained, discontinuous human-transported material over alluvium derived from granite.

Geologic Setting

Frame 7 includes portions of the Cities of Los Angeles and Burbank. The following contains a brief geologic setting along with seismic hazard conditions for each city within Frame 7.

City of Burbank

The Burbank area primarily consists of well-drained soils that formed in alluvium from granitic or related rock sources. Similar to the City of Glendale, the City of Burbank is within the Burbank Quadrangle. Therefore, the geologic setting described for the City of Glendale would be similar here.

Faulting and Seismicity

According to the *Burbank2035 General Plan* Safety Element, Burbank contains one active fault, the Verdugo fault, just south of the Verdugo Mountains and extending across the northern portion of the City of Burbank. Other faults in the area include the Sierra Madre and the Raymond faults.

Ground Motion

The City of Burbank lies within a seismically active region and is subject to strong ground shaking from earthquakes generated along the Verdugo fault and other Southern California regional faults.

Surface Rupture

The Verdugo fault transects Burbank. Therefore, impacts related to fault rupture are possible within the city. However, the Verdugo fault is in the northern portion of the city, beyond the Golden State Freeway (I-5) and away from the LA River footprint.

Secondary Seismic Conditions

Much of Burbank is atop soils susceptible to liquefaction, particularly in the areas west of I-5. According to CGS's *Earthquake Zones of Required Investigation,* the area of the city adjacent to the LA River is in a liquefaction zone (California Department of Conservation 2019). In addition, the southern tip of the city lies adjacent to an area prone to seismically induced landslides (also identified as a landslide zone), including within the study area.

Paleontological Resources

Frame 7 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formations in Frame 7 are the Older Quaternary Alluvium and Upper Topanga Formation geologic units. The overlying Younger Alluvium geologic unit, generally exposed at the ground surface in Frame 7, is not considered sensitive for significant paleontological resources. Six previously recorded paleontological localities have been recorded in Frame 7 of the study area at depths ranging from 40 to 80 feet bgs.

Frame 8

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 8 is identified as Urban land-Grommet-Ballona complex. The soil unit is composed of well-drained, discontinuous human-transported material over young alluvium derived from sedimentary rock.

Frame 8 includes only the City of Los Angeles, which is described under Frame 1.

Paleontological Resources

Frame 8 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formations in Frame 8 include the Monterey Formation, Unnamed Shale deposits, and Older Quaternary geologic units. The overlying Younger Alluvium, generally exposed at the ground surface, is not considered sensitive for significant paleontological resources. Six previously recorded paleontological localities have been recorded in Frame 8. Three of these localities are associated with the Unnamed Shale unit and one with the Monterey Formation, recovered at varying depths; two were recovered from the Older Quaternary Formation at depths ranging from 14 to 20 feet bgs.

Frame 9

Soils

According to the Natural Resources Conservation Service's Web Soil Survey, the primary soil unit found within Frame 8 is identified as Mocho-Urban land complex. The soil unit is composed of well-drained, young alluvium derived from sandstone and shale.

Frame 9 includes only the City of Los Angeles, which is described under Frame 1.

Paleontological Resources

Frame 9 contains geologic deposits that are sensitive for paleontological resources. The sensitive geological formations in Frame 9 include the Unnamed Shale and the Older Quaternary geologic units. The overlying Younger Alluvium, generally exposed at the ground surface across Frame 9, is not considered sensitive for significant paleontological resources. Four previously recorded paleontological localities associated with the Unnamed Shale have been recorded in Frame 9 and were recovered at varying depths.

Three previously recorded localities have been recorded in the vicinity of the study area near Frame 9. All three were associated with the Older Quaternary geologic unit and recovered at depths up to 100 feet bgs.

3.6.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of geology, soils, and paleontological resources in this PEIR.

Federal

Clean Water Act (Erosion Control)

The federal Clean Water Act (33 U.S. Code 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The Clean Water Act requires states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain nonpoint-source discharges to surface water. Such discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (Clean Water Act Section 402). Projects that disturb 1 acre or more are required to obtain NPDES coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Order No. 2009-0009-DWQ. The Construction General

Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) to regulate stormwater runoff, including measures to prevent soil erosion.

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the Earthquake Hazards Reduction Act established the National Earthquake Hazards Reduction Program, which significantly amended the program in November 1990, refining the descriptions of agency responsibilities, program goals, and objectives.

The program's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The National Earthquake Hazards Reduction Program designates the Federal Emergency Management Agency as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under the National Earthquake Hazards Reduction Program help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the proposed Project would be required to adhere.

The Antiquities Act of 1906

The Antiquities Act of 1906 states that any person who appropriates, excavates, injures, or destroys any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the U.S., without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, upon conviction would be fined in a sum of not more than $500 or be imprisoned for a period of not more than 90 days, or both, at the discretion of the court. While the act does not specially address paleontological resources, the term *objects of antiquity* has been interpreted by the National Park Service, the Bureau of Land Management, the Forest Service, and other agencies to include fossils. Permits to collect fossils on federal lands are authorized under this act.

Title 23 U.S. Code Section 305

This statute amends the Antiquities Act of 1906 and allows for funding for mitigation of paleontological resources on projects funded by federal highway funds. The statute contemplates that "excavated objects and information are to be used for public purposes without private gain to any individual or organization" (*Federal Register* 46(19):9570).

National Registry of Natural Landmarks

The National Natural Landmarks Program (16 U.S. Code 461–467), established in 1962 under the authority of the Historic Sites Act of 1935, recognizes and encourages the conservation of outstanding examples of our country's natural history. Under the only natural areas program of national scope that identifies and recognizes the best examples of biological and geological features in both public and private ownership, National Natural Landmarks are designated by the Secretary

of the Interior, with the owner's concurrence, as being of national significance, defined as being one of the best examples of a biological community or geological feature within a natural region of the U.S., including terrestrial communities, landforms, geological features and processes, habitats of native plant and animal species, or fossil evidence of the development of life (36 Code of Federal Regulations 62.2). The National Park Service administers the program and, if requested, assists National Natural Landmark owners and managers with the conservation of these important sites.

Paleontological Resources Preservation Act of 2009

The Paleontological Resources Preservation Act is part of the Omnibus Public Land Management Act of 2009 (Public Law 111-11, Title VI, Subtitle D). This act directs the Secretary of the Interior or the Secretary of Agriculture to manage and protect paleontological resources on federal land and develop plans for inventorying, monitoring, and deriving the scientific and educational use of such resources. It prohibits the removal of paleontological resources from federal land without a permit issued under this act, establishes penalties for violation of this act, and establishes a program to increase public awareness about such resources. The bill imposes criminal penalties for violating this act, which includes serving up to 10 years in prison if convicted.

State

Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to delineate EFZs along known active faults in California. The act also requires building setbacks to be established from the trace of an active fault. EFZs must meet the requirements of being "sufficiently active" (i.e., evidence of movement within the last approximate 11,000 years) and "well-defined" (i.e., detectable by a trained geologist). It is known that faults often rupture along a complex zone that may include the movement of multiple fault splays/strands rather than of a single fault strand. The EFZs are intended to be sufficiently wide enough on both sides of a known active fault trace to encompass unknown splays/strands of a fault. The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prohibit new structures for human occupancy from being located on active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 and went into effect in 1991. The act addresses issues related to earthquake hazards from non-surface fault rupture, including hazards related to liquefaction and seismically induced landslides. The purpose of the Seismic Hazards Mapping Act is to identify and map seismic hazards, intended for use by cities and counties when preparing the safety elements of their general plans, thereby encouraging land use management policies and regulations that will reduce damage from seismic hazards. The act has resulted in the preparation of maps that delineate liquefaction zones and earthquake-induced landslide zones of required investigation (California Department of Conservation 2019).

California Building Standards Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in the State of California. The State of California provides minimum standards for building design through the California Building Code (CBC), a component of the California Building Standards Code (codified under California Code of Regulations Title 24). The CBC

regulates structural design, structural tests and inspections, and soils and foundations. The CBC applies to building design and construction in the State and is based on the federal Uniform Building Code, which is used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC, which has been modified for California conditions, contains numerous provisions that are more stringent than those in the Uniform Building Code because of California's seismic and environmental conditions. According to Section 1613 of the CBC, "[e]very structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, will be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7."

State of California Geological Survey

CGS (formerly the California Division of Mines and Geology) identifies earth resource issues that should be taken into consideration when evaluating a proposed project for geologic hazards, particularly related to earthquake damage. Consideration includes the potential for existing geologic conditions to affect a proposed project, as well as the potential for a proposed project to affect the existing geologic and soil conditions by creating or exacerbating a geologic hazard. CGS provides web-based applications that identify areas prone to geologic hazards (e.g., Landslide Inventory, Earthquake Zones of Required Investigation). CGS establishes regulations related to geologic hazards, including faulting, liquefaction, seismically induced landslides, and ground shaking, as they affect people and structures. These regulations include the Alquist-Priolo Earthquake Fault Zone Act and the Seismic Hazards Mapping Program. CGS also issues guidelines for the evaluation of geologic and seismic factors that may affect a project or that may be affected by a project. Each guideline provides checklists and outlines to ensure a comprehensive report of geologic and seismic conditions. Although not mandatory in all their detail, the guidelines aid in ensuring completeness of geologic and seismic studies conducted for a project.

California Building Code

The CBC consists of 11 parts that contain administrative regulations of the California Building Standards Commission and regulations of all State agencies that implement or enforce building standards. Local agencies must ensure that development in their jurisdictions comply with guidelines contained in the CBC. Cities and counties can, however, adopt building standards beyond those provided in the CBC.

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. Most local jurisdictions rely on the CBC for a basis of seismic design. All local jurisdictions must comply with regulations of the Alquist-Priolo Act and EFZ requirements of the State of California Department of Conservation.

Public Resources Code Section 5097.5

California Public Resources Code Section 5097.5 prohibits excavation or removal of any:

> …vertebrate paleontological site, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on publicly owned lands to preserve or record paleontological resources.

Public lands include those owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites on public lands is a misdemeanor.

Regional

Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit

On November 8, 2012, the Regional Water Quality Control Board adopted Order No. R4-2012-175 (NPDES Permit No. CAS004001) Waste Discharge Requirements for MS4 Discharges Within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4 (County MS4 Permit). The County MS4 Permit became effective December 28, 2012 Order No. R4-2012-175 is the fourth iteration of the stormwater permit for MS4s in the County, which includes the Los Angeles County Flood Control District, the County, and 84 incorporated cities (including the City of Los Angeles) within the County watersheds, excluding the City of Long Beach. This permit requires runoff issues to be addressed during major phases of urban development (planning, construction, and operation) to reduce the discharge of pollutants from stormwater to the maximum extent practicable, effectively prohibit non-stormwater discharges, and protect the beneficial uses of receiving waters. The MS4 permit requires implementation of a Stormwater Quality Management Plan.

The County MS4 Permit includes total maximum daily load provisions designed to ensure that the County achieves waste load allocations and meets other requirements of total maximum daily loads covering receiving waters affected by the County's MS4 discharges. The County MS4 Permit also contains provisions that allow the permit to be modified, revoked, reissued, or terminated under certain circumstances. For example, provisions may be incorporated as a result of future amendments to the Basin Plan, such as a new or revised water quality objective or the adoption or reconsideration of a total maximum daily load, including program implementation.

The County MS4 Permit allows permittees the flexibility to develop Watershed Management Programs or Enhanced Watershed Programs to implement the requirements of the permit on a watershed scale through customized strategies, control measures, and BMPs. An Enhanced Watershed Program provides guidance for municipalities throughout the County to simultaneously comply with federal and State water quality mandates; improve the quality of rivers, creeks and beaches; and address current and future regional water supply challenges. Enhanced Watershed Programs identify current and future multi-benefit projects that will capture, treat, and use or infiltrate as much stormwater as possible.

Los Angeles County Building Code

Title 26: The purpose of the code is to provide minimum standards to preserve the public health, safety, and general welfare by regulating the design, construction, installation, quality of materials, use, occupancy, location, and maintenance of all buildings, structures, grading, and certain equipment. The code applies to the construction, alteration, moving, demolition, repair, use of any building or structure, and grading within the unincorporated territory of the County of Los Angeles or use by the County of Los Angeles in any incorporated city.

Los Angeles County General Plan, Safety Element (Los Angeles County 2015)

Goal S 1. An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.

- **Policy S 1.1.** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
- **Policy S 1.2.** Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.
- **Policy S 1.3.** Require developments to mitigate geotechnical hazards, such as instability and landsliding, in Hillside Management Areas through siting and development standards.

Los Angeles County General Plan, Conservation and Natural Resources (Los Angeles County 2015)

Goal C/NR 14. Protected historic, cultural, and paleontological resources

- **Policy C/NR 14.1.** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- **Policy C/NR 14.2.** Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
- **Policy C/NR 14.5.** Promote public awareness of historic, cultural, and paleontological resources.
- **Policy C/NR 14.6.** Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

Local

Frame 1

City of Long Beach

City of Long Beach General Plan, Seismic Safety Element (City of Long Beach 1988)

Development Goal 1. Utilize seismic safety considerations as a means of encouraging and enhancing desired land use patterns.

Development Goal 2. Provide an urban environment which is safe as possible from seismic risks.

Development Goal 3. Use physical planning as a means of achieving greater degrees of protection from seismic safety standards.

Development Goal 4. Encourage development that would be most in harmony with nature and thus less vulnerable to earthquake damage.

Development Goal 5. Strive to encourage urbanization patterns which preserve and/or create greater earthquake safety for residents and visitors.

Protection Goal 1. Reduce public exposure to seismic risks.

Remedial Action Goal 1. Eliminate or reconstruct uses and structures which pose seismic risks.

The City of Long Beach does not have specific general plan or historic preservation plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Los Angeles

City of Los Angeles General Plan, Safety Element (City of Los Angeles 1996)

Hazard Mitigation

Goal 1. A city where potential injury, loss of life, property damage and disruption of the social and economic life of the city due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.

- **Policy 1.1.6.** State and federal regulations. Assure compliance with applicable state and federal planning and development regulations (e.g., Alquist-Priolo Earthquake Fault Zoning Act, State Mapping Act, and Cobey-Alquist Flood Plain Management Act).

City of Los Angeles General Plan, Conservation and Open Space Element

Goal 1. Protect cultural heritage resources including historical, archaeological, paleontological and geological sites; encourage public use of cultural heritage sites consistent with the protection of these resources; promote public awareness of cultural resources; and encourage private owners to protect cultural heritage resources.

- **Section 3.** The City's paleontological resources are protected for historical, cultural research and/or educational purposes. Mandates the identification and protection of significant paleontological sites and/or resources known to exist or that are identified during "land development, demolition, or property modification activities."

Frame 2

Unincorporated County Areas

Applicable regulations are described above.

City of Carson

Carson General Plan, Safety Element (City of Carson 2004)

Goal: SAF-1: Minimize the risk of injury, loss of life, and property damage caused by earthquake hazards.

- **Policy: SAF-1.1** Continue to require all new development to comply with the most recent City Building Code seismic design standards.
    - **Implementation Measure SAF-IM-1.1** Apply City Building Code consistently to all development.

The City of Carson does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Compton

Draft Compton General Plan 2030, Public Safety Element (City of Compton 2011)

- **Public Safety Policy 1.1.** The City of Compton will maintain high standards for the seismic performance of new buildings.
- **Public Safety Policy 1.4.** In the Alquist-Priolo Zone, the City of Compton will require geologic review in the development approval process to determine surface rupture potential, and regulate development as appropriate.

- **Public Safety Policy 1.5.** In areas with liquefaction potential, the City of Compton will require the review of soils and geologic conditions, and if needed, on-site borings, to determine liquefaction susceptibility of the proposed site.

Draft Compton General Plan 2030, Open Space and Recreation Element

- **5.3.5 Resource Management Programs.** Cultural Resource Management. Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K of the California Environmental Quality Act (CEQA) Guidelines shall be followed for excavation monitoring and salvage work that may be necessary. Preservation efforts will be undertaken pursuant to Appendix K requirements outlined in CEQA.

Frame 3

Unincorporated County Areas

Applicable regulations are described above.

City of Compton

Applicable regulations are described above.

City of Cudahy

Cudahy 2040 General Plan, Safety Element (City of Cudahy 2018)

- **Policy SE 4.1.** Ensure and maintain the structural and operational integrity of essential public facilities during earthquakes and flooding.
- **Policy SE 4.2.** Identify structural types, land uses, materials storage practices, and sites that are highly sensitive to seismic induced ground shaking, liquefaction, and other geological hazards. Seek to abate or modify them to achieve acceptable levels of risk.
- **Policy SE 5.1.** Implement mitigation measures included in Cudahy's 2015 Hazard Mitigation Plan and subsequent updates.

The City of Cudahy does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Downey

Downey Vision 2025 General Plan, Safety Chapter (City of Downey 2005)

Goal 5.5. Address the potential hazards associated with seismic activities.

- **Policy 5.5.1.** Minimize damage in the event of a major earthquake.
    - **Program 5.5.1.4.** Ensure the preparation of geotechnical reports for developments to address soil liquefaction hazards.

The City of Downey does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Lynwood

City of Lynwood General Plan Public Health and Safety (City of Lynwood 2003)

GEO-1. Protect the public health, safety and welfare and minimize the damage to structures, property, and infrastructure as a result of seismic activity.

- **Policy GEO-1.4.** Seismic Safety by Design. Ensure that all new construction is designed to meet current safety regulations.

The City of Lynwood does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Paramount

Paramount General Plan, Health and Safety Element (City of Paramount 2007) Paramount

Health and Safety Element

- **Health and Safety Element Policy 7.** The City of Paramount will work to minimize serious injury and loss of life in the event of a major disaster
- **Health and Safety Element Policy 12**. The City of Paramount will require special soils and structural investigations for all larger structures or development involving large groups of people pursuant to State requirements.

Resource Management Program

- **Cultural Resource Management.** Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K CEQA Guidelines will be followed for excavation monitoring and salvage work that may be necessary. Salvage and preservation efforts will be undertaken pursuant to Appendix K requirements outlined in CEQA.

City of South Gate

South Gate General Plan 2035, Healthy Community Element (City of South Gate 2009)

Objective HC 8.1: Regulate new development to prevent the creation of new geologic and seismic hazards.

- **Policy P.1.** New underground utilities, particularly water and natural gas lines, will be designed to meet the most current seismic resistant design standards.
- **Policy P.2.** Soil and/or geologic reports will continue to be required, as appropriate, for development in potentially seismic areas.
- **Policy P.3.** The City will consider information about geologic hazards whenever making decisions influencing land use, building density, building configurations or infrastructure.
- **Policy P.5.** All new construction will conform to the Uniform Building Code, which specifies requirements for seismic design, foundations and drainage.

The City of South Gate does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

Frame 4

Unincorporated County Areas

Applicable regulations are described above.

City of Bell

City of Bell 2030 General Plan (City of Bell 2018)

Resource Management Programs

- **Cultural Resource Management.** Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K of the California Environmental Quality Act (CEQA) Guidelines shall be followed for excavation monitoring and salvage work that may be necessary. Salvage and preservation efforts will be undertaken pursuant to Appendix K requirements outlined in CEQA.

City of Bell Gardens

City of Bell Gardens General Plan 2010 (City of Bell Gardens 1995)

Safety Element

- **Policy 2.** The City of Bell Gardens shall minimize the loss of life, injuries, and property damage through continuing prevention, inspection, and public education programs, including continual update of the City's Emergency Preparedness Plan.

The City of Bell Gardens does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Commerce

City of Commerce 2020 General Plan (City of Commerce 2008)

Safety Element

- **Safety Policy 4.1.** The City of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards.
- **Safety Policy 4.3.** The City of Commerce will work with the Los Angeles County Department of Building and Safety to identify and monitor those buildings that represent a risk in the event of a major earthquake.

Resource Management Program

- Cultural Resource Management. Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K CEQA Guidelines will be followed for excavation monitoring and salvage work that may be necessary. Salvage and preservation efforts will be undertaken pursuant to Appendix K requirements outlined in CEQA.

City of Huntington Park

City of Huntington Park 2030 General Plan (City of Huntington Park 2017)

Health and Safety Element

- **Health and Safety Element Policy 2.** In areas with liquefaction potential, the City of Huntington Park shall require review of soils and geologic conditions, and if necessary, on-site borings, to determine liquefaction susceptibility of the proposed site.

The City of Huntington Park does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Maywood

City of Maywood General Plan (City of Maywood 2015)

Safety Element

Goal 1. Protect the lives, health, and property of the residents of the City of Maywood from flooding, fire and geologic hazards.

- **Policy 1.1** Continue to implement and enforce stringent site and safety criteria for new construction in the City, and require existing structures be brought up to standards.
- **Policy 1.4** Establish and enforce standards and criteria to reduce unacceptable levels of risk from flooding, fire and geologic hazards.

The City of Maywood does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

City of Vernon

City of Vernon General Plan (City of Vernon 2015)

Safety Element

Goal S-1. Minimize the risk to public health, safety, and welfare associated with the presence of natural and human-caused hazards.

Goal S-4. Provide a high degree of protection for all workers and residents in the event of any disaster.

- **Policy S-4.2.** Review the design of new development projects to consider public safety and issues such as emergency access, defensible space, and overall safety.

The City of Vernon does not have specific general plan elements, goals, policies, or ordinances regarding paleontological resources.

Frame 5

City of Los Angeles

Applicable regulations are described above.

Frame 6

City of Los Angeles

Applicable regulations are described above.

City of Glendale

City of Glendale General Plan

Safety Element (City of Glendale 2003)

- **Policy 1-1.** The City shall ensure that new buildings are designed to address earthquake hazards and shall promote the improvement of existing structures to enhance their safety in the event of an earthquake.
    - **Program 1-1.1.** The City shall adopt and enforce the latest version of Title 24 of the California Code of Regulations (California Building Code) with local amendments, including near-source seismic conditions.
- **Policy 1-2.** The City shall enforce the provisions of the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act, with additional local provisions.
    - **Program 1-2.1.** The City shall require geological studies as part of development proposals in the Fault Hazard Management Zones. The studies shall be conducted by State-certified engineering geologists following the guidelines published by the California Geological Survey (Note 49). The City shall require a State certified engineering geologist or registered civil engineer, having competence in the field of seismic hazard evaluation and mitigation, to review the study at the applicant's expense. The review shall determine the adequacy of the hazard evaluation and proposed mitigation measures and determine whether the requirements of State law are satisfied, as described in Note 49: Guidelines for Evaluating the Hazard of Surface Fault Rupture by the California Geological Survey.
- **Policy 1-4.** The City shall ensure that current seismic and geologic knowledge and State-certified professional review are incorporated into the design, planning and construction stages of a project, and that site-specific data are applied to each project.
    - **Program 1-4.1.** The City shall develop and make available to the public a list of State-certified engineering geologists and registered civil engineers, having competence in the field of seismic hazard evaluation and mitigation, to review, at the applicant's expense, all geologic and geotechnical reports, including fault studies, for proposed development or redevelopment, and to review grading operations.
- **Policy 2-1**. The City shall avoid development in areas of known slope instability or high landslide risk when possible, and will encourage that developments on sloping ground use design and construction techniques appropriate for those areas.
    - **Program 2-1.1.** The City shall require geological and geotechnical investigations in areas of potential seismic or geologic hazards as part of the environmental and development review process. The City will not issue permits for development or redevelopment until assured that all potential geologic hazards have been mitigated.
    - **Program 2-1.2.** The City shall require preliminary geological investigations of tract sites by State-registered geotechnical engineers and certified engineering geologists (in accordance with the California Building Code and the City of Glendale's Grading, Fills and Excavations Code – City Code 15.12).

- **Program 2-1.3.** In those areas of Glendale susceptible to slope instability, the City shall require geotechnical investigations that include engineering analyses of slope stability, provide surface and subsurface drainage specifications, and provide detailed design for fill placement and excavation.
- **Program 2-1.4.** The City shall discourage any grading beyond that which is necessary to create adequate and safe building areas. The City shall conduct regular inspection of grading operations to maximize site safety and compatibility with community character.
- **Program 2-1.5.** The City shall prohibit grading that is inconsistent with the Grading Ordinance. The City shall encourage the use of varied slope ratios on manufactured slopes to reduce the visual impact of grading.

Open Space and Conservation Element (City of Glendale 1993)

- **Policy 3**: Cultural, historical, archaeological and paleontological structures and sites are essential to community life and identity and should be recognized and maintained.

Frame 7

Unincorporated County Areas

Applicable regulations are described above.

City of Los Angeles

Applicable regulations are described above.

City of Burbank

Burbank2035 General Plan (City of Burbank 2013)

Safety Element

Goal 5 Seismic Safety. Injuries and loss of life are prevented, critical facilities function, and property loss and damage is minimized during seismic events.

- **Policy 5.1.** Require geotechnical reports for development within a fault area that may be subject to risks associated with surface rupture.
- **Policy 5.2.** Require geotechnical reports for new development projects in areas with the potential for liquefaction or landslide.
- **Policy 5.3.** Enforce seismic design provisions of the current California Building Standards Code related to geologic, seismic, and slope hazards.

Open Space and Conservation Element

Goal 6 Open Space Resources. Burbank's open space areas and mountain ranges are protected spaces supporting important habitat, recreation, and resource conservation.

- **Policy 6.1** Recognize and maintain cultural, historical, archeological, and paleontological structures and sites essential for community life and identity.

Frame 8

City of Los Angeles

Applicable regulations are described above.

Frame 9

City of Los Angeles

Applicable regulations are described above.

3.6.3 Impact Analysis

3.6.3.1 Methods

This analysis qualitatively evaluates the construction and operations impacts of the proposed Project on geologic, soils, and paleontological resources based on desktop review of geologic and soils conditions within and adjacent to the project study area. The impacts were assessed on a programmatic level based on the relevant regulatory framework.

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories and related design components, and the *2020 LA River Master Plan* in its entirety are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.6.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.6(a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
- Strong seismic ground shaking
- Seismic-related ground failure, including liquefaction
- Landslides

3.6(b) Result in substantial soil erosion or the loss of topsoil.

3.6(c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.

3.6(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

3.6(e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal where sewers are not available for the disposal of waste water.

3.6(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.6.3.3 Impacts and Mitigation Measures

Impact 3.6(a): Would the proposed Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**
- **Strong seismic ground shaking?**
- **Seismic-related ground failure, including liquefaction?**
- **Landslides?**

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction

Frames discussed together under Impact 3.6(a) have similar characteristics as related to the geologic hazards listed.

Frame 1 and Frame 2

Generally speaking, for typical footprints involved under the Common Elements Typical Project, construction activities are not expected to disturb a significant amount of soil, from the smallest scale disturbing surface soils only to deeper excavations of several feet (in the case of Tier III pavilions). Although the Multi-Use Trails and Access Gateways Typical Project would potentially involve deeper excavations and larger footprints than Common Elements Typical Project, construction activities would still be considered too shallow and small in scale to cause or exacerbate significant geologic phenomena such as fault rupture, seismic ground shaking, or liquefaction.

However, as described above in Section 3.6.2.1, *Geologic Setting*, the LA River is in a seismically active area due to the various active and potentially active faults in the region. Seismic events from

one or more of these regional active or potentially active faults could result in strong ground shaking in the LA River area. Consequently, it is possible that the Typical Projects could be affected by strong ground shaking.

In addition to being subject to strong seismic shaking, fault zone and landslide prone areas exist along the LA River. The Newport–Inglewood fault zone traverses areas of Long Beach along Frames 1 and 2 (Figure 3.6-1 and Figure 3.6-2), to the east and southeast of where I-710 and I-405 intersect. Fault zones are described by CGS as regulatory zones surrounding the surface traces of active faults. If the Typical Projects are to be constructed within these zones, they would be subject to fault zone regulations, wherein, prior to a new project being permitted in a fault zone, cities and counties require a geologic investigation to demonstrate that proposed structures will not be constructed on active faults.

In addition, the majority of Frames 1 and 2 are within liquefaction zones (Figure 3.6-1 and Figure 3.6-2). Per CGS, liquefaction zones identify where the stability of foundation soils must be evaluated, resulting in site mitigation (e.g., compaction piles, stone columns, deep soil mixing). If any Typical Projects are to be constructed within a liquefaction zone, they could be subject to liquefaction zone mitigation recommendations.

There are no landslide hazard areas[2] within Frames 1 and 2.

Construction of the Typical Projects would be consistent with prevailing building codes and relevant regulations and permits[3] and would be required to follow fault zone regulations if constructed in fault zones, and implement countermeasures to address liquefaction risks if constructed in liquefaction zones.

Frame 3 and Frame 4

There are no fault zones within Frames 3 and 4. As mentioned, the LA River channel is in a seismically active area; therefore, projects within Frames 3 and 4 could be subject to strong seismic shaking as a result of regional seismic activity. As such, the analysis under Frames 1 and 2 related to strong seismic shaking would also apply to Frames 3 and 4.

All of Frame 3 and the vast majority of Frame 4 are in liquefaction-prone areas (Figure 3.6-1 and Figure 3.6-2). Construction of the Typical Projects in these areas would be subject to seismic hazard zone requirements for liquefaction zones, and construction of Typical Projects would adhere to the prevailing building codes that would help minimize risk from seismic activity.

There are no landslide hazard areas within either Frame 3 or Frame 4.

[2] Designated landslide hazard areas identify where the stability of hillslopes must be evaluated and countermeasures undertaken in the design and construction of buildings (California Department of Conservation 2019).

[3] Permits certify a building project met the current building code requirements and, when necessary, conformed to approved plans and specifications. Permit issuance is generally preceded by a plan check review and is dependent upon the approval of other required agencies that may be triggered based on the type of project. New buildings; new, expanded, or replaced electrical items; and grading work are some activities requiring a building permit.

Frame 5 through Frame 9

The project area within Frame 5 through Frame 9 would also be subject to strong seismic shaking as a result of regional seismic activity. Therefore, the analysis under Frames 1 and 2 related to strong seismic shaking would also apply to Frames 5 through 9.

The northern portion of Frame 5, central portion of Frame 6, eastern portion of Frame 7, and majority of Frames 8 and 9 are within a liquefaction zone (Figure 3.6-1 and Figure 3.6-2). The Typical Projects constructed in these areas would be subject to liquefaction hazard requirements, as detailed previously.

Unlike Frames 1 through 4 described above, portions of Frames 5 through 9 are also in areas designated as landslide hazard areas (these are areas with variation in topography adjacent to the Santa Monica Mountains). According to the Department of Conservation, these zones identify where the stability of hillslopes must be evaluated and countermeasures undertaken in the design and construction.

Although construction of the Typical Projects would adhere to the prevailing building codes and relevant regulations and permits, which would help minimize risk from seismic activity, and would be subject to fault zone, liquefaction, and landslide hazard regulations if constructed in these zones, there is still potential for substantial adverse effects involving strong seismic shaking, fault rupture, liquefaction, and landslides.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing[4] Subsequent Projects Prior to Construction Activities.

Prior to final design of subsequent projects that would feature load-bearing structures (e.g., Tier III pavilions), the implementing agency will ensure that a licensed geologist and engineer will prepare a design-level geotechnical investigation prior to construction.

The investigation will include subsurface soil sampling, laboratory analysis of samples collected to determine soil characteristics and properties (including identifying and defining the limits of unstable, compressible, and collapsible soils), and an evaluation of the laboratory testing. Recommendations based on the results will be used in the design specifications for the proposed subsequent projects. The report will include recommendations to avoid potential risks associated with seismic hazards (including ground shaking and fault rupture, seismically induced landslides, liquefaction, and the other seismic effects described in this section), in accordance with the specifications of CGS's Special Publication 117A, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, and the requirements of the Seismic Hazards Mapping Act. The geotechnical study will provide detailed project-specific recommendations for design and construction, and implementation of those recommendations will be required during

[4] Load-bearing structures are structures that carry and transfer load to the ground safely (i.e., load-bearing walls transfer loads to the foundation or other suitable frame members and can support structural members like beams, slab, and walls on floors above).

construction of relevant projects. Mitigation to address potential fault rupture, seismic ground shaking, ground failure, and liquefaction hazards can include (but are not limited to) the following:

- **Fault rupture:** Studies will evaluate the location and relative activity of potentially active fault splays at the project site and the feasibility of locating future site improvements will be conducted by geologic consultants as part of the geotechnical study. Fault investigations will be conducted by a California State Certified Engineering Geologist and submitted to CGS. Appropriate building setback zones will be established in locations deemed not feasible for construction of occupied structures.
- **Seismic ground shaking:** Structural elements of subsequent projects will be designed to resist or accommodate appropriate site-specific ground motions and conform to current seismic design standards, including those set forth by prevailing building codes.
- **Liquefaction/ground failure:** Assessment of liquefaction potential at subsequent project sites will be conducted as part of the geotechnical study. Structural design will be developed to reduce the potential impacts of liquefaction, including the incorporation of techniques such as structural design, in-situ ground modification, or supporting foundations with piles at depths designed specifically for seismically induced settlement.
- **Landslides:** Where applicable, assessment for landslide potential and/or potential for surficial failure will be performed as part of the geotechnical study with measures to be incorporated into the design, as appropriate. Mitigation measures in areas subject to a landslide hazard could include the following measures: excavation of potentially unstable material for a more stable slope configuration; reduction of landslide-driving forces by removal of earth materials at the top of the landslide; construction of a buttress and/or stabilization fills; construction of retaining walls installation of rock bolts on a slope face, and/or installation of protective wire mesh on a slope face; construction of debris impact walls at the toe of the slope to contain rock fall debris, or other such measures.

The following measures could be recommended in the site-specific geotechnical study to mitigate the potential effects of unstable and/or expansive soils:

- **Groundwater:** Excavations for improvements in areas with shallow perched groundwater may need to be cased, shored, and/or dewatered to maintain stability of the excavations and adjacent improvements and provide access for construction.
- **Collapsible soils/settlement:** Assessment of soil settlement will be performed as part of the geotechnical study and techniques will be recommended, as appropriate, to reduce impacts related to settlement. Assessment of settlement potential of onsite natural soils and undocumented fill will include drilling of exploratory borings or test pits and laboratory testing of soils. Possible mitigation measures for soils with the potential for settlement could include removal of the compressible/collapsible soil layers and replacement with compacted fill, surcharging to induce settlement prior to construction of improvements, allowing for a settlement period after or during construction of new fills, and utilization of specialized foundation design, including the use of deep foundation systems, to support structures. Various in-situ soil improvement techniques are also available, such as dynamic compaction (i.e., heavy tamping) or compaction grouting.
- **Expansive soils:** Assessment of the potential for expansive soils will be performed as part of the geotechnical study, and mitigation techniques, such as over-excavation and

replacement with non-expansive soils, soil treatment, moisture management, and/or specific structural design for expansive soil conditions, will be developed, as appropriate.

The implementing agency will apply the recommendations of the site-specific geotechnical study to minimize risks related to potential fault rupture, seismic ground shaking, ground failure, and liquefaction hazards/landslides.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

All Frames

As operations activities associated with the Typical Projects would not differ from frame to frame, the following operational discussion applies to all frames. Implementation of the Typical Projects would attract visitors to the study area (the Common Elements Typical Project would attract up to 500 visitors and the Multi-Use Trails and Access Gateways Typical Project would attract up to 1,000 visitors); as such, visitors could be exposed to strong seismic shaking, fault rupture, and secondary seismic phenomena such as liquefaction and landslides. However, as mentioned under *Construction* above, any development occurring in fault, liquefaction, and landslide zones would require evaluation and countermeasures implemented in design and construction. All Typical Projects would be implemented following proper engineering methods and building code requirements. Operations activities associated with the Typical Projects, which mainly include recreational uses and wayfinding, would not cause or exacerbate major geological phenomena such as strong seismic shaking, fault rupture, or any secondary phenomena such as liquefaction or landslides; furthermore, visitors would only be on site on a temporary basis, as the Typical Projects do not include permanent human occupancy in the design. Nonetheless, there could be potential impacts on people or structures from risks associated with seismic phenomena (including fault rupture, seismic ground shaking, ground failure, and liquefaction hazards/landslides).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above; the impact discussion below focuses on specific KOP categories only.

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Categories 1 through 6

Construction

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. KOP Categories 1 through 6 include a variety of construction activities ranging from trail improvement to access gateways, channel modifications, crossings and platforms, diversions, floodplain reclamation, housing, and off-channel land assets anywhere in the study area; therefore, the potential for exposure to seismic hazards exists. As mentioned previously, the potential for seismic hazards exists throughout the footprint, in the case of strong seismic shaking, and in areas that exhibit specific conditions conducive of other seismic hazards (such as fault, liquefactions, and landslide zones). Although the specific location, configuration, and design for KOP Categories 1 through 6 are unknown, all projects constructed as part of the *2020 LA River Master Plan* would adhere to prevailing building codes, and KOP Categories 1 through 6 constructed within geologic hazard zones would require evaluation.

Similar to Typical Projects, construction activities associated with KOP Categories 1 through 6 would be small in scale and too shallow to cause or exacerbate significant geologic phenomena.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

> **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.**

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Categories 1 through 6 design components have not been determined; however, these projects are likely to attract additional visitors to areas within the *2020 LA River Master Plan*. As such, visitors could be exposed to strong seismic shaking, fault rupture, and secondary seismic

phenomena, such as liquefaction and landslides. Development occurring in fault zones or liquefaction or landslide hazard areas would require evaluation and mitigation measures to be implemented (as necessary). In addition, these projects would be developed according to the prevailing building codes, thereby minimizing the potential geologic hazard risk to visitors.

As KOP categories would be implemented following proper engineering methods and building code requirements, operations activities associated with KOP Categories 1 through 6 are not expected to cause or exacerbate major geological phenomena, such as strong seismic shaking, fault rupture, or any secondary phenomena, such as liquefaction or landslides. Furthermore, visitors would only be on site on a temporary basis for KOP Categories 1 through 5, as those KOP categories do not include permanent human occupancy in their design. Permanent occupancy is a feature included in KOP Category 6; however, as already stated, the projects would adhere to all applicable regulations and requirements, including pre-construction investigations, as applicable. Impacts would be less than significant on visitors as well as permanent residents.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

The *2020 LA River Master Plan* includes up to 107 potential projects, ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles), that would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be constructed at a specified cadence, or spacing, along the river to ensure equitable distribution of facilities throughout the 51-mile-long corridor and help improve access and safety, as well as additional subsequent projects from the KOP categories' multi-benefit design components. The construction of these projects, including specific location (e.g., planning frame, in-channel/off-channel), design, and timing, would depend on many factors that are currently unknown at this time.

As mentioned individually under the *Typical Projects* and *2020 LA River Master Plan Kit of Parts* sections above, all projects to be identified and implemented under the *2020 LA River Master Plan* would require evaluation if constructed in geologic hazard areas. All *2020 LA River Master Plan* projects would adhere to all building code and permitting requirements and, if necessary, geotechnical investigations. This would reduce potential impacts associated with geologic hazards to

less-than-significant levels for short-term (construction) and long-term (i.e., operations) activities associated with the implementation of the *2020 LA River Master Plan*.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.6(b): Would the proposed Project result in substantial soil erosion or the loss of topsoil?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction

Frames 1 through 9 are discussed together, as the erosion analysis would apply to all Typical Projects in all frames.

Erosion is a condition that could adversely affect development on any site; therefore, this analysis applies to construction of both the Common Elements and Multi-Use Trails and Access Gateways Typical Projects in any frame. Construction activities could exacerbate erosion conditions by exposing soils and adding water to the soil from irrigation and runoff from new impervious surfaces. The Typical Projects could disturb up to 3 acres under the Common Elements Typical Project and a 5-mile-long and 40-foot-wide area under the Multi-Use Trails and Access Gateways Typical Project. As described in Section 3.9, *Hydrology and Water Quality,* of this PEIR, any project involving grading of an area greater than 1 acre (or less than 1 acre, but part of a larger common plan of development) would be required to obtain NPDES coverage under the NPDES Construction General Permit, Order No. 2009-0009-DWQ (State Water Resources Control Board 2020). Construction activities covered under the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation. The Construction General Permit would require the development and implementation of a SWPPP, which includes BMPs to regulate stormwater runoff, including measures to prevent soil erosion (typical construction BMPs can include silt fences, straw waddles, sediment traps, gravel sandbag barriers, etc.) and loss of topsoil. Erosion management would be implemented during and after construction, as exposed slopes would be treated to avoid dust and sediment erosion. Additional details regarding erosion management are provided in Section 3.9, *Hydrology and Water Quality*. For Typical Projects involving less than 1 acre of soil disturbance, a SWPPP would not be required; however, construction BMPs would still be implemented to minimize

erosion and the discharge of pollutants off site. Compliance with permit requirements, along with implementation of BMPs, would minimize the erosion potential during construction; as such, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operations activities associated with the Common Elements or Multi-Use Trails and Access Gateways Typical Projects would not include any activities that would cause or exacerbate conditions leading to substantial erosion or loss of topsoil. Stormwater BMPs[5] as part of the Common Elements Typical Project would treat all surface runoff associated with storm events and filtering sediments, further reducing the likelihood of significant amounts of sediments leaving the project site. Foot and animal traffic involved in trail use under the Multi-Use Trails and Access Gateways Typical Project could disturb trail materials and increase potential for erosion; however, the Multi-Use Trails and Access Gateways Typical Project could be paved with concrete, asphalt, stone fines, and decomposed granite, compacted earth, or permeable paving (as part of the Access and Mobility Design Guidelines), as applicable, and could help minimize erosional conditions. As described in Section 3.9, *Hydrology and Water Quality*, of this PEIR, soil erosion during operation of a Typical Project would be minimized through site drainage design and maintenance practices. In addition, Typical Project operations would comply with the County MS4 Permit and its associated provisions, applicable low-impact development requirements from local jurisdictions, and local stormwater management programs, as required.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for

[5] BMPs help capture, convey, and infiltrate stormwater during a rain event and may include rain gardens, swales, infiltration strips, and infiltration trenches.

potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Categories 1 through 6

Construction

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. KOP Categories 1 through 6 include a variety of construction activities ranging from trail improvement to access gateways, channel modifications, crossings and platforms, diversions, floodplain reclamation, and off-channel land assets, anywhere in the study area. Construction activities associated with these projects could exacerbate erosion conditions by exposing soils and adding water to the soil from irrigation and runoff from new impervious surfaces. Similar to the Multi-Use Trails and Access Gateways Typical Project, KOP categories would involve larger footprints and, therefore, would be required to obtain NPDES coverage under the Construction General Permit. A SWPPP as part of the Construction General Permit would require BMPs to regulate stormwater runoff and prevent soil erosion. Erosion management would be implemented during and after construction.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operations activities associated with KOP Categories 1 through 6 are not expected to include any activities that would cause or exacerbate conditions leading to substantial erosion or loss of topsoil. Foot and animal traffic involved in trail use could disturb trail materials; however, KOP Categories 1 through 6 would be paved with concrete, asphalt, stone fines, and decomposed granite, compacted earth, or permeable paving, thereby minimizing erosional conditions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As mentioned individually under the *Typical Projects* and *2020 LA River Master Plan Kit of Parts* sections above, all large projects to be included under the *2020 LA River Master Plan* would require obtaining coverage under the Construction General Permit, minimizing the amount of erosion during construction. For smaller Typical Projects, construction BMPs would still be implemented to minimize erosion and the discharge of pollutants off site. In addition, erosion management would be implemented during construction and after construction is complete. This would reduce potential impacts associated with erosion to less-than-significant levels for short-term (construction) and long-term (operations) activities associated with the implementation of the *2020 LA River Master Plan*.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.6(c): Would the proposed Project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction and Operations

Due to the nature of the projects, operational impacts associated with Typical Projects would not include activities that would contribute significantly to soil instability and are therefore discussed along with construction impacts. Frames 1 through 9 are discussed together under Impact 3.6(c) because they contain similar conditions as related to the geologic hazards listed.

For a discussion of landslide and liquefaction hazards during construction and operations, see Impact 3.6(a) above.

As the LA River footprint covers 51 linear miles, soil components along and adjacent to the river vary substantially in secondary components; however, the largest portion and primary component of soils within the project study area are classified as Urban Land by the Natural Resources

Conservation Service. Urban Land typically consists of soils in areas of high population density in the largely built environment (which is the most common description of the land surrounding the LA River). These soils can be significantly changed human-transported materials, human-altered materials, or minimally altered or intact "native" soils. Soils in urban areas can exhibit a wide variety of conditions and properties, making soil instability associated with lateral spreading, liquefaction, or collapse possible (U.S. Department of Agriculture 2019). The Common Elements and Multi-Use Trails and Access Gateways Typical Projects constructed within geologic hazard zones would be subject to geologic hazard zone requirements, and the Typical Projects would be required to follow the prevailing building codes and, if necessary, prepare a geotechnical investigation. In addition, the *Los Angeles County General Plan* Safety Element includes goals and policies for addressing the introduction or expansion of developments in areas known to have geologic hazards, thereby further minimizing potential impacts. Nonetheless, due to the lack of site-specific details, there remains a potential for presence of potentially unstable soils in the project study area.

Operations activities associated with the Typical Projects primarily include recreation, social and cultural opportunities from cafés, arts/performance spaces, and trails, and would not include any activities that would cause or exacerbate soil instability including landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Categories 1 through 6

Construction

KOP Categories 1 through 6 include a variety of construction activities ranging from trail improvement to access gateways, channel modifications, crossings and platforms, diversions, floodplain reclamation, and off-channel land assets. As mentioned previously, the potential for seismic hazards exist throughout the footprint, including areas that exhibit specific conditions potentially subject to seismic hazards such as liquefaction and seismically induced landsliding. In addition, the majority of soil components surrounding the LA River are classified as Urban Land by the Natural Resources Conservation Service. These soils can be significantly changed human-transported materials, human-altered materials, or minimally altered or intact "native" soils. Soils in urban areas can exhibit a wide variety of conditions and properties, increasing the potential for soil instability.

All projects constructed as part of the *2020 LA River Master Plan* would adhere to applicable building codes, and KOP Categories 1 through 6 constructed within geologic hazard areas would require evaluation. Construction activities associated with KOP categories are considered too shallow and small in scale to cause or exacerbate geologic hazards.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Categories 1 through 6 design components are likely to attract additional visitors to areas within the *2020 LA River Master Plan*. As such, visitors could be exposed to the effects of soil instability. KOP Categories 1 through 6 design components, once complete, could also be exposed to secondary seismic phenomena, such as liquefaction, landsliding, or subsurface conditions potentially subject to instability. Development occurring in liquefaction and seismically induced landslide areas would require evaluation and countermeasures to be implemented (as necessary). In addition, these projects would be developed with prevailing building codes, thereby minimizing the potential seismic risk to visitors.

As KOP categories would be implemented following proper engineering methods and building code requirements, operation activities associated with KOP Categories 1 through 6 are not expected to cause or exacerbate major geological hazards such as strong seismic shaking, fault rupture, or secondary seismic effects due to liquefaction or landsliding. All projects would adhere to applicable

regulations and requirements, including pre-construction investigations. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As mentioned individually under *Typical Projects* and *2020 LA River Master Plan Kit of Parts* sections above, all projects to be included under the *2020 LA River Master Plan* would require evaluation if constructed in State-designated geologic hazard areas and fault zones. Additionally, all *2020 LA River Master Plan* projects would adhere to all building code and permitting requirements, including geotechnical evaluations where appropriate. This would mitigate potential impacts associated with geologic hazards to less-than-significant levels for short-term (construction) and long-term (operations) activities associated with the *2020 LA River Master Plan* implementation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.6(d): Would the proposed Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction and Operation

Due to the nature of the projects, operational impacts associated with Typical Projects would not include activities that would contribute significantly to soil instability and are therefore discussed along with construction impacts. Frames 1 through 9 are discussed together under Impact 3.6(d) because they contain similar conditions as related to expansive soils.

Soil components along and adjacent to the LA River are composed primarily of soils classified as Urban Land and can exhibit a wide variety of conditions and properties, including expansive potential. Urban soils could contain fine-grained soils (silts and clays), which contain variable amounts of expansive minerals—that is, soils that expand when they get wet and shrink as they dry out. Upward pressure can increase when these expansive soils swell, which may result in detrimental effects on structures and surface improvements if not property mitigated. The Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be required to comply with all applicable building codes and permit requirements, thereby minimizing the potential for substantial direct or indirect expansive soil impacts on structures and visitors. In addition, the Typical Projects' operations activities primarily include social, cultural, and recreation opportunities from cafés, arts/performance spaces, and trails, none of which would be expected to cause or exacerbate the expansive potential in onsite soils. Furthermore, visitors would only be on site on a temporary basis, as none of the Typical Projects include permanent human occupancy elements. However, due to the presence of expansive soils in the project study area, impacts could be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. See above for potential impacts of the Common Elements Typical Project. The impact discussion below focuses on specific KOP categories only.

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. See above for potential construction and operation impacts of these design components. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Categories 1 through 6

Construction

KOP Categories 1 through 6 include a variety of construction activities for design components ranging from trail improvement to access gateways, channel modifications, crossings and platforms, diversions, floodplain reclamation, and off-channel land assets, which can be anywhere in the study area. Soil components surrounding the LA River are primarily classified as Urban Land by the Natural Resources Conservation Service. As previously stated, soils in urban areas can exhibit a wide variety of conditions and properties, including expansive soils.

KOP Categories 1 through 6 constructed as part of the *2020 LA River Master Plan* would adhere to all current building codes and required permitting requirements. As projects would be implemented following proper engineering methods and building code requirements, it is expected that none of the activities associated with the construction of KOP Categories 1 through 6 would cause or exacerbate expansive characteristics in soils. However, due to the presence of expansive soils in the study area, impacts could be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

> **Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.**

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Categories 1 through 6 design components are likely to attract additional visitors and residents to areas within the *2020 LA River Master Plan*. As such, people could be exposed to the potential effects of soil expansion on project structures. However, projects would be built and adhere to all applicable building codes, thereby minimizing the potential risk to visitors.

As mentioned under construction, projects would be implemented following proper engineering methods and building code requirements. Additionally, activities associated with KOP Categories 1 through 6 operations are not expected to include activities that would cause or exacerbate expansive characteristics in soils.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As mentioned individually under the Typical Projects and KOP categories above, all projects to be included under the *2020 LA River Master Plan* would adhere to all building code and permitting requirements, along with implementing recommendations from site-specific geotechnical studies, when deemed necessary. This would reduce potential impacts associated with expansive soils to less-than-significant levels for short-term (construction) and long-term (operations) activities associated with *2020 LA River Master Plan* implementation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.6(e): Would the proposed Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal where sewers are not available for the disposal of waste water?

There are no septic tanks or alternative wastewater disposal systems being proposed as part of the Typical Projects, six KOP categories, or the overall *2020 LA River Master Plan* implementation. No impacts would occur.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Impact 3.6(f): Would the proposed Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction

Construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would generally involve site disturbance, movement of construction equipment, and import and export of materials. Construction would occur along the right-of-way and include an area of approximately 3 acres (for the Common Elements Typical Project) or up to 40 acres (for the Multi-Use Trails and Access Gateways Typical Project) and last about 10 months or 20 months, respectively. Ground disturbance would include site clearing and excavation. Excavation would be a maximum depth of 7 feet bgs to construct pavilions and install footings for bollards, lighting, or fences and generally 2 feet bgs for trails. Thirty-two previously recorded and as-yet-unrecorded paleontological localities have been identified in seven of the nine frames of the study area. All nine frames contain deposits considered sensitive for containing significant unrecorded paleontological vertebrate fossils. Construction of the Typical Projects could destroy, remove, disturb, and alter surface-exposed and buried paleontological resources, resulting in an adverse change in the significance of the resource.

Sensitive paleontological deposits exist at various depths below the current ground surface within all nine frames of the study area. For this PEIR analysis, all sensitive deposits identified across the study area, regardless of documentation depth, resulted in sensitive results and a potentially significant impact determination. Specific project areas and components have not been formalized, so the PEIR analyzes impacts in a general approach for all nine frames and provides a list of project-specific assessment needs that would be conducted as project-specific locations are identified.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure GEO-2: Conduct Paleontological Resources Investigations.

During design of individual subsequent projects and prior to construction, the implementing agency will conduct paleontological resource investigations consistent with SVP Guidelines. This process will include:

- Conducting a paleontological records search through the Los Angeles County Natural History Museum to identify previously recorded paleontological localities and the presence of sensitive deposits in the proposed project study area
- Reviewing project design and maximum depths and extents of project ground disturbance components
- Reviewing publicly available geotechnical reports for information concerning subsurface deposits and deposit depths across the project area
- Identifying the potential for sensitive paleontological deposits underlying the proposed Project that project implementation could affect
- Determining whether impacts on sensitive deposits, if present, would be significant

If no sensitive deposits are identified or if they are sufficiently deeper than the proposed project excavations and would not be encountered during construction, no further steps will be required.

If sensitive deposits are identified and could be affected by the proposed Project, implement Mitigation Measure GEO-3.

Mitigation Measure GEO-3: Avoid Paleontological Resources or Conduct Monitoring.

The implementing agency will redesign the subsequent project to avoid sensitive paleontological resources and deposits that could potentially contain these resources. If avoidance and/or project redesign is not feasible, then paleontological monitoring will be implemented and will include the following implementation steps:

- The implementing agency will retain a qualified paleontologist, who will attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. A *qualified paleontologist* is defined as an individual (1) who has an MS or PhD in paleontology or geology; (2) who also has demonstrated familiarity with paleontological procedures and techniques; (3) who is knowledgeable in the geology and paleontology of the County; and (4) who has worked as a paleontological mitigation project supervisor in the County for at least 1 year.
- A paleontological monitor or a qualified paleontologist will be on site on a full-time basis during excavation and ground-disturbing activities that occur in any undisturbed deposits below ground surface, to inspect exposures for contained fossils. The paleontological monitor will work under the direction of the proposed Project's qualified paleontologist. A *paleontological monitor* is defined as an individual selected by the qualified paleontologist who has experience in the collection and salvage of fossil materials.

- If fossils are discovered on a development site, the qualified paleontologist will recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains.
- The qualified paleontologist will be responsible for the cleaning, repairing, sorting, and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation program.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited (as a donation) at a scientific institution with permanent paleontological collections, such as the Los Angeles County Natural History Museum. Donation of the fossils will be accompanied by financial support for initial specimen storage, paid for by the project proponent.
- Within 30 days after the completion of excavation and ground-disturbing activities, the qualified paleontologist will prepare and submit to the implementing agency a paleontological resource recovery report that documents the results of the mitigation program. This report will include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operation activities related to the Common Elements and Multi-Use Trails and Access Gateways Typical Projects could include new single-story structures, such as pavilions, cafés, or restrooms, or lower-profile infrastructure, such as multi-use trails, signs, lighting, benches, and other associated recreational facilities, which may introduce activities that could directly affect significant paleontological resources. Operation elements, such as potentially increased erosion, even though not substantial, along proposed trail alignments, facilities, and recreational areas could result from increased public use. Additionally, introducing recreationists and trail users to new facilities associated with the Typical Projects near an area with exposed deposits that are sensitive for significant paleontological resources could directly affect any undiscovered resources, through exposure and removal from unanticipated disturbance and increased public use.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure GEO-4: Avoid/Minimize Impacts on Paleontological Resources During Operations.

If significant paleontological resources and sensitive deposits with the potential to contain significant paleontological resources are identified within a project area during design/planning of individual projects (Mitigation Measures GEO-2 and GEO-3), and deposits that are sensitive for significant paleontological resources remain exposed at or near the ground surface or become exposed during project operations, then an avoidance and minimization plan will be

prepared to avoid/minimize potential impacts during operations. This plan may include, but not be limited to:

- Securing sensitive deposits from accessibility through the development of Environmentally Sensitive Areas
- Preparing an operations and maintenance plan to minimize degradation and exposure of sensitive deposits
- Designing and developing interpretive exhibits to provide education and understanding of the importance of avoiding and protecting sensitive deposits and paleontological resources

If significant impacts on a newly exposed or existing significant paleontological resource cannot be avoided, then Mitigation Measure GEO-3 will need to be implemented.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

Similar to the Typical Projects, construction of the KOP categories would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in an adverse effect on significant paleontological resources. Impacts may be direct, through proposed ground disturbance, which could destroy, remove, disturb, or alter surface-exposed and buried paleontological resources.

Sensitive paleontological deposits exist at various depths below the current ground surface within all nine frames of the study area. For this PEIR analysis, all sensitive deposits identified across the study area, regardless of documentation depth, resulted in sensitive results and a potentially significant impact determination. Specific project areas and components have not been formalized so the PEIR analyzes impacts with a combined approach to include all frames and provides a list of project-specific assessment needs that will need to be conducted as project-specific locations are identified.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GEO-2: Conduct Paleontological Resources Investigations.

Mitigation Measure GEO-3: Avoid Paleontological Resources or Conduct Monitoring.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Potential impacts from operation of the design components under the KOP categories would vary depending on the specific component and its intended function, as well as on the specific location, including in-channel or off-channel. The specific location, configuration, and design for these components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description*, and under the construction section above, the KOP categories include a variety of construction scenarios that include ground-disturbing activities. The operation of the KOP categories could result in significant impacts on sensitive geologic deposits with the potential for containing undiscovered significant paleontological resources, which include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for disturbance. These activities could result in the exposure, disturbance, and potential destruction through damage or removal of previously unrecorded significant paleontological resources. Other KOP operations that include the construction of off-channel water features and floodplain storage and wetlands could expose previously undocumented surface-exposed or buried significant paleontological resources through stream, off-channel, and floodplain water aggradation/erosional processes.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-4:. Avoid/Minimize Impacts on Paleontological Resources During Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction

The construction impacts of the 107 projects in the *2020 LA River Master Plan* would be similar to those of the KOP categories. Some projects would cover more area than others, but the same general construction equipment and activities would be involved, e.g., the use of backhoes, trucks, hand-held

power equipment, and generators. As noted, the projects are expected to be constructed over a 25-year period. Therefore, it is possible that construction activities could result in an adverse change to a significant paleontological resource, resulting in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GEO-2: Conduct Paleontological Resources Investigations.

Mitigation Measure GEO-3: Avoid Paleontological Resources or Conduct Monitoring.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The operations impacts of the 107 projects in the *2020 LA River Master Plan* would be similar to those of the KOP categories, which could result in significant impacts on sensitive geologic deposits with the potential for containing undiscovered significant paleontological resources, including increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for removal and disturbance. These activities could result in the exposure, disturbance, and potential destruction through damage or removal of previously unrecorded significant paleontological resources. Other KOP operations that include off-channel water features and floodplain storage and wetlands could expose surface-exposed or buried significant paleontological resources through stream or off-channel degradation processes and water erosional processes related to floodplain storage activities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GEO-4: Avoid/Minimize Impacts on Paleontological Resources During Operations.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on geology, soils, and paleontological resources is the greater Los Angeles region, as it is composed of similar soil types, is a seismically active region, and was heavily settled by Native Americans, and the area contains abundant paleontological resources. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on geology and soils, if, in combination with other projects within the greater Los Angeles region, it would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides; result in substantial soil erosion or the loss of topsoil; be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse; be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal where sewers are not available for the disposal of waste water , or directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Cumulative Condition

As discussed in the *Los Angeles County General Plan Update Draft Environmental Impact Report* (2014), most of Southern California, including the cumulative programs and projects in the greater Los Angeles region, is in an area of relatively high seismic activity, and buildout and development of the cumulative programs and projects in the County would expose additional people and new infrastructure to the effects of earthquakes, seismically related ground failure, liquefaction, and seismically induced landslides.

Future cumulative development in the surrounding area would be subject to local, State, and federal regulations pertaining to geology and soils, including the CBC and, in the County area, Los Angeles County Building Code requirements. These regulations contain requirements for development in areas that are subject to Seismic Design Categories E and F. In addition, cumulative projects would be subject to the Alquist-Priolo Earthquake Fault Zone Act, which restricts development on active fault traces. Adherence to these regulations and standard engineering conditions would help reduce cumulative impacts related to geology and soils (Los Angeles County 2014). Implementation of transportation projects and land use strategies included in the 2020 Regional Transportation Plan/Sustainable Communities Strategy within the Southern California Association of Governments (SCAG) region would contribute to cumulative significant impacts with regard to the potential to expose additional people and infrastructure to the effects of earthquakes, seismic related ground failure, liquefaction, and seismically induced landslides due to thousands of acres of land subject to severe peak ground acceleration, potential liquefaction, and potential earthquake-induced landslides within 500 feet of major SCAG projects; tens of thousands of acres subject to moderate or high soil erosion within 500 feet of major SCAG projects; and several miles being within the Alquist-

Priolo EFZ (SCAG 2020). In addition, expansive soils and paleontological resources are present throughout the SCAG region, and larger transportation projects and regional land use strategies in particular may result in significant cumulative impacts where projects are within areas of expansive soils and such resources. Even with implementation of mitigation measures, these cumulative impacts would remain significant (SCAG 2020). Therefore, there is a cumulative condition with respect to geology, soils, and paleontological resources.

Contribution of the Project to Cumulative Impacts

The *2020 LA River Master Plan* project area could be subject to strong seismic ground shaking or unstable soil conditions. Construction activities would not be expected to be at depths sufficient to cause significant geologic events (e.g., fault rupture, landslides, seismic ground shaking, liquefaction) or exacerbate geologic conditions because Mitigation Measure GEO-1 would be implemented. Geologic conditions in the area would remain unchanged as a result of the proposed Project. However, landslide- and liquefaction-prone areas as well as areas with collapsible soils could expose workers to geologic hazards. The proposed Project would comply with all applicable regulations and would be consistent with goals and policies contained in the applicable general plans.

Construction activities could exacerbate erosion conditions by exposing soil or adding water to the soil, either from irrigation or runoff from new impervious surfaces. BMPs, such as silt fences, straw waddles, sediment traps, gravel sandbag barriers, or other effective BMPs, would be implemented to control runoff and erosion during construction activities. Implementation of erosion and sediment control BMPs would prevent substantial soil erosion and sedimentation. Construction activities associated with the proposed Project would not create a geologic hazard by causing or accelerating instability related to erosion, and adherence to Construction General Permit requirements would reduce potential impacts during construction to less-than-significant levels. Therefore, impacts related to geology and soils would not be cumulatively considerable.

The *2020 LA River Master Plan* could occur in or near undiscovered fossil resources (e.g., within Quaternary alluvium deposits, at depths of up to 3 feet; younger alluvium, at depths greater than 5 feet; and areas of older alluvium or paleontologically sensitive surface bedrock). The proposed Project would require notification and inventory of paleontological resources and implementation of an unanticipated discovery plan to mitigate potentially significant impacts (Mitigation Measures GEO-2, GEO-3, and GEO-4). Therefore, the *2020 LA River Master Plan* would not make a cumulatively considerable contribution to impacts on paleontological resources.

Section 3.7
Greenhouse Gas Emissions

3.7.1 Introduction

This section describes the geographic and regulatory setting for greenhouse gas (GHG) emissions, discusses GHG impacts that would result from the *2020 LA River Master Plan* and its elements, determines the significance of impacts, and identifies mitigation measures that would reduce or avoid significant impacts, where feasible.

GHG emissions refer to airborne pollutants that affect global climate conditions. These gaseous pollutants have the effect of trapping heat in the atmosphere, and consequently altering weather patterns and climatic conditions over long timescales. Consequently, unlike other resource areas that are primarily concerned with localized project impacts (e.g., within 1,000 feet of a project area), the global nature of climate change requires a broader analytic approach. Accordingly, whereas the GHG analysis focuses on emissions generated from activities in the project area, the climate change study area includes the global context. Section 3.2, *Air Quality*, analyzes criteria pollutants and air quality.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.7.2 Setting

3.7.2.1 Geographic

Global Climate Change

The process known as the greenhouse effect keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere. Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which is re-emitted back toward the surface by GHGs. Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth.

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution (IPCC 2018). Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a phenomenon commonly referred to as global warming. Higher global surface temperatures, in turn, result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, variable precipitation, and increased frequency and intensity of extreme weather events (IPCC 2018). Large-scale changes to Earth's system are collectively referred to as climate change.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. IPCC estimates that human-induced warming reached approximately 1 degree Celsius (°C) above pre-industrial levels in 2017, increasing at 0.2°C per decade. Under the current nationally determined contributions of mitigation from each country until 2030, global warming is expected to rise to 3°C by 2100, with warming to continue afterward (IPCC 2018). Even small, incremental increases in global temperatures could have substantial adverse effects on the natural and human environments worldwide and in California.

Potential Climate Change Effects

Climate change is a complex process that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea level rise (both globally and regionally) as well as changes in climate and rainfall, among other effects, there remains uncertainty about characterizing precise local climate characteristics and predicting accurately how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected to occur in the future, although the precise extent will take further research to define. Specifically, predicted adverse effects of global climate change worldwide and in California include:

- Declining sea ice and mountain snowpack levels, resulting in increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor, due to the atmosphere's ability to hold more water vapor at higher temperatures (CNRA 2018)
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets (IPCC 2018)
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2018)
- Declining Sierra Nevada Mountains snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years (CNRA 2018)
- Increase in the number of days conducive to ozone formation (e.g., clear days with intense sun light) by 25 percent to 85 percent (depending on the future temperature scenario) by the end of the 21st century in high ozone areas, including Southern California (CNRA 2018)

- Increasing potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level (CNRA 2018)
- Exacerbated severity of drought conditions in California such that durations and intensities are amplified, ultimately increasing the risk of wildfires and consequential damage incurred (CNRA 2018)
- Agriculture experiencing lower crop yields due to extreme heat waves, heat stress and increased water needs of crops and livestock (particularly during dry and warm years), and new and changing pest and disease threats (CNRA 2018)

The impacts of climate change, such as increased heat-related events, droughts, and wildfires, pose direct and indirect risks to public health, as people will experience earlier death and worsening illnesses. Indirect impacts on public health include increased vector-borne diseases, stress and mental trauma due to extreme events and disasters, economic disruptions, and residential displacement (CNRA 2018).

Greenhouse Gases

The principal anthropogenic (human-made) GHGs listed by IPCC that contribute to global warming are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds, including sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources. California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505(g); 14 CCR Section 15364.5).

The primary GHGs of concern associated with the proposed Project are CO_2, CH_4, and N_2O. Principal characteristics of these pollutants are discussed below.

- **Carbon dioxide** enters the atmosphere through fossil fuels (oil, natural gas, and coal) combustion, solid waste decomposition, plant and animal respiration, and chemical reactions (e.g., manufacture of cement). CO_2 is also removed from the atmosphere (or *sequestered*) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane** is emitted during the production and transport of coal, natural gas, and oil. CH_4 emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.
- **Nitrous oxide** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in IPCC reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO_2e), which compares the gas in question to that of the same mass of CO_2 (CO_2 has a global warming potential of 1 by definition). The GWP values used in this report are based on the IPCC Fourth Assessment Report and United Nations Framework Convention on Climate Change reporting guidelines. The Fourth Assessment Report GWP values are consistent with those used in the California Air Resources Board's (CARB's) most recent GHG inventory (CARB 2020a) and *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan) (CARB 2017a).

Table 3.7-1 lists the global warming potential of CO_2, CH_4, and N_2O and their lifetimes in the atmosphere.

Table 3.7-1. Lifetimes and Global Warming Potential of Key Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100 years)	Lifetime (years)[a]
CO_2	1	-[b]
CH_4	25	9–15
N_2O	298	121

Source: CARB 2020a.

[a] Defined as the half-life of the gas.

[b] CARB has not identified a lifetime for CO_2.

All GWPs used for CARB's GHG inventory and to assess attainment of the State's 2020 and 2030 reduction targets are considered over a 100-year timeframe (as shown in Table 3.7-1). However, CARB recognizes the importance of short-lived climate pollutants (SLCPs) and reducing these emissions to achieve the State's overall climate change goals. SLCPs have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate-forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO_2 (CARB 2017b). Recognizing their short-term lifespan and warming impact, SLCPs are measured in terms of CO_2e using a 20-year time period. The use of GWPs with a time horizon of 20 years better captures the importance of the SLCPs and gives a better perspective on the speed at which SLCP emission controls will affect the atmosphere relative to CO_2 emission controls. The SLCP Reduction Strategy, which is discussed under Section 3.7.2.2, *Regulatory*, addresses the three primary SLCPs—CH_4, HFC gases, and anthropogenic black carbon. CH_4 has lifetime of 12 years and a 20-year GWP of 72. HFC gases, which would not be generated by the proposed Project, have lifetimes of 1.4 to 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200 (CARB 2017b).

Statewide Greenhouse Gas Emissions Trends

A GHG inventory is a quantification of all GHG emissions and sinks[1] within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

CARB has prepared a statewide emissions inventory covering 2000 to 2017, which demonstrates that GHG emissions have decreased by approximately 10 percent over that period (CARB 2019a). The largest reductions in GHG emissions have come from the electricity sector, which continues to decrease as a result of the State's climate policies that has led to a growth in wind generation and solar power. Emissions in 2017 from the transportation sector, which represents California's largest source of GHG emissions and contributed 40 percent of total annual emissions, increased by 1 percent from 2016. Table 3.7-2 shows statewide GHG emission estimates from 2007 to 2017 in California. Note that the 2020 target (1990 levels) is 426.6 million metric tons of CO_2e ($MMTCO_2e$) while the 2030 target (40 percent below 1990 levels) is currently set at 260 $MMTCO_2e$ (CARB 2017a).

[1] A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

Table 3.7-2. California Greenhouse Gas Emissions Inventory 2007–2017

Sector	Annual CO_2e Emissions (million metric tons)										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Transportation	189	189	177	170	165	162	161	161	163	166	169
Industrial	93	90	91	88	92	90	91	94	94	92	90
Electric Power	105	114	120	101	90	88	96	89	89	84	69
Commercial/Residential	44	44	44	45	46	46	44	44	38	39	41
Agriculture	35	35	35	33	34	34	36	34	35	34	34
High Global Warming Potential	10	11	12	12	14	15	16	17	18	19	19
Recycling and Waste	8	8	8	8	8	9	9	9	9	9	9
Emissions Total	491	487	457	449	444	451	448	445	441	429	424

Source: CARB 2019b.
Totals may not add exactly due to rounding.

Table 3.7-3 outlines the most recent city and County GHG inventories (where available) to help contextualize the magnitude of potential project-related emissions. There is no GHG inventory specifically for the study area. Mobile sources (e.g., vehicle trips) generate the largest amounts of GHG emissions in the study area. Other smaller sources of GHG emissions in the study area include those from industrial processes and electricity consumption.

Table 3.7-3. Local Greenhouse Gas Emissions (metric tons per year)

Emissions Inventory	CO_2e (rounded)
2017 City of Los Angeles	27,500,000
2015 City of Long Beach	3,100,468
2012 City of Carson	2,136,321
2010 Unincorporated County Areas	7,900,000
2010 City of Burbank	1,992,162
2009 City of Glendale	1,614,709

Sources: City of Los Angeles 2019; City of Long Beach 2019; City of Carson 2017; Los Angeles County 2015; City of Burbank 2013b; City of Glendale 2012.

3.7.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of GHG emissions in this PEIR.

International

In 2015, the 21st session of the Conference of Parties took place in Paris, France. The session included representatives from 196 parties to the United Nations Framework Convention on Climate Change. The outcomes from the Paris Agreement at this session include limiting global temperature increase well below 2°C, establishing binding commitments by all parties to make Nationally Determined Contributions and to pursue domestic policies aimed at achieving Nationally

Determined Contributions, and regular reporting by all countries on their emissions and progress made in implementing and achieving their Nationally Determined Contributions. In April 2016, 174 states and the European Union signed the agreement, including the United States. However, on November 4, 2019, President Donald Trump formally notified the United Nations that the United States would withdraw from the Paris Agreement after first making the announcement on June 1, 2017. This formal notification began a 1-year process for exiting the deal, which can occur no sooner than November 2020.

The Under2 Coalition is an international coalition of jurisdictions that signed the Global Climate Leadership Memorandum of Understanding following President Trump's decision to withdraw from the Paris Agreement. The Memorandum of Understanding aims to limit global warming to 2°C, to limit GHGs to below 80 to 95 percent below 1990 levels, and/or to achieve a per-capita annual emissions goal of less than 2 metric tons by 2050. The Memorandum of Understanding has been signed or endorsed by 135 jurisdictions (including California) that represent 32 countries and six continents.

Also in response to President Trump's decision to withdraw from the Paris Agreement, several states (including California) formed the United States Climate Alliance to continue to advance the goals of the Paris Agreement at the state level. This includes tracking and reporting progress on the U.S. goal of reducing GHG emissions 26 to 28 percent from 2005 levels by 2025.

Federal

There is currently no federal overarching law specifically related to climate change or the reduction of GHG emissions. Under the Obama Administration, the U.S. Environmental Protection Agency (EPA) had been developing regulations under the Clean Air Act. There have also been settlement agreements among EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries, as well as EPA's issuance of an "Endangerment Finding" and a "Cause or Contribute Finding." EPA has also adopted a Mandatory Reporting of Greenhouse Gases Rule and Clean Power Plan. Under the Clean Power Plan, EPA issued regulations to control CO_2 emissions from new and existing coal-fired power plants. However, on February 9, 2016, the Supreme Court issued a stay of these regulations pending litigation. Former EPA Administrator Scott Pruitt also signed a measure to repeal the Clean Power Plan. The fate of the proposed regulations is uncertain given the change in federal administrations and the pending deliberations in federal courts.

The National Highway Traffic Safety Administration sets the Corporate Average Fuel Economy Standards to improve the average fuel economy and reduce GHG emissions generated by cars and light-duty trucks. The National Highway Traffic Safety Administration and EPA have proposed to amend the current fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). California, 22 other states, the District of Columbia, and two cities filed suit against the proposed action on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). The lawsuit requests a "permanent injunction prohibiting Defendants from implementing or relying on the Preemption Regulation," but does not stay its implementation during legal deliberations. Part 1 of the SAFE Vehicles Rule went into effect on November 26, 2019. Part 2 of the rule was finalized on March 31, 2020.

State

California has taken proactive steps, briefly described below, to address issues associated with GHG emissions and climate change. Much of this establishes a broad framework for the State's long-term GHG and energy reduction goals and climate change adaptation program. The former and current governors of California have also issued several Executive Orders (EOs) related to the State's evolving climate change policy. Summaries of key policies, EOs, regulations, and legislation at the state level that are relevant to the Project are provided below in chronological order.

Assembly Bill 1493

Assembly Bill (AB) 1493 (2002) (Pavley I) requires CARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with model year 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025. See the *Federal* section above for a discussion of the current status of the SAFE Vehicles Rule, which would affect fuel efficiency standards for passenger cars and light trucks subject to Pavley II.

Executive Order S-3-05

On June 1, 2005, Governor Arnold Schwarzenegger signed California EO S-3-05. The goal of this EO was to reduce California's GHG emissions to (1) 2000 levels by 2010; (2) 1990 levels by 2020; and (3) 80 percent below 1990 levels by 2050. EO S-3-05 also calls for the California Environmental Protection Agency to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy. As a result of the scientific analysis presented in these biennial reports, a comprehensive Climate Adaptation Strategy was released in December 2009 following extensive interagency coordination and stakeholder input. The latest of these reports, Climate Action Team Biennial Report, was published in December 2010.

Green Building Code and Title 24 Updates

The Green Building Standards Code (CALGreen) applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects after January 1, 2011. CALGreen also requires newly constructed buildings to develop a waste management plan and divert at least 50 percent of the construction materials generated during project construction.

Administrative regulations related to CALGreen Part 11 and the 2016 Building Energy Efficiency Standards were adopted in 2016 (effective January 1, 2017). The 2016 standards resulted in residential construction that was 25 percent more efficient than previous residential construction. Part 11 also established voluntary standards, which became mandatory in the 2010 edition of the code, including planning and designing for sustainable site development, energy efficiency, water conservation, material conservation, and reductions in internal air contaminants. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features to reduce energy consumption in homes and businesses.

On May 9, 2018, the California Energy Commission (CEC) adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020. The 2019 standards mandate higher

efficiency levels and rooftop solar photovoltaic systems for all new residential buildings constructed in 2020 and beyond. The 2019 standards are expected to result in residential buildings that are, on average, 53 percent more energy efficient than those built under the 2016 standards. Non-residential buildings will be 30 percent more energy efficient because the standards will update indoor and outdoor lighting to make maximum use of light-emitting diode (LED) technology. Future CALGreen standards are expected to include a requirement of zero net energy for newly constructed commercial buildings.

Assembly Bill 1826

In October 2014 Governor Jerry Brown signed AB 1826 (Chesbro; Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the State implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (although multifamily dwellings are not required to have a food waste diversion program). Organic waste (also referred to as *organics* throughout this section) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. As of January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week must arrange for organic waste recycling services. The California Department of Resources Recycling and Recovery is scheduled in 2020 to conduct a formal review of statewide disposal rates and evaluate whether organic recycling requirements should be expanded to cover business that generate 2 cubic yards.

Assembly Bill 32

One goal of EO S-03-05 was further reinforced by AB 32 (Chapter 488, Statutes of 2006), the Global Warming Solutions Act of 2006, which requires the State to reduce GHG emissions to 1990 levels by 2020. Since AB 32 was adopted, CARB, CEC, the California Public Utilities Commission, and the Building Standards Commission have been developing regulations that will help meet the goals of AB 32. Under AB 32, CARB is required to prepare a scoping plan and update it every 4 years. CARB's Scoping Plan was approved in 2008, the First Update approved in 2014, and an additional update was approved in 2017 (see discussion of Senate Bill [SB] 32 below). The 2008 Scoping Plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020, and requires CARB and other State agencies to develop and enforce regulations and other initiatives for reducing GHGs. Specifically, the 2008 Scoping Plan articulates a key role for local governments, recommending they establish GHG reduction goals for both their municipal operations and the community consistent with those of the State.

Low Carbon Fuel Standard

With EO S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard (LCFS) for California in 2007. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020. In September 2018, the LCFS regulation was amended to increase the statewide goal to a 20 percent reduction in carbon intensity of California's transportation fuels by at least by 2030.

Senate Bill 375

SB 375, signed into law by Governor Schwarzenegger on September 30, 2008, became effective January 1, 2009. This law requires the state's 18 Metropolitan Planning Organizations to develop sustainable communities strategies (SCS) as part of their regional transportation plans (RTPs) through integrated land use and transportation planning, and to demonstrate an ability to attain the GHG emissions reduction targets that CARB established for the region by 2020 and 2035. This would be accomplished through either the financially constrained SCS as part of the RTP or an unconstrained alternative planning strategy. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain CEQA review requirements.

Senate Bills 1078, 107, and 2

SBs 1078 (2002), 107 (2006) and 2 (2011), California's Renewables Portfolio Standard (RPS), obligates investor-owned utilities, energy service providers, and Community Choice Aggregators to procure additional retail sales per year from eligible renewable sources with the long-range target of procuring 33 percent of retail sales from renewable resources by 2020. The California Public Utilities Commission and CEC are jointly responsible for implementing the program.

Executive Order B-30-15

Governor Brown signed EO B-30-15 on April 29, 2015. EO B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and requires CARB to update its current AB 32 Scoping Plan to identify measures to meet the 2030 target. EO B-30-15 supports EO S-3-05 but is only binding on State agencies.

Senate Bill 32 and Assembly Bill 197

SB 32 (2016) requires CARB to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. The companion bill to SB 32, AB 197, creates requirements to form a Joint Legislative Committee on Climate Change Policies, requires CARB to prioritize direct emission reductions and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit, requires CARB to prepare reports on sources of GHGs and other pollutants, establishes 6-year terms for voting members of CARB, and adds two legislators as non-voting members of CARB. CARB adopted the 2017 Scoping Plan in November 2017 (updated in December 2017) to meet the GHG reduction requirement set forth in SB 32. The 2017 Scoping Plan proposes continuing the major programs of the 2008 Scoping Plan, including Cap-and-Trade regulation; LCFS; more efficient cars, trucks, and freight movement; RPS, and reducing CH_4 emissions from agricultural and other wastes.

Senate Bill 32 Scoping Plan

CARB approved the 2017 Scoping Plan update in December 2017, which builds on the programs set in place as part of the 2008 Scoping Plan that was drafted to meet the 2020 reduction targets per AB 32. The 2017 Scoping Plan proposes meeting the 2030 goal by accelerating the focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels including electricity and hydrogen, stronger efforts to reduce emissions of SLCPs (CH_4, black carbon, and fluorinated gases), further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car, continuing the Cap-and-Trade program, and

ensuring that natural lands become carbon sinks to provide additional emissions reductions and flexibility in meeting the target. The 2017 Scoping Plan also recommends that local governments aim to achieve community-wide efficiency of 6 metric tons of CO_2e ($MTCO_2e$) per capita by 2030 and 2 $MTCO_2e$ per capita by 2050 to be used in local climate action planning. These efficiency targets replace the "15 percent from 2008 levels by 2020" approach recommended in the 2008 Scoping Plan, which would allow for local governments to grow in a sustainable manner.

Senate Bill 350 and Senate Bill 100

SB 350 (the Clean Energy and Pollution Reduction Act) was signed into law in October 2015. SB 350 requires CARB (in coordination with the California Public Utilities Commission and CEC) to coordinate and implement the following overarching goals:

- Increase the RPS to 50 percent of retail sales by 2030 and ensure grid reliability.
- Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.
- Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in their integrated resource plans (IRPs) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs. The IRPs will detail how each large utility will meet their customers' resource needs, minimize price increases, reduce emissions, and ramp up the deployment of clean energy resources.

In September 2018, SB 100 was signed into law, which implements the following goals:

- Increase the RPS to 50 percent of retail sales by 2026 (moved up by 4 years from SB 350).
- Increase the RPS to 60 percent of retail sales by 2030 (new 2030 target).
- Increase the RPS to 100 percent of retail sales by 2045 (carbon-free goal for 2045).

SB 100 is a legislative action that was signed into law after the 2017 Scoping Plan was adopted. The 2017 Scoping Plan modeling is based on the SB 350 target of 50 percent renewables by 2030. However, the new SB 100 target of 60 percent renewables by 2030 and 100 percent renewables by 2045 supersede the goals of SB 350 and will be included in future scoping plan updates.

Senate Bill 743

To further the state's commitment to the goals of SB 375, AB 32, and AB 1358, Governor Brown signed SB 743 on September 27, 2013. SB 743 adds Chapter 2.7*, Modernization of Transportation Analysis for Transit-Oriented Infill Projects*, to Division 13 (Section 21099) of the Public Resources Code. Key provisions of SB 743 include eliminating the measurement of vehicle delay, or level of service (LOS), as a metric that can be used for measuring traffic impacts. Under SB 743, the focus of transportation analysis shifts from LOS to the reduction of GHG emissions through the creation of multimodal transportation networks and promotion of a mix of land uses to reduce vehicle miles traveled (VMT). SB 743 required the California Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly for areas served by transit (i.e., transit priority areas), those alternative criteria must "promote the reduction of GHG emissions, the development of multimodal transportation

networks, and a diversity of land uses" (New Public Resources Code Section 21099[b][1]). Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." OPR also has discretion to develop alternative criteria for areas that are not served by transit, if appropriate.

Pursuant to the mandate in SB 743, OPR adopted the revised State CEQA Guidelines in December 2018, recommending the use of VMT for analyzing transportation impacts under CEQA. In turn, Section 15064.3 was added to the State CEQA Guidelines and states "generally, vehicle miles traveled [VMT] is the most appropriate measure of transportation impacts." The revised State CEQA Guidelines require that lead agencies remove automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a criterion for determining a significant impact on the environment pursuant to CEQA, except in locations specifically identified in the revised guidelines, if any. In accordance with this requirement, CEQA Guidelines Section 15064.3(a), adopted in December 2018, states "a project's effect on automobile delay does not constitute a significant environmental impact." The requirements of SB 743 went into full effect as of July 1, 2020. The County has developed Transportation Impact Guidelines consistent with SB 743, which are described below.

Mobile Source Strategy

CARB developed the Mobile Source Strategy to provide an integrated action plan that establishes an integrated planning perspective and common vision for transforming the mobile sector. The Mobile Source Strategy supports multiple planning efforts, including the State Implementation Plans, the Scoping Plan, the SLCP Strategy (discussed below), and the Sustainable Freight Action Plan. The Mobile Source Strategy outlines CARB's approach to reducing emissions from mobile sources. The strategy includes actions to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth.

Short-Lived Climate Pollutant Strategy

SB 1383, adopted in 2013, requires CARB to develop and implement an SLCP Strategy with the following 2030 goals: 40 percent reduction in CH_4, 40 percent reduction in HFC gases, and 50 percent reduction in anthropogenic black carbon below 2013 levels. Per its directive, CARB adopted the SLCP Strategy, establishing a path to decrease SLCPs from various sectors of the economy. Strategies span from wastewater and landfill practices and CH_4 recovery to reducing natural gas leaks and consumption. The SLCP strategy also identifies measures that can reduce HFC emissions through incentive programs and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment.

Cap-and-Trade

CARB adopted the Cap-and-Trade program in October 2011. The California Cap-and-Trade program is a market-based system with an overall emissions limit for affected emission sources. Affected sources include in-state electricity generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers and distributors. The original Cap-and-Trade program set a compliance schedule through 2020. AB 398 extends the program through 2030 and requires CARB to make refinements, including establishing a price ceiling. Revenue generated from the Cap-and-Trade program are used to fund various programs. AB 398 established post-2020 funding priorities, to include (1) Air Toxics and Criteria Pollutants, (2) Low and Zero Carbon Transportation,

(3) Sustainable Agricultural Practices, (4) Healthy Forests and Urban Greening, (5) Short-lived Climate Pollutants, (6) Climate Adaptation and Resiliency, and (7) Climate and Clean Energy Research.

Executive Order B-55-18

Based on the worldwide scientific agreement that carbon neutrality must be achieved by midcentury, EO B-55-18 establishes a new State goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. The EO charges CARB with developing a framework for implementing and tracking progress toward these goals. This EO extends EO S-3-05, but is only binding on State agencies. However, given this directive, it is likely that the carbon neutrality goal for 2045 will make its way into future updates to the scoping plan, which must be updated every 5 years.

Regional

South Coast Air Quality Management District

As discussed in Section 3.2, *Air Quality*, the South Coast Air Quality Management District (SCAQMD) has primary responsibility for development and implementation of rules and regulations to attain the national and California ambient air quality standards as well as permitting new or modified sources, developing air quality management plans, and adopting and enforcing air pollution regulations within the South Coast Air Basin. CARB's 2017 Scoping Plan does not provide an explicit role for local air districts with respect to implementing the reduction goals of SB 32 and AB 32, but CARB does state that it will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting but also through their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents.

On December 5, 2008, the SCAQMD Governing Board considered draft GHG guidance, and adopted a staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for industrial permitting projects where SCAQMD is lead agency. The board letter, resolution, interim GHG significance threshold, draft guidance document, and attachments can be found under Board Agenda Item 31 of the December 5, 2008, Governing Board Meeting Agenda.[2] In its draft guidance document, SCAQMD included evidence and rationale for developing thresholds, specifically citing the State CEQA Guidelines §15064.7(a) *("each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects"*) and Subsection (b) (*"Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule or regulation, and developed through a public review process and be supported by substantial evidence"*). SCAQMD developed thresholds for both stationary sources and land use development projects. SCAQMD's recommended GHG significance threshold underwent a public review process as part of stakeholder working group meetings that were open to the public. The draft guidance document provides the supporting analysis and methodology for developing the GHG significance thresholds for both

[2] Board Agenda Item 31 data available at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds.

stationary sources and land use development projects. After completion of the public process, the proposed interim thresholds for land use development projects was brought to the SCAQMD's Governing Board but were not formally adopted, while the threshold involving industrial permitting projects where SCAQMD is lead agency was adopted.

For industrial process, SCAQMD has formally adopted a 10,000 $MTCO_2e$ threshold for industrial (permitted) facilities where SCAQMD is the lead agency.

SCAQMD noted that the proposed interim GHG significance threshold for evaluation of land use development projects was only a recommendation for lead agencies and not a mandatory requirement. The GHG significance threshold may be used at the discretion of the local lead agency. The draft GHG guidance identified a tiered approach for determining the significance of GHG emissions, one of which included the use of numerical screening thresholds. With respect to numerical GHG significance thresholds, SCAQMD proposed two different approaches to be taken by lead agencies when analyzing GHG emissions:

- Option #1 includes using separate numerical thresholds for residential projects (3,500 $MTCO_2e$ per year), commercial projects (1,400 $MTCO_2e$ per year), and mixed-use projects (3,000 $MTCO_2e$ per year).
- Option #2 is use of a single numerical threshold for all non-industrial projects of 3,000 $MTCO_2e$ per year. SCAQMD's most recent recommendation per its September 2010 meeting minutes is to use option #2.

Southern California Association of Governments 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

On September 3, 2020, the Southern California Association of Governments' (SCAG's) Regional Council formally adopted Connect SoCal (2020–2045 RTP/SCS). On May 7, 2020, the 2020-2045 RTP/SCS was approved by SCAG's Regional Council for federal transportation conformity purposes only. The plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The plan charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably.

The 2020–2045 RTP/SCS is consistent with SB 375, which requires SCAG to adopt an SCS that outlines policies to reduce per-service-population GHG emissions from automobiles and light trucks. SCAG's current target is to reduce per-capita GHG emissions from passenger vehicles by approximately 8 percent by 2020 and 19 percent by 2035 over base year 2005 (CARB 2020b). The 2020–2045 RTP/SCS achieves per-capita GHG emissions reductions relative to 2005 of 8 percent in 2020 and 19 percent in 2035. While this plan is being released in 2020, the same year as the first target date, the achievement is based on modeled results, as observed data are not yet available.

The SCS presents strategies and tools that are consistent with local jurisdictions' land use policies and incorporates best practices for achieving the State-mandated reductions in GHG emissions at the regional level through reduced per-capita VMT. The SCS strategies included in the 2020–2045 RTP/SCS to reduce GHG emissions consist of focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, supporting implementation of sustainability policies, and promoting a green region.

Los Angeles County General Plan

Adopted in 2016, the *Los Angeles County General Plan*'s Air Quality Element outlines goals and policies that would also reduce GHG emissions and address the impacts of climate change. Relevant policies are as follows:

- **Policy AQ 3.2:** Reduce energy consumption in County operations by 20 percent by 2015.
- **Policy AQ 3.3**: Reduce water consumption in County operations.
- **Policy AQ 3.5:** Encourage energy conservation in new development and municipal operations.
- **Policy AQ 3.7:** Support and expand urban forest programs within the unincorporated areas.

In addition, the general plan contains policies that encourage water conservation and protection, traffic reduction, sustainable development, and waste minimization that would further reduce GHG emissions (Los Angeles County 2016).

Los Angeles County Climate Action Plan

Los Angeles County's *Community Climate Action Plan* (2020 CCAP), adopted in 2015, supplements the *Los Angeles County General Plan* and describes the County's plan to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated County areas by at least 11 percent below 2010 levels by 2020 (Los Angeles County 2015). The 26 local community actions relate to green buildings and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting (Los Angeles County 2015). On June 6, 2018, the County adopted an ordinance amendment to Title 22 in order to implement the 2020 CCAP actions. This ordinance allows for environmentally friendly roof and pavement materials and electric vehicle infrastructure, requires signs in on-site loading areas to encourage vehicle idle reduction, and regulates secondary land uses under high-voltage power lines in select zones.

As of August 2020, the 2020 CCAP is in the process of being updated. The draft Los Angeles County Climate Action Plan (CAP) builds upon the efforts within the 2020 CCAP, as well as the *OurCounty Los Angeles Countywide Sustainability Plan* (OurCounty Sustainability Plan; described below). The Los Angeles County CAP outlines actions that the County plans to take to reduce GHG emissions and adapt to a changing climate in unincorporated County areas. The Los Angeles County CAP ties together existing climate change initiatives and provides a blueprint for targeting carbon neutrality by 2045 in unincorporated County areas. In that sense, the Los Angeles County CAP is aligned with EO B-55-18, which calls for statewide carbon neutrality by 2045. The Los Angeles County CAP was released for public review in March 2020 and received public comments through April 2020 (Los Angeles County 2020). At this time, the anticipated adoption date of the plan is unknown.

Los Angeles County Sustainability Plan

In July 2019, the County adopted the OurCounty Sustainability Plan. OurCounty Sustainability Plan includes 12 primary goals that have a total of 37 strategies, with a total of 159 actions. The plan identifies lead County entities and partners for each goal. The plan is intended to help guide decision-making in unincorporated County areas and provide a model for decision-making in the 88 incorporated cities in the County. As a strategic plan, OurCounty Sustainability Plan does not supersede land use plans that have been adopted by the Regional Planning Commission and Board

of Supervisors, including the *Los Angeles County General Plan* and various community, neighborhood, and area plans.

Local

Frame 1

City of Long Beach

City of Long Beach General Plan

Several air quality policies in the *City of Long Beach General Plan* are relevant to GHG emissions. They include the following:

- **Policy 7.1:** Reduce energy consumption through conservation improvements and requirements.
- **Policy 7.2:** Promote local recycling of wastes and use of recycled materials.

In addition, general plan policies that encourage water conservation and protection, traffic reduction, and efficient land uses would further reduce GHG emissions (City of Long Beach 1996).

City of Long Beach Climate Action and Adaptation Plan

In May 2019, the City of Long Beach released a working draft of its *Climate Action and Adaptation Plan*. This plan includes mitigation and adaptation strategies for the city to address climate impacts and to reduce the city's impacts on climate change through reducing GHG emissions. Priority mitigation actions in the transportation, energy, and waste sectors are presented and include actions such as providing expanding and improving pedestrian infrastructure, providing access to renewable generated electricity, and ensuring compliance with waste collection programs. Adaptation strategies are primarily focused on addressing extreme heat, air quality, drought, and flooding and include actions such as encouraging urban agriculture, implementing additional water conservation programs, and incentivizing renewable energy sources. A final draft plan will be released sometime in 2020 and will ultimately be incorporated into the city's general plan (City of Long Beach 2019).

City of Los Angeles

City of Los Angeles General Plan

The Air Quality Element of the *City of Los Angeles General Plan* (City of Los Angeles 1992) includes goals related to GHG emissions. Relevant policies are as follows:

- **Policy 4.2.5:** Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.
- **Policy 5.1.2:** Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations.
- **Policy 5.1.4:** Reduce energy consumption and associated emissions by encouraging waste reduction and recycling.
- **Policy 5.3.1:** Support the development and use of equipment powered by electric or low-emitting fuels.

In addition, the Air Quality Element includes goals that would support further reduction of GHG emissions. They include less reliance on single-occupancy vehicles, efficient management of transportation facilities and system infrastructure, reduction of vehicle traffic during peak periods, and addressing the relationship between land use, transportation, and air quality.

City of Los Angeles Sustainable City pLAn

In 2019, *L.A.'s Green New Deal: Sustainable City pLAn* was released and contains actions that would also addresses GHG emissions. The plan is made up of short-term (2017) and longer-term (2025 and 2035) targets in 14 categories that will advance the city's environment, economy, and equity. These topic areas include local water, local solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, prosperity and green jobs, preparedness and resiliency, air quality, environmental justice, urban ecosystem, livable neighborhoods, and leadership by example (City of Los Angeles 2019).

Frame 2

City of Carson

City of Carson General Plan

The *Carson General Plan* (City of Carson 2004) does not contain GHG-specific policies, but general plan policies related to air quality would be relevant and would reduce GHG emissions. They include the following policies:

- **Policy AQ-2.2:** Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.
- **Policy AQ-2.4:** Continue to work to relieve congestion on major arterials and thereby reduce emissions.
- **Policy AQ-2.5:** Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.
- **Policy AQ-2.6:** Encourage in-fill development near activity centers and along transportation routes.
- **Policy AQ-3.1**: Continue to promote the use of alternative clean fueled vehicles for personal and business use.

City of Carson Climate Action Plan

The City of Carson's CAP, adopted in 2017, sets a long-term goal of reducing GHG emissions by 49 and 80 percent below 2005 levels by 2035 and 2050, respectively. The CAP identifies emission reduction strategies, including those involving land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage. Strategies involve identifying ways to reduce automobile emissions, emphasizing energy efficiency, increasing waste diversion, creating carbon sinks, and implementing clean, renewable energy (City of Carson 2017).

City of Compton

City of Compton Draft General Plan

The *Draft Compton General Plan 2030*'s Air Quality Element (City of Compton 2011) contains additional policies related to air quality and health that are relevant to GHGs. They include the following:

- **Air Quality Element Policy 4.1.** The City of Compton will support the use of energy-efficient equipment and design in City facilities and infrastructure.
- **Air Quality Element Policy 4.2.** The City of Compton will encourage incorporation of energy features, including passive solar, in the construction and rehabilitation of new and existing structures.

In addition, policies that encourage sustainable transportation and land use planning would further reduce GHG emissions.

City of Long Beach

Applicable regulations for the City of Long Beach are described above.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in Frame 2.

Frame 3

City of Compton

Applicable regulations for Compton are described above in Frame 2.

City of Cudahy

City of Cudahy General Plan

The Air Quality Element in the *Cudahy 2040 General Plan* contains policies related to air quality that are relevant to reducing GHG emissions, including policies related to the energy, land use, and waste sectors (City of Cudahy 2018). They include the following:

- **Policy AQE-3.1:** Support, expand, and incentivize the use of renewable energy resources such as geothermal, wind, solar, and others.
- **Policy AQE-3.3:** Encourage participation in and expansion of the Cudahy Hero program, which offers financing for energy efficient products and renewable energy systems.
- **Policy AQE-3.4:** Encourage and promote the establishment of local green energy generation projects.
- **Policy AQE-3.5:** Consider strategies that will encourage property owners to pursue energy and water conservation/efficiency retrofits in existing buildings.
- **Policy AQE-3.6:** Develop energy consumption regulations for public and private development that meet or exceed California Energy Efficiency Standards and California Green Building Standards Codes.
- **Policy AQE-3.7:** Expand native and drought-resistant trees and plantings palettes (urban forest) to support natural air filtering and cooling capabilities and in accordance with California Air Resources Board's urban forest protocol.

- **Policy AQE-3.8:** Increase public awareness about climate change; encourage Cudahy residents and businesses to become involved in activities and lifestyle changes that help reduce GHG emissions.
- **Policy AQE-4.1:** Adopt a citywide benchmark goal to divert 75 percent of annual waste away from landfills by 2025; track annual progress.
- **Policy AQE-4.2:** Develop a minimum 50 percent diversion rate requirement for construction and demolition projects.
- **Policy AQE-4.3:** Increase composting, recycling, and efforts to reduce waste generation, focusing especially on large commercial and industrial waste producers, but also accommodating the needs of residents in multi-unit housing.

City of Downey

City of Downey General Plan

The *Downey Vision 2025 General Plan* (City of Downey 2005) does not contain GHG-specific policies, but general plan policies related to air quality would reduce GHG emissions. These include the following:

- **Program 4.5.1.4:** Encourage alternative modes of travel, such and walking and cycling, to vehicles to reduce emission associated with vehicle use.
- **Program 4.5.1.5:** Promote the use of alternative fuel vehicles, including clean diesel, compressed natural gas, hydrogen, that result in reduced emission, including in instances involving City operations.

In addition, general plan policies related to sectors, including land use, transportation, water, waste, and energy, would further reduce GHG emissions.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* contains various measures that would affect sectors such as land use, transportation, water, solid waste, and energy and would reduce GHG emissions. Such measures include implementing energy conservation measures, encouraging the use of drought-tolerant landscaping, and promoting a circulation system to serve all travel needs (City of Lynwood 2003).

City of Paramount

City of Paramount General Plan

The *Paramount General Plan* was adopted in 2007 and does not contain GHG-specific policies. However, general plan policies related to land use, circulation, and resources would reduce GHG emissions. These include encouraging alternative modes of transportation, resource conservation, solid waste reduction, and thoughtful development (City of Paramount 2007).

City of South Gate

City of South Gate General Plan

Adopted in 2009, the *South Gate General Plan 2035*'s Green City Element includes a climate change section that is focused on reducing the city's production of GHG emissions (City of South Gate 2009).

Relevant GHG policies across the energy, land use, transportation, and waste sectors include the following:

- **GC 7 Policy 1:** The City will proactively cooperate with the State to implement AB 32, which calls for reducing GHG emissions to 1990 levels by 2020 and Executive Order S-3-05, which calls for 1990 levels by 2020 and 80 percent below 1990 levels by 2050.
- **GC 7 Policy 3:** The City will strive to reduce its per capita GHG emissions to 15 percent below 2005 levels by 2020.
- **GC 7 Policy 4:** The City will reduce GHG emissions and adapt to climate change with efforts in the following areas:
    - **Energy** – Major mitigation and adaptation strategies will include incentivizing renewable energy installation, facilitating green technology and business, and reducing community-wide energy consumption.
    - **Land Use** – Major mitigation and adaptation strategies will include strategies that include transit-oriented development, infill development, and encouraging a mix of uses.
    - **Transportation** – Major mitigation and adaptation strategies will include enhanced multi-modal transportation, cycling infrastructure and walking infrastructure.
    - **Buildings** – Major mitigation adaptation strategies will include green building incentives, assessment of green building techniques as a formal development of a green building ordinance. Adaptation strategies will also include increased water efficiency in buildings.
    - **Waste** – Major mitigation strategies will include increased composting and recycling, and efforts to reduce waste generation.
    - **Ecology** – Major mitigation strategies will include tree planting and city greening. Major adaptation strategies will include native and drought-resistant planting.
    - **Government Operations** – Major mitigation strategies will include green procurement and energy saving in operations and maintenance.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in Frame 2.

Frame 4

City of Bell

City of Bell General Plan

The *City of Bell 2030 General Plan* includes a goal to prepare a sustainability CAP to address issues related to global warming and climate change. In addition, the general plan contains policies that encourage sustainable practices to conserve water, waste, energy and other resources and sustainable development that would reduce vehicle use. These policies would also reduce GHG emissions (City of Bell 2018).

City of Bell Gardens

City of Bell Gardens General Plan

The *City of Bell Gardens General Plan 2010* was adopted in 1995 and does not contain GHG-specific policies. However, general plan policies related to land use, circulation and transportation, and conservation would reduce GHG emissions. These include encouraging alternative modes of transportation, resource conservation, and thoughtful development (City of Bell Gardens 1995).

City of Commerce

City of Commerce General Plan

The *City of Commerce 2020 General Plan* does not contain GHG-specific policies, but general plan policies related to air quality and various sectors, including land use, transportation, and energy, would reduce GHG emissions. These policies encourage energy conservation, traffic reduction, and sustainable development (City of Commerce 2008).

City of Huntington Park

City of Huntington Park General Plan

The draft *City of Huntington Park 2030 General Plan'*s Resource Management Element includes policies that aim to address air pollution in the city. Some of these policies are relevant to GHG emissions, as well, and include the following:

- **Resource Management Element Policy 4:** The City of Huntington Park shall encourage the use of energy conservation devices in project design and construction to increase energy efficiency and decrease pollution emissions from energy production and use.

In addition, the draft *City of Huntington Park 2030 General Plan* contains policies that encourage water conservation and protection, energy conservation, traffic reduction, sustainable development, waste minimization, and an urban canopy that would reduce GHG emissions (City of Huntington Park 2017).

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan*'s Conservation Element identified the need to protect natural resources. Policies relevant to air quality are also relevant to reducing GHG emissions. Relevant policies from this element include the following:

- **Policy 1.1:** Require landscaping and vegetative cover for its own value and for its value as wildlife habitat.
- **Policy 3.2:** Require drought resident trees and plants for all new landscaping for commercial and industrial development.
- **Policy 3.4:** Encourage water conservation in residential, commercial, and industrial developments through the use of water saving irrigation systems.

In addition, the general plan includes policies involving the transportation, water, energy, and land use sectors that would further reduce GHGs (City of Maywood 2008).

City of Vernon

City of Vernon General Plan

The *City of Vernon General Plan* was amended in 2015 and does not contain GHG-specific policies. However, general plan policies related to land use, circulation, and resources would reduce GHG emissions. These include encouraging alternative modes of transportation, resource conservation, and thoughtful development (City of Vernon 2015).

Unincorporated County

Applicable regulations for unincorporated County areas are described above in Frame 2.

Frame 5

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 6

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

City of Glendale

City of Glendale General Plan

The *Envision Glendale 2040 General Plan* does not contain GHG-specific policies. However, general plan policies related to land use, circulation, and resources would reduce GHG emissions. These include encouraging alternative modes of transportation, resource conservation, and thoughtful development (City of Glendale 2020). In addition, in March 2012, the City completed the *Greener Glendale Plan*, which promotes sustainable living and conservation programs within the community and government operations to meet State-mandated GHG reduction targets. The plan includes strategies in various sectors, including waste, energy, water, transportation, and building design. Strategies are centered around conservation, reduced consumption, and efficiency (City of Glendale 2012).

Frame 7

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

City of Burbank

City of Burbank General Plan

The *Burbank2035 General Plan*'s Air Quality and Climate Change Element (City of Burbank 2013a) contains policies that aim to reduce GHG emissions through complying with statewide GHG reduction goals and preparing for anticipated effects of climate change. The City is striving to reduce communitywide GHG emissions by at least 30 percent from current levels by 2035. Other relevant policies are as follows:

- **Policy 3.4:** Reduce GHG emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio.
- **Policy 3.6:** Reduce GHG emissions by encouraging the retrofit of older, energy inefficient buildings.

- **Policy 3.8:** Transition all economic sectors, new development, and existing infrastructure and development to low- or zero-carbon energy sources. Encourage implementation and provide incentives for low- or zero-carbon energy sources.

In addition, the general plan includes policies that would encourage sustainable transportation development and resource conservation that would reduce GHG emissions.

City of Burbank Climate Action Plan

The City of Burbank's CAP, *Burbank2035 Greenhouse Gas Reduction Plan* (GGRP), implements the GHG goals and policies from the Air Quality and Climate Change Element of the *Burbank2035 General Plan* to achieve a communitywide emissions reduction goal of 30 percent by 2035. The GGRP identifies emission reduction opportunities with the community, in addition to the incorporation of best practices from other jurisdictions and organizations and State and regional laws, guidance, and recommendations. The primary ways to reduce communitywide GHG emissions in Burbank include actions in the building and energy, transportation, water conservation, and waste reduction areas. Measures include energy efficiency in new construction, pedestrian enhancements, water conservation programs, and waste diversion programs (City of Burbank 2013b).

Unincorporated County

Applicable regulations for unincorporated County areas are described above in Frame 2.

Frame 8

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 9

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

3.7.3 Impact Analysis

This section describes at a programmatic level the impacts related to GHG emissions for the Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), six kit of parts (KOP) categories, and the *2020 LA River Master Plan* in its entirety. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. This section also describes the methods used to determine impacts of the Project and lists the thresholds used to conclude whether an impact would be significant. Measures to reduce significant impacts accompany each impact discussion, where necessary.

3.7.3.1 Methods for Estimating Emissions

Construction of the *2020 LA River Master Plan* would generate emissions of CO_2, CH_4, and N_2O associated with mobile and stationary construction equipment exhaust and employee and haul truck vehicle exhaust. Operation of the *2020 LA River Master Plan* would generate emissions of CO_2, CH_4, and N_2O associated with area sources, energy consumption, motor vehicles, waste generation, water consumption, and any stationary sources. Area sources include landscaping activities and consumer products (e.g., cleaning supplies, kitchen aerosols). Energy sources include electricity consumption and natural gas combustion for lighting and heating requirements. Mobile sources include vehicle trips from employees, vendors, and haul trips. Waste generation refers to decomposition of waste generated during operations. The water category includes electricity consumption associated with the supply, treatment, and distribution of water.

Emissions associated with the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. The two Typical Projects, the Common Elements and the Multi-Use Trails and Access Gateways, are analyzed in greater detail than the other elements based on the design components and Common Elements Typical Projects for which Public Works could make reasonable and informed construction and operations assumptions. The methodology for quantifying construction- and operations-related GHG emissions from the two Typical Projects is presented below.

Quantifying Construction Mass Emissions from the Typical Projects

GHG emissions associated with construction of the Typical Projects were estimated using the most recent version of the California Emissions Estimator Model (CalEEMod), version 2016.3.2, and the methods applied to the analysis of criteria pollutant emissions, which are summarized in Section 3.2, *Air Quality*, of this PEIR. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

Because impacts from construction activities would occur over a relatively short period of time (19 to 20 months depending on the Typical Project), they typically contribute a relatively small portion of the overall lifetime of a project's GHG emissions. In accordance with SCAQMD guidance, the Project's construction-related GHG emissions were amortized over a 30-year period (typically defined as the lifetime of a project) and added to operational emissions to evaluate the Typical Projects' total GHG emissions. Use of the SCAQMD-recommended 30-year period in this analysis is generally consistent with the length of the lifetime of the *2020 LA River Master Plan*, which would be implemented over a 25-year period through 2045.

Quantifying Operations Mass Emissions from the Typical Projects[3]

GHG emissions associated with operation of the Typical Projects were estimated using CalEEMod and the methods applied to the analysis of criteria pollutant emissions, which are summarized in

[3] Sources of GHG emissions during maintenance activiites could include intermittent vehicle trips from maintenance workers and any area source landscaping equipment used for maintenance of vegetation. CalEEMod by default quantifies emissions associated with landscaping but does not explicitly do so for maintenance worker vehicle trips. It is anticipated that maintenance would occur at a low frequency and low intensity and thereby result in a negligible amount of emissions. Accordingly, the maintenance worker vehicle trips were not quantified as part of this analysis.

Section 3.2, *Air Quality*, of this PEIR. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

In accordance with SCAQMD guidance, emissions from all operational sources associated with the Typical Projects were calculated annually and added to amortized construction emissions to evaluate the total GHG emissions.

For purposes of analysis, the electricity emissions are based on the Los Angeles Department Water and Power's 2016 carbon intensity as identified in its 2017 Power Strategic Long-Term Resource Plan (LADWP 2017). The plan provides the Los Angeles Department Water and Power with a 20-year roadmap for supplying reliable electricity in an environmentally responsible and cost-effective manner. The carbon intensity identified in the plan was extrapolated to represent the year 2022, the first year of operation for the Typical Projects, based on the State's long-term renewable energy procurement goals (i.e., SB 100).[4]

For purposes of analysis, the vehicle emissions estimated by CalEEMod were adjusted to assume implementation of the Final SAFE Rule, which would increase passenger vehicle emissions of GHGs in future years. The adjustment factors are based on CARB (2020c) guidance.

3.7.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.7(a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

3.7(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

The State CEQA Guidelines Section 15064.4 provides guidance to lead agencies in determining the significance of GHG emissions and determining the appropriate methodology to assess a project's incremental contribution to climate change. The California Supreme Court's decision in *Center for Biological Diversity v. Department of Fish and Wildlife, the Newhall Land and Farming Company* (62 Cal.4th 204) confirmed that there are multiple potential pathways for evaluating GHG emissions consistent with CEQA. Several air quality management agencies throughout the State have also drafted or adopted varying threshold approaches and guidelines for analyzing GHG emissions in CEQA documents.

Common threshold approaches include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, (4) efficiency-based thresholds, and (5) compliance with regulatory programs. These potential threshold approaches were reviewed for potential applicability to the Project.

The *2020 LA River Master Plan* would be implemented over a 25-year period through 2045. There are currently no adopted quantitative thresholds relevant to the Project. The County has not drafted

[4] Development proposed under the *2020 LA River Master Plan* any time after 2022 would have a lower carbon intensity from electricity than that used in this analysis given the State's increasing RPS.

or adopted threshold approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. Although the County adopted its 2020 CCAP in 2015, the plan was prepared to comply with the 2020 GHG reduction goal established by AB 32, and therefore would not be applicable to use in evaluating GHG emissions of the proposed Project beyond the 2020 timeframe. Consequently, the GHG emissions analysis for the proposed Project herein cannot rely on a qualitative tiering analysis with the County's 2020 CCAP. Additionally, SCAQMD has adopted bright-line numeric significance threshold levels for industrial, residential, commercial, and mixed-use projects. However, like the County's 2020 CCAP, these thresholds were based on compliance with the 2020 GHG reduction goal established by AB 32, and therefore would not be applicable to use in evaluating GHG emissions of the proposed Project beyond 2020 (Sacramento Metropolitan Air Quality Management District 2014).

GHG emissions from the Project are evaluated on a sector-by-sector (e.g., energy, water) basis using the most applicable regulatory programs, policies, and thresholds recommended by CARB and the OPR, as described below ("(5) compliance with regulatory programs" approach mentioned above as a common threshold). The buildout year for the *2020 LA River Master Plan* is 2045. The State has a reduction goal of carbon neutrality set by EO B-55-18. However, the State's goal has not been codified in law, and neither the State nor the 18 jurisdictions within the study area have adopted a plan or framework to achieve the 2045 reduction goal. The State's 2030 target has been codified in law through SB 32 and the 2017 Scoping Plan adopted to meet this goal. Therefore, 2030 marks the next statutory statewide milestone target applicable to the Project. The analysis focuses on the 2030 target and the plans, policies, and regulations adopted pursuant to achieving 2030 reductions. Where applicable, guidance from CARB, OPR, and other agencies related to long-term emission reduction requirements is incorporated into the analysis.

- **Mobile sources**: federal, State, and local regulatory efforts target three elements of emissions reduction from mobile sources: vehicle fuel efficiency, the carbon content of fuels, and VMT. Most adopted programs and regulations focus on fuel efficiency (e.g., Corporate Average Fuel Economy Standards, Pavley standards) and reducing the carbon intensity of transportation fuels (e.g., LCFS). Vehicle electrification is also rapidly becoming part of the State's approach to reducing mobile-source emissions (e.g., electric vehicle charging infrastructure requirement). SB 743 is intended to close the VMT and emissions reduction gap in the mobile-source sector. OPR (2018a) and CARB (2019c) have released guidance that establish VMT reduction targets needed to meet statewide GHG planning goals through 2030.
- Consistent with OPR and CARB guidance for meeting statewide GHG planning goals, Los Angeles County has approved an update to the Transportation Impact Analysis Guidelines that includes, for SB 743 purposes, a VMT threshold as determined on a project-by-project basis based on guidance provided by CARB[5] and OPR[6]. The draft guidelines also specify screening criteria to exempt projects from conducting a VMT analysis if (1) they are located within a half mile of a major transit stop or along a major transit corridor and if (2) they meet certain other criteria (OPR 2018a). Because transit stop locations can change over time and the screening eligibility is based on proximity to transit, these screening criteria are inapplicable to the Project; however, other screening criteria as referenced in OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, may be applicable. Mobile-source emissions would be

[5] As referenced by the VMT reduction goals discussed in the 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Goals, January 2019, Figure 3.

[6] As referenced in OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018.

considered less than significant as determined on a project-by-project basis based on the SB 743 guidance provided by CARB and OPR. In addition, compliance with other regulatory programs (e.g., AB 1493, LCFS and SB 375) would be required to reduce the statewide mobile GHG emissions for a less-than-significant impact.

- **Energy, water, waste, area, and land sources.** CARB's 2017 Scoping Plan, which relies heavily on State programs (e.g., Title 24 and SB 100), outlines strategies required to reduce statewide GHG emissions in order to achieve California's SB 32 reduction target. Projects that implement applicable strategies from the 2017 Scoping Plan would be consistent with the State's GHG reduction framework and requirements for these sectors. Accordingly, a sector-by-sector review of the respective project features and measures included in the Project is provided to evaluate consistency with the 2017 Scoping Plan. This assessment also considers recent OPR (2018b) guidance related to the long-term reduction of statewide emissions. Accordingly, energy, water, waste, area, and land use source emissions would be considered less than significant if the Project is consistent with all applicable 2017 Scoping Plan strategies and supporting regulations and guidance.

Note that GHGs and climate change are exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective (CAPCOA 2008). Therefore, in accordance with the scientific consensus regarding the cumulative nature of GHGs, the analysis herein analyzes the cumulative contribution of project-related GHG emissions, with amortized construction emissions added to annually calculated operational emissions for evaluation of the Project's total GHG emissions.

3.7.3.3 Impacts and Mitigation Measures

Impact 3.7(a): Would the proposed Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As discussed above, emissions associated with the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. The two Typical Projects, the Common Elements and the Multi-Use Trails and Access Gateways, are analyzed in greater detail than the other elements based on the design components for which Public Works could make reasonable and informed construction and operations assumptions. The quantification of emissions is presented for informational purposes, as there are no bright-line numeric thresholds applicable to the Project. Instead, the significance determination of GHG emissions from the Project is based on a sector-by-sector analysis using the most applicable regulatory programs, policies, and thresholds recommend by CARB and OPR. As project emissions would not vary based on the planning frame and the regulatory programs analyzed are not specific to any one frame, this analysis would apply equally to projects in all nine frames.

Typical Projects

Common Elements

Construction

Construction of the Common Elements Typical Project would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the Common Elements Typical Project's construction emissions are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. In accordance with SCAQMD guidance, the Project's construction emissions are amortized over a 30-year period, and the resulting annual emissions are combined with the Project's annual operational GHG emissions.

Construction of the Common Elements Typical Project is estimated to generate a total of 304 $MTCO_2e$ over the 19-month construction period. When amortized over a 30-year period, the construction GHG emissions from the Common Elements Typical Project would be approximately 10 $MTCO_2e$ per year. It should be noted that total and annual construction GHG emissions represent a conservative assessment because GHG emissions would decrease in future years as the construction industry shifts toward implementation of cleaner fuels (i.e., electrified equipment) and more efficient technologies. As such, the annual construction GHG emissions associated with the Common Elements Typical Project would decrease with time and are likely to be lower than assumed herein.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

Operations of the Common Elements Typical Project would result in GHG emissions from multiple sources, including energy, mobile, area, water, wastewater, and waste, as further described below.

Table 3.7-4 presents the GHG emissions from implementation of the Common Elements Typical Project, which include the amortized construction emissions and annual operation emissions.

Table 3.7-4. Annual GHG Emissions Associated with the Common Elements Typical Project

Source	**$MTCO_2e$**
Operations	
Area	<1
Energy	222
Mobile	4,464
Waste	46
Water/Wastewater	31
Subtotal of Operations	4,764
Subtotal of Amortized Construction	10
Total	4,774

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).

As shown, implementation of the Common Elements Typical Project would result in annual GHG emissions of 4,774 $MTCO_2e$.

The quantification of emissions is presented solely for informational purposes. The significance determination of this impact is based on the following sector-by-sector analysis of the respective project features and measures to evaluate consistency with the 2017 Scoping Plan strategies and supporting regulations and guidance.

Energy

GHGs are emitted directly from buildings through the combustion of any type of fuel (e.g., natural gas for cooking). GHGs are also emitted indirectly from buildings through the use of upstream fossil fuels to provide electricity. It is anticipated that the pavilion buildings of the Common Elements Typical Project would use electricity and require natural gas appliances. The Common Elements Typical Project would also include continuous outdoor lighting.

The OPR 2018 *CEQA and Climate Change Advisory* recommends that a land use development project that "achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes ENERGY STAR appliances where available, may be able to demonstrate a less-than-significant greenhouse gas impact associated with project operation" (OPR 2018b).

Development under the Common Elements Typical Project would comply with all applicable local and State building measures at the time of their development, including Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency, commonly referred to as CALGreen (California Code of Regulations, Part 11). Implementation of State and local measures (e.g., SB 100) would also reduce GHG emissions associated with electricity in future operations years. Relative to the energy emissions estimated in Table 3.7-4, the portion of GHG emissions associated with electricity use would decrease annually in future years from statewide implementation of SB 100, which sets an RPS target of 60 percent by 2030 and 100 percent by 2045. Because SB 100 obligates utilities to supply 100 percent carbon-free electricity by 2045, all electric buildings that do not consume any natural gas would not generate any emissions.

The *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, Project Description, and included in Appendix B) for the pavilions recommend that the following best practices be incorporated to reduce energy consumption: use of renewable energy sources; optimized building orientation for solar exposure, diffused daylight, and passive ventilation; high thermal performance; energy efficient appliances; high-albedo roof and paving materials to mitigate heat gain; and green roof and pervious paving. In addition to the mandated CALGreen building measures, other building standards from where energy best practices could be recommended include the United States Green Building Council's Leadership in Energy and Environmental Design (LEED), United States Department of Energy Better Buildings Initiative, ENERGY STAR, Dark Sky, Cradle-to-Cradle, and Green Globes. The Design Guidelines for the lighting elements require use of LED or a more efficient light source and use of solar-power light fixtures along the river, wherever possible. While the Design Guidelines address the need for energy-efficient appliances, besides the requirements for outdoor lighting, they are not required and the decision to implement them would be determined by the subsequent project proponent. Furthermore, the Design Guidelines do not address the use of natural gas in the buildings. Therefore, the Common Elements Typical Project potentially could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan.

Mobile

GHG emissions associated with on-road mobile sources would be generated from workers, visitors, and delivery vehicles visiting the project site. The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely possible. It is likely that a portion of the vehicle trips associated with operations of the Common Elements Typical Project would be displaced by other modes, such as pedestrian and cyclist trips. The Common Elements Typical Project includes installation of bike racks at all project sites or at set intervals along the LA River Trail. This biking infrastructure would help promote cyclist trips in place of vehicle trips.

Vehicles associated with operation of the Common Elements Typical Project would not conflict with the State's regulatory programs related to vehicle fuel efficiency and the carbon content of fuels (e.g., LCFS, Pavley Standards).

As discussed above, the County will evaluate whether a project complies with SB 743 on a project-by-project basis based on guidance provided by CARB and OPR that is consistent with meeting the long-term GHG reduction goals of the 2017 Scoping Plan. As discussed in Section 3.16, *Transportation*, two specific components of the Common Elements Typical Project, Tier III Pavilions and Art/Performance Spaces, were determined to have the potential to generate a significant VMT impact because they could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b), which deals with compliance with SB 743. Therefore, the Common Elements could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan.

Area

Area-source GHG emissions from the Common Elements Typical Project would be generated by gasoline-powered landscaping equipment (e.g., trimmers, mowers). Area-source emissions are based on CalEEMod's default assumptions and represent a conservative estimate of equipment usage, according to the square footage of the proposed building space. Landscaping would include primarily trees, shrubs and pervious pavement, as opposed to grassed areas, thereby minimizing the routine use of mowers and other landscaping equipment.

The 2017 Scoping Plan does not include specific measures for landscaping equipment. OPR (2018b) guidance recommends that land use development projects strive to avoid fossil fuels. Because the landscaping equipment would be fueled with gasoline, the Common Elements Typical Project potentially could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan.

Land Use

The 2017 Scoping Plan has an overall goal of avoiding losses in carbon sequestration. Although the emissions benefit was not quantified, the Common Elements Typical Project would include planting of vegetation that would sequester carbon. The Design Guidelines for ecology and planting describe the best practices that would sequester carbon emissions: provide continuous native tree and plant corridor along the river with linkages to riparian habitat and upland areas near the river; support nurseries and organizations that specifically collect and propagate indigenous native plant species for planting along the river corridor; and study project sites to identify optimal locations and possible grading actions to increase capture and retention of rainfall to help sustain the growth of native plantings. Because the Common Elements Typical Project includes plantings that could be

further supported by the Design Guidelines, the Common Elements Typical Project would be consistent with the 2017 Scoping Plan's goal of avoiding losses in carbon sequestration.

Water Use and Wastewater Generation

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of water. Additional wastewater emissions include CH_4 and N_2O, although these are generated by wastewater treatment at individual wastewater treatment plants. The Common Elements Typical Project does not include any new wastewater treatment plants.

The 2017 Scoping Plan outlines objectives and goals to reduce GHGs in the water sector, including using and reusing water more efficiently through greater water conservation, drought-tolerant landscaping, stormwater capture, and water recycling. Regulations have further targeted water supply and water conservation (e.g., SB X7-7) through building and landscaping efficiency (e.g., Title 24).

The Design Guidelines for the pavilions recommend the following best practices that should be incorporated to reduce water consumption: on-site water retention, detention, and filtration; capture of 100 percent of on-site rainfall for the 85 percent rain event; greywater and rainwater reuse; and low-flow water fixtures. These features, if implemented, would be consistent with the 2017 Scoping Plan's water measures and the State's regulatory programs within the water sector. However, because these Design Guidelines are not required and the decision to implement them would be determined by the subsequent project proponent, the Common Elements Typical Project potentially could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan.

Waste Generation

Solid waste may be disposed of in landfills or diverted for recycling, composting, or reuse. GHG emissions from landfills are generated through anaerobic breakdown of material. The 2017 Scoping Plan aims to reduce waste emissions by diverting waste away from landfills through waste reduction, reuse, composting, and material recovery. In addition, AB 341 and AB 1826 require certain commercial business provide organics and recycling containers adjacent to trash to collect waste. The California Integrated Waste Management Act of 1989 requires that each local jurisdiction in the State divert 50 percent of all solid waste from disposal through measures including recycling and reuse. The County Construction and Demolition Debris Ordinance requires that at least 50 percent of all soil, rock, gravel, and construction and demolition debris removed from the project site be recycled or reused. Any organic waste, including landscaping waste, vegetation waste, or construction/demolition debris, will need to be diverted from landfill disposal, as required by SB 1383 regulations. The Common Elements Typical Project would be required to comply with the State's regulatory programs within the waste sector.

The Common Elements Typical Project includes dual trash/recycling bins. The Design Guidelines for the pavilions recommend the following best practices to reduce waste generation: use locally sourced, recycled, and recyclable materials with low-embodied energy; green cleaning and integrated building management; and regular monitoring of building systems and usage optimization. These features, if implemented, would be consistent with the 2017 Scoping Plan's waste measures. However, because these Design Guidelines are not required and the decision to implement them would be determined by the subsequent project proponent, the Common Elements

Typical Project potentially could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan.

Summary

As described above, the Common Elements Typical Project would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limiting land use emissions. The Design Guidelines for the Common Elements Typical Project related to water, energy, and waste, if implemented, would be consistent with the 2017 Scoping Plan's measures and the State's regulatory programs within these sectors. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that any of these measures will be incorporated into the design of the Common Elements Typical Project given that they are not required and the decision to implement them would be determined by the subsequent project proponent. Furthermore, it is anticipated that buildings would use natural gas and landscaping equipment would be gasoline powered, both of which are inconsistent with OPR (2018b) guidance. In addition, daily vehicle trips would exceed OPR's (2018a) daily trip screening threshold. Consequently, while emissions from the land use sector would generally be consistent with the 2017 Scoping Plan, emissions from the energy, mobile, area, water, and waste sectors would be potentially inconsistent with the 2017 Scoping Plan and applicable regulatory programs. Therefore, emissions associated with the construction and operation of the Common Elements Typical Project may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operations would be potentially significant.

Mitigation Measures

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Implementing agencies will require implementation of the following GHG emissions reduction strategies:

- **Energy**
    - **Energy-efficient Appliances in Buildings.** New construction will use only ENERGY STAR rated appliances for appliance types that are offered ENERGY STAR ratings.
    - **Electric Space and Water Heating for Buildings.** New construction will employ electric and water heating. Where natural gas appliances need to be installed, these appliances will be an ENERGY STAR certified gas water heater) or be powered by renewable natural gas.
    - **Building Energy.** New construction will implement one or more of the Design Guidelines related to building energy consumption.
        - Use renewable energy sources (solar, wind, water, and renewable natural gas).
        - Optimize building orientation for solar exposure, diffused daylight, and passive ventilation.
        - Optimize high thermal performance.

        - Use high-albedo roof and paving materials to mitigate heat gain.
        - Use green roof and pervious paving.
        - Implement building energy best practices from the following standards: United States Green Building Council's LEED, United States Department of Energy Better Buildings Initiative, ENERGY STAR, Dark Sky, Cradle-to-Cradle, and Green Globes.

- **Area**
    - **Electric Landscaping Equipment.** Maintenance and operations activities that use landscaping equipment (e.g., lawn mowers, trimmers) for new construction will employ electric landscaping equipment.
- **Water Use**
    - **Water Conservation and Efficiency.** New construction will implement one or more of the Design Guidelines related to indoor and outdoor water conservation and efficiency.
        - Install systems for on-site water retention, detention, and filtration.
        - Capture 100 percent of on-site rainfall for the 85 percent rain event.
        - Reuse rainwater and greywater.
        - Create bioswales or treatment basins to collect stormwater runoff.
        - Install low-flow water fixtures that exceed the requirements of codes and ordinances.
            - Public bathroom faucet aerators with a flow rate of 0.4 gallon per minute
            - Rotating sprinkler nozzles for landscape irrigation 0.5 to 1.0 gallons per minute, or
            - Drip/subsurface irrigation (i.e., micro-irrigation)
- **Wastewater Generation**
    - **Waste Reductions.** New construction will implement one or more of the Design Guidelines related to minimization and recycling of waste generation.
        - Use locally sourced, recycled, and recyclable materials with low-embodied energy.
        - Use green cleaning products and integrated building management.
        - Regularly monitor building systems and optimize usage.

As discussed in Section 3.16, *Transportation*, the Common Elements Typical Project was determined to have the potential to generate a significant VMT impact. If, as part of Mitigation Measure TRA-1a, the subsequent project cannot be screened out using the County's VMT impact criteria and the VMT is determined to exceed the threshold based on applicable guideline and project type, then Mitigation Measure TRA-1b will be implemented.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure, which is described in Section 3.16, *Transportation*, would require implementation of a project-specific program utilizing transportation demand management (TDM)

strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operations would be significant and unavoidable.

With implementation of Mitigation Measure GHG-1a, compliance with a minimum of the Design Guidelines for the Common Elements Typical Project related to water, energy, and waste would be required for all new construction. Mitigation would also require electrified buildings and landscaping equipment. Mitigation Measure TRA-1b would require various TDM measures to reduce VMT, which would reduce mobile-source emissions. Nonetheless, given the range in the possible size and programmatic intensity of the project elements/design significant VMT impacts may not be fully mitigated even with TDM measures. Consequently, while emissions from the land use, energy, area, water, and waste sectors would generally be consistent with the 2017 Scoping Plan with implementation of mitigation, emissions from the mobile sector would be inconsistent with the 2017 Scoping Plan and applicable regulatory programs. No other feasible mitigation measures that would reduce mobile-source VMT emissions to a less-than-significant level are available at this time. Therefore, emissions associated with the Common Elements Typical Project would have a significant impact on the environment, and this impact would be significant and unavoidable.

Multi-Use Trails and Access Gateways

Construction

Construction of the Multi-Use Trails and Access Gateways Typical Project would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, GHG emissions are measured exclusively as cumulative impacts; therefore, the Multi-Use Trails and Access Gateways Typical Project's construction emissions are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. In accordance with SCAQMD guidance, the Multi-Use Trails and Access Gateways Typical Project's construction emissions are amortized over a 30-year period, and the resulting annual emissions are combined with the Multi-Use Trails and Access Gateways Typical Project's annual operational GHG emissions.

Construction of the Multi-Use Trails and Access Gateways Typical Project is estimated to generate a total of 1,065 $MTCO_2e$ over the estimated 20-month construction period. When amortized over a 30-year period, the construction GHG emissions from the Multi-Use Trails and Access Gateways Typical Project would be approximately 36 $MTCO_2e$ per year. It should be noted that total and annual construction GHG emissions represent a conservative assessment because GHG emissions would decrease in future years as the construction industry shifts toward implementation of cleaner fuels (i.e., electrified equipment) and more efficient technologies. As such, the annual construction GHG emissions associated with the Multi-Use Trails and Access Gateways Typical Project would decrease with time and are likely to be lower than assumed herein.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

Project operations would result in GHG emissions from multiple sources of emissions, including energy, mobile, area, water, wastewater, and waste.

Table 3.7-5 presents the GHG emissions from implementation of the Multi-Use Trails and Access Gateways Typical Project, which include the amortized construction emissions and annual operation emissions.

Table 3.7-5. Estimated Annual GHG Emissions Resulting from the Multi-Use Trails and Access Gateways Typical Project

Source	$MTCO_2e$
Operations	
Area	<1
Energy	0
Mobile	215
Waste	1
Water/Wastewater	122
Subtotal of Operations	338
Subtotal of Amortized Construction	36
Total	373

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).

As shown, implementation of the Multi-Use Trails and Access Gateways Typical Project would result in annual GHG emissions of 373 $MTCO_2e$. The quantification of emissions is presented solely for informational purposes. The significance determination of this impact is based on the sector-by-sector consistency analysis with the 2017 Scoping Plan strategies and supporting regulations and guidance, consistent with OPR and CARB recommendation. The sector-by-sector analysis findings for the Multi-Use Trails and Access Gateways Typical Project are similar to those for the Common Elements Typical Project. A summary of the analysis and key differences between the types of emission sources between the two Typical Projects is presented below.

Summary of Energy, Mobile, Area, Land Use, Water, Waste

The Multi-Use Trails and Access Gateways Typical Project does not include any buildings or infrastructure that would consume electricity or natural gas. Therefore, the 2017 Scoping Plan's energy measures and the State's regulatory programs within the energy sector are not applicable.

As discussed in Section 3.16, *Transportation*, unlike the Common Elements Typical Project, the Multi-use Trails and Access Gateways Typical Project would result in a less than significant VMT impact and therefore would not affect the State's ability to meet its mobile source GHG reduction targets. The Multi-Use Trails and Access Gateways Typical Project would include a vegetative buffer (e.g., shrubs, grasses, trees) along the trails and therefore be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limited land use emissions. The Design Guidelines described above under the Common Elements Typical Project related to water would apply to the Multi-Use Trails and Access Gateways Typical Project, except for the following guideline related to fixtures: low-flow water fixtures. The Design Guidelines described above under the Common Elements Typical Project related to waste would also apply, except for the following

guideline related to buildings: use green cleaning products and integrated building management, and regularly monitor building systems and optimize usage. The applicable Design Guidelines for the Common Elements Typical Project related to water and waste, if implemented, would be consistent with the 2017 Scoping Plan's measures and the State's regulatory programs within these sectors. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that all of these measures will be incorporated into the design of the Multi-Use Trails and Access Gateways Typical Project, given that they are not required and the decision to implement them would be determined by the subsequent project proponent. Furthermore, landscaping equipment would be gasoline powered, which is inconsistent with OPR (2018b) guidance.

Consequently, while emissions from the land use and mobile sector would generally be consistent with the 2017 Scoping Plan, emissions from the area, water, and waste sectors would be potentially inconsistent with the 2017 Scoping Plan and applicable regulatory programs. Therefore, construction and operation emissions associated with the Multi-Use Trails and Access Gateways Typical Project may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operations would be potentially significant.

Mitigation Measures

Mitigation Measure GHG-1a, as discussed above for the Common Elements Typical Project, applies to this impact. However, as the Multi-Use Trails and Access Gateways Typical Project would not result in any building energy consumption, the GHG reduction strategies of Mitigation Measure GHG-1a related to energy-efficient appliances in buildings and electric space and water heating for buildings do not apply. The Design Guidelines described above under the Common Elements Typical Project related to water fixtures and building waste, as made mandatory through implementation of Mitigation Measure GHG-1a, also do not apply to the Multi-Use Trails and Access Gateways Typical Project. The mitigation measure applicable to this Typical Project, Mitigation Measure GHG-1b, is as follows.

Mitigation Measure GHG-1b: Implement Operations GHG Emissions Reduction Strategies Specific to Emission Sources of Multi-Use Trails and Access Gateways.

Implementing agencies will require implementation of the following GHG emissions reduction strategies:

- **Area**
    - **Electric Landscaping Equipment.** Maintenance and operations activities that use landscaping equipment (e.g., lawn mowers, trimmers) for new construction will employ electric landscaping equipment.
- **Water Use**
    - **Water Conservation and Efficiency.** New construction will implement one or more of the Design Guidelines related to indoor and outdoor water conservation and efficiency.
        - Install systems for on-site water retention, detention, and filtration.
        - Capture 100 percent of on-site rainfall for the 85 percent rain event.

        - Reuse rainwater and greywater.
        - Install low-flow water fixtures that exceed the requirements of codes and ordinances:
            - Rotating sprinkler nozzles for landscape irrigation 0.5 to 1.0 gallons per minute, or
            - Drip/subsurface irrigation (i.e., micro-irrigation)
- **Wastewater Generation**
    - **Waste Reductions.** New construction will implement one or more of the Design Guidelines related to minimization and recycling of waste generation.
        - Use locally sourced, recycled, and recyclable materials with low-embodied energy.
        - Recycle construction waste.

Significance after Required Mitigation

With implementation of Mitigation Measure GHG-1b, the Design Guidelines related to water and waste would be required for all new construction. Mitigation would also require electrified landscaping equipment. Consequently, emissions from the area, land use, water, mobile, and waste sectors would generally be consistent with the 2017 Scoping Plan, Therefore, construction and operation emissions associated with the Multi-Use Trails and Access Gateways Typical Project would be less than significant with mitigation for later activities when carried out by the County.

Impacts would be significant and unavoidable for projects for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

As discussed above, the wide-ranging functions, characteristics, and complexity of the KOPs and their respective design components—along with the lack of specific sites or detailed design information—make it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for these elements of the *2020 LA River Master Plan*. The specific location (in-channel/off-channel, frame, etc.) and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing agency, community needs, policy decisions, and availability of funding. Accordingly, the six KOP categories are qualitatively analyzed at a high level for this impact. The significance determination of this impact is based on the sector-by-sector consistency analysis with the 2017 Scoping Plan strategies and supporting regulations and guidance.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation

impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

The specific location (in-channel/off-channel, frame, etc.) and design details for construction and operation of KOP Category 1 are currently unknown. Projects under KOP Category 1 would likely be substantially larger than the Typical Projects.

Construction

Construction of KOP Category 1 would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. Because details about KOP Category 1 are unknown, GHG emissions associated with construction and operations activities have not been quantified. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of KOP Category 1 are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

It is anticipated that project operations would result in GHG emissions from multiple sources, including energy at the equestrian facilities and light towers, mobile-source emissions from visitor and maintenance vehicle trips, area-source emissions from landscaping equipment used in habitat corridors, water from irrigation of the habitat corridor and use in the water tower, and waste at the equestrian facility. Many of the design components of KOP Category 1 (e.g., lookouts, boardwalks, vegetated buffer) are passive (i.e., no emissions are associated with them) and therefore would not likely generate substantial amounts of GHG emissions during operations. However, specific site locations and detailed design information are not known. It is, however, assumed that development under KOP Category 1 would be greater than what could occur under either of the Typical Projects given the potential for KOP Category 1 to incorporate multiple design components. Furthermore, as discussed in Section 3.16, *Transportation*, the equestrian facility design component of KOP Category 1 was determined to have the potential to generate a significant VMT impact. Therefore, KOP Category 1 could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The GHG emissions from non-mobile sectors could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with KOP Category 1 may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that KOP Category 1 would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for KOP Category 1.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program using TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measure GHG-1a and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that KOP Category 1 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 2

Construction

Construction of KOP Category 2 would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. Because details about KOP Category 2, including location and design, are unknown, GHG emissions associated with construction and operations activities have not been quantified. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of KOP Category 2 are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

All of the design components of KOP Category 2 are passive (i.e., no emissions are directly associated with operation) and therefore KOP Category 2 would result in only a minor amount of direct GHG emissions during operations. However, recreation uses of KOP Category 2 design components (such as amphitheaters and parks) could result in emissions from energy sources (e.g., outdoor lighting),

water use requiring energy (e.g., conveyance and distribution), wastewater generation, or waste generation.

It is assumed that development under KOP Category 2 would be greater than either of the Typical Projects given the potential for KOP Category 2 to incorporate multiple design components. Furthermore, as discussed in Section 3.16, *Transportation*, the terraced banks design component of KOP Category 2 was determined to have the potential to generate a significant VMT impact. Therefore, KOP Category 2 could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The GHG emissions from non-mobile sectors could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with KOP Category 2 may have a potentially significant impact on the environment.

Impact Determination:

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that KOP Category 2 would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for the KOP Category 2.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program using TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1a and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that KOP Category 2 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 3

Construction

Construction of KOP Category 3 would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. Because details about KOP Category 3 are unknown, GHG emissions associated with construction and operations activities have not been quantified. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of KOP Category 3 are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

All of the design components of KOP Category 3 are passive (i.e., no emissions are directly associated with operation) and therefore KOP Category 3 would result in only a minor amount of direct GHG emissions during operations. It is anticipated that project operations would not include building energy or stationary sources (e.g., generators). However, recreational uses such as parks and recreational fields of KOP Category 3 design components (e.g., cantilever or platform) could include water use requiring energy (e.g., conveyance, distribution treatment), wastewater generation, or waste generation. Area-source landscaping equipment would be used for maintenance activities. It is assumed that development under KOP Category 3 would be greater than either of the Typical Projects given the potential for KOP Category 3 to incorporate multiple design components. Furthermore, as discussed in Section 3.16, *Transportation*, the platform design component of KOP Category 3 was determined to have the potential to generate a significant VMT impact. Therefore, KOP Category 3 could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The non-mobile sector GHG emissions could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with KOP Category 3 may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that KOP Category 3 would not result in emissions associated with a particular

sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for KOP Category 3.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1a and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that KOP Category 3 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 4

Construction

Construction of KOP Category 4 would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. Because details about KOP Category 4 are unknown, GHG emissions associated with construction and operations activities have not been quantified. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of KOP Category 4 are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

It is anticipated that project operations would not include building energy or stationary sources (e.g., generators). However, design components could include water use requiring energy and waste generation. Mobile sources could include intermittent vehicle trips from maintenance and repair workers. It is not anticipated that maintenance would occur at a high enough frequency or intensity that associated emissions would be significant. However, operation of KOP Category 4 would require an unknown amount of electricity during use of water pumps for diversion activities. It is assumed that development under KOP Category 4 would be greater than either of the Typical Projects given the potential for KOP Category 4 to incorporate multiple design components. Furthermore, as discussed in Section 3.16, *Transportation*, the side channel design component of

KOP Category 4 was determined to have the potential to generate a significant VMT impact. Therefore, KOP Category 4 could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The non-mobile sector GHG emissions could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with KOP Category 4 may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that KOP Category 4 would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for KOP Category 4.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1a and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that KOP Category 4 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. With mitigation, impacts would still remain significant and unavoidable.

KOP Category 5

Construction

Construction of KOP Category 5 would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. Because details about KOP Category 5 are unknown, GHG emissions associated with construction and operations activities have not been quantified. As mentioned above in Section

3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of KOP Category 5 are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

It is anticipated that project operations would not include building energy or stationary sources (e.g., generators). However, recreational uses, such as farmers markets and recreational fields of Category 5 design components (e.g., fields), would require outdoor lighting and result in waste generation. Mobile sources could include intermittent vehicle trips from maintenance and any area-source landscaping equipment used for maintenance activities. It is not anticipated that maintenance would occur at a high enough frequency or intensity that associated emissions would be significant. However, recreational uses could result in VMT and associated mobile emissions. It is assumed that development under KOP Category 5 would be greater than either of the Typical Projects given the potential for KOP Category 5 to incorporate multiple design components. Furthermore, as discussed in Section 3.16, *Transportation*, the fields and recreational fields design components of KOP Category 5 were determined to have the potential to generate a significant VMT impact. Therefore, KOP Category 5 could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan.

The GHG emissions could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with KOP Category 5 may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that KOP Category 5 would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for KOP Category 5.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measure GHG-1a would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that KOP Category 5 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 6

Construction

As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of KOP Category 6 are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. Because details about KOP Category 6 are unknown, GHG emissions associated with construction and operations activities have not been quantified.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

It is anticipated that project operations would result in GHG emissions from multiple sources, including building energy in affordable housing and cultural centers; mobile-source emissions from visitor and maintenance vehicle trips to all design components; area-source emissions from landscaping equipment used in urban agriculture/composting, fields, and parks; stationary sources associated with water treatment facilities; water irrigated for urban agriculture/composting, fields, and parks; wastewater used in the water treatment facilities; and waste from all design components. The lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable operations scenarios for KOP Category 6. It is assumed that development under KOP Category 6 would be greater than either of the Typical Projects given the potential for KOP Category 6 to incorporate multiple design components. Furthermore, as discussed in Section 3.16, *Transportation*, the design components of KOP Category 6 of recreation fields, urban agriculture/composting, and art and culture facilities were determined to have the potential to generate a significant VMT impact. Therefore, KOP Category 6 could affect the State's ability to meet its mobile source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The GHG emissions could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with KOP Category 6 may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that KOP Category 6 would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for KOP Category 6.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1a and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that KOP Category 6 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. With mitigation, impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOPs' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

Construction

Construction impacts of the overall *2020 LA River Master Plan* would be similar to those described for the KOP categories. As mentioned above in Section 3.7.3.2, *Criteria for Determining Significance*, of this PEIR, GHG emissions are measured exclusively as cumulative impacts; therefore, the construction emissions of the *2020 LA River Master Plan* are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations.

The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities. See below for the combined construction and operations impact determination.

Operations

Operation of the overall *2020 LA River Master Plan* would involve GHG emissions from building natural gas use, stationary sources, worker and visitor vehicle trips, and other sources. Because details about the *2020 LA River Master Plan* construction and operation scenario are unknown, GHG emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the GHG emissions could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with the *2020 LA River Master Plan* may have a potentially significant impact on the environment.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project details are known, it can be stated with certainty that the KOP categories would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for the KOP categories.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1a and TRA-1bwould be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that the *2020 LA River Master Plan* would comply with the long-term GHG reduction

targets and goals of applicable regulatory programs. With mitigation, impacts would be significant and unavoidable.

Impact 3.7(b): Would the proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The plans relevant to the proposed Project that have been adopted for the purposes of reducing GHG emissions include the 2020 CCAP and the updated Los Angeles County CAP, OurCounty Sustainability Plan, City of Long Beach Climate Action and Adaptation Plan (CAAP), City of Carson CAP, City of Burbank CAP, SCAG's RTP/SCS, 2008 Scoping Plan and First Update, and 2017 Scoping Plan. The proposed Project's consistency with these plans is reviewed below. The cities' CAPs are only relevant to development that would occur in those jurisdictions, which overlap with one or more of the nine planning frames. The City of Long Beach CAAP is relevant to analyses in Frames 1 and 2, the City of Carson CAP in Frame 2, and the City of Burbank CAP in Frame 7. The other plans are relevant to all nine planning frames in the project area and are discussed below under the *All Frames* section. The impact analysis for Frames 1, 2, and 7 is separated to discuss the frame-specific CAPs.

AB 32 and SB 32 outline the State's GHG emissions reduction targets for 2020 and 2030, respectively. While not legislatively adopted, EO S-03-05 establishes the State's long-term goal to reduce GHG emissions 80 percent from 1990 levels by 2050. EO B-55-18 sets a more ambitious State goal of net zero GHG emissions by 2045.

In 2008 and 2014, CARB adopted the 2008 Scoping Plan and First Update, respectively, as a framework for achieving AB 32. The 2008 Scoping Plan and First Update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted the 2017 Scoping Plan in November 2017 (updated in December 2017) as a framework to achieve the 2030 GHG reduction goal described in SB 32. There is no State plan for addressing GHG reductions beyond 2030.

Based on CARB's 2017 Scoping Plan, many of the reductions needed to meet the 2030 target will come from State regulations, including Cap-and-Trade, the requirement for increased renewable energy sources in California's energy supply, updates to Title 24, and increased emission-reduction requirements for mobile sources. The 2017 Scoping Plan indicates that reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards, changes pertaining to sources of electricity and increased energy efficiency at existing facilities, and State and local plans, policies, or regulations that will lower GHG emissions relative to business-as-usual conditions. The 2017 Scoping Plan carries forward GHG reduction measures from the First Update, as well as new potential measures to help achieve the State's 2030 target across all sectors of the California economy, including transportation, energy, and industry.

Typical Projects

Common Elements

All Frames

Consistency with 2008 Scoping Plan and First Update

AB 32 codifies the State's GHG emissions reduction targets for 2020. While operation of the Common Elements Typical Project could occur as soon as 2022, this is still beyond AB 32's 2020 target year. Consistency with the 2008 Scoping Plan is discussed primarily for informational purposes. For a comprehensive evaluation of GHG impacts, a discussion is needed with respect to the Common Elements Typical Project's consistency with guidance documents and regulations with timelines more consistent with the buildout years and beyond.

CARB adopted the 2008 Scoping Plan in 2008, incorporating its First Update (2014) as a framework for achieving the AB 32 targets. The 2008 Scoping Plan and First Update outline a series of technologically feasible and cost-effective measures for reducing statewide GHG emissions. Some reductions would require changes pertaining to vehicle emissions and mileage standards, some of which would result from changes to sources of electricity and increased energy efficiency at existing facilities. The remainder would need be based upon State and local plans, policies, or regulations that would lower carbon emissions, relative to business-as-usual conditions.

Plantings at the project site ensure that the Common Elements Typical Project would be consistent with the 2008 Scoping Plan and First Update's goal of avoiding losses in carbon sequestration and limiting land use emissions.

The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across Los Angeles County for cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely possible. It is likely that a portion of the vehicle trips associated with operations of the Common Elements Typical Project would be displaced by other modes, such as pedestrian and cyclist trips. The Common Elements Typical Project includes installation of bike racks at all project sites or at set intervals along the LA River Trail. This biking infrastructure would help promote cyclist trips in place of vehicle trips, thereby directly addressing the 2008 Scoping Plan and First Update's overall goal of VMT reduction.

The Design Guidelines described above under the Common Elements Typical Project related to water, energy, and waste would minimize GHG emissions associated with future development through water and energy conservation, solid waste diversion, and use of renewable energy—all goals of the 2008 Scoping Plan and First Update. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that all of these measures will be incorporated into the design of the Common Elements Typical Project given that they are not required and the decision to implement them would be determined by the subsequent project proponent. Accordingly, the Common Elements Typical Project would be potentially inconsistent with strategies identified in the 2008 Scoping Plan and First Update, as well as statewide goals to improve energy efficiency, reduce building energy consumption, and increase renewable energy generation.

Consistency with 2017 Scoping Plan

Although the measures included in the 2017 Scoping Plan are necessarily broad, goals and desired outcomes of the First Update are identified as increasing energy efficiency, water conservation, waste diversion, transportation sustainability, etc. The consistency of the Common Elements Typical Project with the 2017 Scoping Plan's policies needed to achieve the 2030 GHG targets is presented in Table 3.7-6. As shown, the policies are not applicable to the Common Elements Typical Project, and thus consistency with these measures does not apply. Therefore, the Common Elements Typical Project would not conflict with or hinder the implementation of the policies in the 2017 Scoping Plan.

Table 3.7-6. Consistency of the Common Elements Typical Project with the 2017 Scoping Plan

Policy[a]	Primary Objective	Consistency Analysis
SB 350	Reduce GHG emissions in the electricity sector through the implementation of the 50 percent RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the IRP process.	This policy is a State program that requires no action at the local or project level and therefore does not apply to the Common Elements Typical Project.
LCFS	Transition to cleaner/less-polluting fuels that have a lower carbon footprint.	This policy is a State program that requires no action at the local or project level and therefore does not apply to the Common Elements Typical Project.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario)	Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled.	This policy is a State program that requires no action at the local or project level and therefore does not apply to the Common Elements Typical Project.
SB 1383	Approve and Implement SLCP strategy to reduce highly potent GHGs.	This policy is a State program that may require action at the local or project level. Any organic waste, including landscaping waste, vegetation waste, or construction/demolition debris, will need to be diverted from landfill disposal as required by the SB 1383 regulations.
California Sustainable Freight Action Plan	Improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system.	This policy is a State program that requires no action at the local or project level and therefore does not apply to the Common Elements Typical Project.
Post-2020 Cap-and-Trade Program	Reduce GHGs across largest GHG emission sources.	This policy is a State program that requires no action at the local or project level and therefore does not apply to the Common Elements Typical Project.

[a] The 2017 Scoping Plan policies included in this table are those representing the State strategy for meeting the 2030 GHG target of SB 32.

Consistency with SB 32 and EO S-3-05

As discussed above, SB 32 adopted a GHG reduction target of 40 percent below 1990 levels by 2030, and EO S-3-05 established a long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050. Achieving these long-term GHG reduction policies will require systemic changes in how energy is produced and used, which, if legislatively adopted, will require significant policy, technical, and economic solutions. Decarbonization of the transportation fuel supply will require that electric and plug-in hybrid electric vehicles compose the vast majority of light-duty vehicles, and will also require electrification or the use of alternative fuels for medium- and heavy-duty vehicles. Some changes, such as the use of alternative fuels (e.g., biofuels) to replace petroleum for aviation, cannot be accomplished without action by the federal government. Furthermore, achieving the 2050 GHG reduction goals will require California to dramatically increase the amount of electricity that is generated by renewable generation sources and, correspondingly, advance significantly the deployment of energy storage technology and smart-grid strategies, such as price-responsive demand and the smart charging of vehicles. This would entail a significant redesign of California's electricity system, which can only be accomplished through State action.

In evaluating the Common Elements Typical Project's emissions for consistency with SB 32 and EO S-3-05, it is important to note that many of these broad-scale shifts in how energy is produced and used are unknown at this time and ultimately outside of the scope of the Project. Consequently, the extent to which the Common Elements Typical Project's GHG emissions and resulting impacts would be mitigated through implementation of such statewide (or nationwide) changes is not known. Furthermore, implementation of such additional policy and regulatory changes lies within the jurisdiction of state-level agencies (e.g., CARB) and federal-level agencies, not the County or the proposed Project. However, some of the measures recommended as part of SB 32 and EO S-3-05 (e.g., decarbonization, energy efficiency, reduced fossil-fuel-based VMT) can be facilitated to some extent through implementation of specific GHG reduction measures at the project and program level.

The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians. The Common Elements Typical Project includes installation of bike racks, which would help promote cyclist trips in place of vehicle trips, thereby reducing fossil-fuel-based VMT. The Design Guidelines for the Common Elements Typical Project related to water, energy, and waste would work toward decarbonization and energy efficiency through water and energy conservation, solid waste diversion, and use of renewable energy. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that all of these measures will be incorporated into the design of the Common Elements Typical Project given that they are not required and the decision to implement them would be determined by the subsequent project proponent. Accordingly, the Common Elements Typical Project would be potentially inconsistent with the goals in SB 32 and EO S-3-05.

Consistency with SB 375 and 2020 – 2045 RTP/SCS

The 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2020–2045 RTP/SCS is consistent with SB 375, which requires SCAG to adopt an SCS that outlines policies to reduce per-service-population GHG emissions from automobiles and light trucks. The SCS presents strategies and tools that are consistent with local jurisdictions' land use policies and incorporates best practices for achieving the State-mandated reductions in GHG emissions at the regional level through reduced

per-capita VMT. The strategies included in the 2020–2045 RTP/SCS to reduce GHG emissions consist of focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, supporting implementation of sustainability policies, and promoting a green region.

Consistent with the strategies of the RTP/SCS, the *2020 LA River Master Plan* will use existing right-of-way (ROW) to provide additional recreational and community benefits that increase neighborhood connectivity. Other improvements would include striping bicycle lanes, installing pedestrian-oriented lighting and landscaping, and creating high-visibility crosswalks and pedestrian refuges. The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians. The Common Elements Typical Project includes installation of bike racks, which would help promote cyclist trips in place of vehicle trips, thereby helping reduce per service population GHG emissions from passenger vehicles. Thus, the Common Elements Typical Project would be consistent with the goals of SB 375 and the 2020–2045 RTP/SCS.

Consistency with County of Los Angeles 2020 CCAP

As discussed above, the County adopted the 2020 CCAP in 2015 to reduce community GHG emissions (Los Angeles County 2015). The County's 2020 CCAP is a roadmap that outlines the County's path to achieve its 2020 GHG reduction goal of 11 percent below 2010 GHG emissions levels. The 2020 CCAP's GHG reduction measures feature 26 local actions grouped into five strategy areas: green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting. Because the 2020 CCAP analysis was prepared for the County's 2020 GHG reduction goal, its use in quantitatively evaluating the significance of the GHG emissions of the Common Elements Typical Project, which could be operating by 2022, is not applicable. Consequently, the 2020 CCAP is used qualitatively for this analysis to determine if the Common Elements Typical Project would be consistent with the 2020 CCAP measures.

The consistency of the Common Elements Typical Project with the measures in the County's 2020 CCAP is analyzed in Table 3.7-7. As shown in Table 3.7-7, nine of the actions are not applicable to the Common Elements Typical Project, and therefore consistency with these measures does not apply. The Common Elements Typical Project would be potentially inconsistent with one of the 17 remaining relevant actions in the County's 2020 CCAP.

Table 3.7-7. Consistency of the Common Elements Typical Project with 2020 CCAP Measures

Local Actions	Consistency
Green Building and Energy	
BE-1 (Green Building Development): Promote and incentivize at least Tier 1 voluntary standards within CALGreen for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers.	**Consistent.** Development under the Common Elements Typical Project would comply with all applicable local and State building measures at the time of their development, including CALGreen. The Design Guidelines for the pavilions recommend the following best practices that would reduce building energy use and heat island effects beyond the CALGreen measures: use of renewable energy sources; optimized building orientation for solar exposure, diffused daylight, and passive ventilation;

Local Actions	Consistency
	high thermal performance; high-albedo roof and paving materials to mitigate heat gain; and green roof and pervious paving. Also, other building standards from which energy efficiency best practices will be referenced include United States Green Building Council's LEED, United States Department of Energy Better Buildings Initiative, ENERGY STAR, Dark Sky, Cradle-to-Cradle, and Green Globes.
BE-3 (Solar Installations): Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses.	**Consistent.** The Design Guidelines for the pavilions recommend the use of renewable energy sources and solar-powered outdoor lighting.
BE-4 (Alternative Renewable Energy Programs): Implement pilot projects for currently feasible wind, geothermal, and other forms of alternative renewable energy.	**Consistent.** The Design Guidelines for the pavilions recommend the use of renewable energy sources (including wind and solar).
Land Use and Transportation	
LUT-1 (Bicycle Programs and Supporting Facilities): Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and end-of-trip facilities.	**Consistent.** The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely possible. It is likely that a portion of the vehicle trips associated with operations of the Common Elements Typical Project would be displaced by other modes, such as pedestrian and cyclist trips. The Common Elements Typical Project includes installation of bike racks, which would help promote cyclist trips in place of vehicle trips.
LUT-2 (Pedestrian Network): Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Program the construction of pedestrian projects toward the goal of completing 15,000 linear feet of new pedestrian improvements/amenities per year.	Consistent. See LUT-1.
LUT-3 (Transit Expansion): Collaborate with the Los Angeles County Metropolitan Transportation Authority (Metro) on a transit program prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Construct and improve bicycle, pedestrian and transit infrastructure to increase bicyclist and pedestrian access to transit and transit stations/hubs.	Consistent. See LUT-1.

Local Actions	Consistency
LUT-4 (Travel Demand Management): Encourage ride- and bike-sharing programs and employer sponsored vanpools and shuttles. Encourage market-based bike sharing programs that support bicycle use around and between transit stations/hubs. Implement marketing strategies to publicize these programs and reduce commute trips.	**Consistent.** The *2020 LA River Master Plan* would improve bicycle and pedestrian infrastructure, supporting bicycle use around and between transit stations/hubs.
LUT-6 (Land Use Design and Density): Promote sustainability in land use design, including diversity of urban and suburban developments.	**Consistent.** The Common Elements Typical Project would result in the development of collocated recreational and commercial land uses along the project area accessible via active transportation modes.
LUT-9 (Idling Reduction Goal): Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer's specifications.	**Consistent.** The *2020 LA River Master Plan* would be consistent with the County Idling Reduction Ordinance, which requires signs in on-site loading areas to encourage vehicle idle reduction.
LUT-11 (Sustainable Pavements Program): Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.	**Consistent.** The Design Guidelines describe numerous paving typologies, including permeable paving.
LUT-12 (Electrify Construction and Landscaping Equipment): Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment.	**Potentially Inconsistent.** The *2020 LA River Master Plan* does not include any best practices related to electric construction and landscaping equipment.
Water Conservation and Wastewater	
WAW-1 (Per Capita Water Use Reduction Goal): Meet the State established per capita water use reduction goal, as identified by SB X7-7 (The Water Conservation Act of 2009) for 2020.	**Consistent.** The Design Guidelines for the pavilions recommend the following best practices that would reduce water: on-site water retention, detention, and filtration; capture of 100 percent of on-site rainfall for the 85 percent rain event; greywater and rainwater reuse; bioswales or treatment basins to collect stormwater runoff; and low-flow water fixtures.
WAW-2 (Recycled Water Use, Water Supply Improvement Programs, and Storm Water Runoff): Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes. Manage stormwater, reduce potential treatment, and protect local groundwater supplies.	Consistent. See WAW-1.
Waste Reduction, Reuse, and Recycling	
SW-1 (Waste Diversion Goal): For the County's unincorporated areas, adopt a waste diversion goal to comply with all state mandates associated with diverting from landfill disposal at least 75 percent of the waste by 2020.	**Consistent.** The Design Guidelines for the pavilions recommend the following best practices that would divert waste: use locally sourced, recycled, and recyclable materials with low-embodied energy; recycle construction waste; use green cleaning and integrated building management; and regularly monitor building systems and optimize usage.

Local Actions	Consistency
Land Conservation and Tree Planting	
LC-1 (Develop Urban Forests): Support and expand urban forest programs within the unincorporated areas.	**Consistent.** The Common Elements Typical Project would include planting of vegetation. Furthermore, the Design Guidelines for ecology and planting describe the best practices that would support urban forests: provide a continuous native tree and plant corridor along the river with linkages to riparian habitat and upland areas near the river; and support nurseries and organizations that specifically collect and propagate indigenous native plant species for planting along the river corridor.
LC-2 (Create New Vegetated Open Space): Restore and re-vegetate previously disturbed land and/or unused urban and suburban areas.	Consistent. See LC-1.
LC-4 (Protect Conservation Areas): Encourage the protection of existing land conservation areas.	Consistent. See LC-1.

Consistency with Los Angeles County CAP

As discussed above, the County released the draft Los Angeles County CAP in March 2020. As of August 2020, the anticipated adoption date of the plan is unknown. The draft Los Angeles County CAP outlines actions that the County plans to take to reduce GHG emissions and achieve carbon neutrality by 2045 in unincorporated County areas. The Los Angeles County CAP includes 17 strategies that support this goal. The strategies alone would result in an 86 percent reduction from 1990 baseline emissions, leaving about 1.3 million residual $MTCO_2e$ in 2045. If the residual emissions cannot be eliminated through new technologies introduced over the next 25 years, the County will consider the purchase of certified carbon credits (or offsets) to achieve carbon neutrality by 2045. The strategies and actions in the plan will be reassessed when the CAP is next updated in 2025.

The Los Angeles County CAP strategies span the sectors of transportation; stationary energy (i.e., buildings); waste; industrial processes and product use; and agriculture, forestry, and other land uses. The strategies are supported by 71 actions. Many of the actions build off those identified in the 2020 CCAP and therefore the Common Elements Typical Project would be consistent with these actions. Some strategies (e.g., accelerate freight decarbonization) deal with emissions sectors that are not relevant to the Common Elements Typical Project. However, the Common Elements Typical Project would be potentially inconsistent with Action T29 (similar to 2020 CCAP action LUT-12), which requires, whenever feasible, the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment for County projects (Los Angeles County 2020). Therefore, the Common Elements Typical Project would be potentially inconsistent with the Los Angeles County CAP.

Consistency with OurCounty Sustainability Plan

As discussed above, in July 2019, the County adopted the OurCounty Sustainability Plan. The plan includes 12 primary goals that have a total of 37 strategies, with a total of 159 actions. The plan is used qualitatively for this analysis to determine if the Common Elements Typical Project would be generally consistent with the applicable GHG emissions goals, strategies, and actions.

The OurCounty Sustainability Plan includes numerous strategies related to urban forestry, sustainable building design, building energy consumption, renewable energy, active and alternative transportation, waste generation, integrated water systems, and water conservation.

Plantings at the project site ensure that the Common Elements Typical Project would be consistent with the OurCounty Sustainability Plan's strategies related to urban forestry.

The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across Los Angeles County for cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely possible. It is likely that a portion of the vehicle trips associated with operations of the Common Elements Typical Project would be displaced by other modes, such as pedestrian and cyclist trips. The Common Elements Typical Project includes installation of bike racks at all project sites or at set intervals along the LA River Trail. This biking infrastructure would help promote cyclist trips in place of vehicle trips. These features address the OurCounty Sustainability Plan strategies related to active and alternative transportation.

The Design Guidelines described above under the Common Elements Typical Project related to water, energy, and waste would minimize GHG emissions associated with future development through water and energy conservation, solid waste diversion, and use of renewable energy—all of which are discussed in the strategies of the OurCounty Sustainability Plan. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that all of these measures will be incorporated into the design of the Common Elements Typical Project given that they are not required and the decision to implement them would be determined by the subsequent project proponent. Accordingly, the Common Elements Typical Project would be potentially inconsistent with strategies identified in the OurCounty Sustainability Plan.

Consistency with other State Regulations

As discussed above, systemic changes will be required at the State level to achieve California's future GHG reduction goals. Regulations, such as future amendments to the LCFS, future updates to the State's Title 24 standards, and implementation of the State's SLCP Reduction Strategy, including forthcoming regulations for composting and organics diversion, will be necessary to attain the magnitude of reductions required for the State's goals.

The Common Elements Typical Project would be required to comply with these regulations in new construction (in the case of updated Title 24 standards), or would be directly affected by the outcomes (vehicle trips and energy consumption would be less carbon intensive due to statewide compliance with future LCFS amendments and increasingly stringent RPS). Therefore, for the foreseeable future, the Common Elements Typical Project would not conflict with any other long-term state-level regulations pertaining to GHGs.

Summary

Operation of the Common Elements Typical Project would be consistent with the 2017 Scoping Plan, SB 375, the 2020–2045 RTP/SCS, and other State regulations (e.g., LCFS, Title 24 standards, SLCP Reduction Strategy). However, the Common Elements Typical Project would be potentially inconsistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, 2020 CCAP, updated Los Angeles County CAP, and OurCounty Sustainability Plan due to the reasons described above. Therefore, construction and operation of the Common Elements Typical Project would potentially

conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Frame 1

As described above, based on the consistency analysis of the GHG plans relevant to each of the nine planning frames, the Common Elements Typical Project could conflict with GHG plans relevant to all frames. The potential for inconsistency with additional GHG plans relevant only to Frame 1 appears below. The only additional GHG plan for Frame 1 is the City of Long Beach CAAP.

Consistency with City of Long Beach CAAP

As discussed above, in May 2019 the City of Long Beach released a working draft of its CAAP. This plan includes mitigation and adaptation strategies for the city to address climate impacts and to reduce the city's impacts on climate change through reducing GHG emissions. Priority mitigation actions in the transportation, energy, and waste sectors are presented and include actions such as providing expanding and improving pedestrian infrastructure, providing access to renewable generated electricity, and ensuring compliance with waste collection programs.

While the CAAP has not yet been finalized or adopted by the City of Long Beach, mitigation strategies can still be used for a consistency analysis with the Common Elements Typical Project. As shown in Table 3.7-8, the Common Elements Typical Project would be consistent with the eight applicable actions in the City of Long Beach's CAAP.

Table 3.7-8. Consistency of the Common Elements Typical Project with CAAP Priority Mitigation Actions

Priority Mitigation Actions	Consistency
Transportation	
T-2. Increase employment and residential development along primary transit corridors.	**Consistent.** The Common Elements Typical Project would be located along the river channel within the existing ROW and would not compete with potential development along primary transit corridors.
T-4. Increase bikeway infrastructure.	**Consistent.** The Common Elements Typical Project includes installation of bike racks, which would help promote cyclist trips.
T-5. Expand/improve pedestrian infrastructure citywide.	**Consistent.** The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians.
T-8. Increase density and mixing of land uses.	**Consistent.** The Common Elements Typical Project would result in the development of collocated recreational and commercial land uses along the project area accessible via active transportation modes.
Energy	
BE-4. Promote community solar and microgrids.	**Consistent.** The Design Guidelines for the pavilions recommend the use of renewable energy sources (including wind and solar).

Priority Mitigation Actions	Consistency
Waste	
W-1. Ensure compliance with state law recycling program requirements for multi-family residential and commercial property.	**Consistent.** The Common Elements Typical Project includes dual trash/recycling bins.
W-4. Identify organic waste management options.	Consistent. See W-3.

Frame 2

Consistency with the City of Long Beach CAAP would also be required for development under the Common Elements Typical Project that occur in the portion of the city that overlaps with Frame 2. The City of Long Beach CAAP consistency analysis is presented above for Frame 1 in Table 3.7-8.

As described above, based on the consistency analysis of the GHG plans relevant to each of the nine planning frames, the Common Elements Typical Project would potentially conflict with GHG plans relevant to all frames. The potential for inconsistency with additional GHG plans relevant only to Frame 2 appears below. The only additional GHG plan for Frame 2 is the City of Carson CAP.

Consistency with City of Carson CAP

As discussed above, the City of Carson's CAP, adopted in 2017, sets a long-term goal of reducing GHG emissions by 49 and 80 percent below 2005 levels by 2035 and 2050, respectively. The CAP identifies goals, measures, and sub-strategies to reduce GHG emissions related to land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage.

The Design Guidelines for the pavilions recommends best practices to reduce GHG emissions associated with energy, water, and waste. The Common Elements Typical Project would utilize existing ROW to provide additional recreational and community benefits that increase neighborhood connectivity and create a mobility network across the County for cyclists, pedestrians, and equestrians. The Common Elements Typical Project includes installation of bike racks, which would help promote cyclist trips in place of vehicle trips. The Common Elements Typical Project would also include planting of vegetation that would sequester carbon. Therefore, the Common Elements Typical Project would be consistent with the applicable goals of the City of Carson's CAP.

Frame 7

As described above, based on the consistency analysis of the GHG plans relevant to each of the nine planning frames, the Common Elements Typical Project would potentially conflict with GHG plans relevant to all frames. The potential for inconsistency with additional GHG plans relevant only to Frame 7 appears below. The only additional GHG plan for Frame 7 is the City of Burbank GGRP.

Consistency with City of Burbank CAP

As discussed above, the City of Burbank's GGRP identifies emission-reduction opportunities with the community, in addition to the incorporation of best practices from other jurisdictions and organizations and State and regional laws, guidance, and recommendations.

The consistency of the Common Elements Typical Project with the measures in the City of Burbank's GGRP is analyzed in Table 3.7-9. As shown in Table 3.7-9, the Common Elements Typical Project would be consistent with the relevant measures in the City of Burbank's GGRP.

Table 3.7-9. Consistency of the Common Elements Typical Project with City of Burbank GGRP Measures

Measures	Consistency
Building and Energy	
E-1.1. Energy Efficiency in New Construction. The City will require new commercial projects to be constructed to Title 24 Tier 1 levels (e.g., exceed current efficiency standards by 15%) beginning in January 2015.	**Consistent.** Development under the Common Elements Typical Project would comply with all applicable local and State building measures at the time of their development, including the Title 24 Standards. Furthermore, development under the Common Elements Typical Project would comply with all applicable local and regional programs and ordinances.
E-1.3. Energy Star Appliances. The City will encourage voluntary community participation to install Energy Star appliances or other energy-efficient appliance models in both new and existing residential units.	**Consistent.** The Design Guidelines for the pavilions include best practices to use energy efficient appliances.
E-1.4. Smart Grid Integration. The City will encourage voluntary adoption of smart grid technology in new and existing construction, promoting the use of smart appliances in homes and businesses and the use of OPower to track building energy use.	**Consistent**. Development under the Common Elements Typical Project would comply with all applicable local and State building measures at the time of their development, including the Title 24 Standards.
E-1.5. Cool Roofs. The City will extend its current Cool Roof Pilot Program and will advertise BWP's non-residential cool roof incentives to building owners when they obtain permits for re-roofing.	**Consistent.** The Design Guidelines for the pavilions include best practices to use energy efficient appliances.
E-1.6. BWP Energy Conservation Programs. WP will continue to implement a variety of energy conservation programs in order to achieve its goal of 1% annual reductions in projected energy loads.	**Consistent.** The Design Guidelines for the pavilions include best practices to use high-albedo roofs and paving materials to mitigate heat gain, as well as green roofs and pervious paving.
E-1.7. Building Shade Trees. BWP will continue to administer the Made in the Shade Program. The City will also revise the Zoning Ordinance to require the planting of two building shade trees per parcel to accompany each new single-family residential unit. The City will update its Street Tree Plan and Urban Forestry program, with a focus on identifying streets that currently lack street trees, parking lots that could accommodate additional shade trees, and locations for new tree plantings in City parks and open space	**Consistent.** The Design Guidelines for ecology and planting include best practices to provide a continuous native tree and plant corridor along the river with linkages to riparian habitat and upland areas near the river.
E-2.2 Solar Photovoltaic Systems. The City will actively promote development of building-scale solar energy. The City will develop an outreach campaign to ensure BWP's Solar Photovoltaic Power program is fully subscribed between 2013 and 2016 to meet its solar goal. The City will also reduce or remove its third-party electrical review for non-	**Consistent.** The Design Guidelines for the pavilions recommend the use of renewable energy sources, including solar.

Measures	Consistency
residential solar PV permits through January 1, 2017 to further encourage full participation in the program.	
E-1.7. Light-emitting Diode Street Lights. Upon completion of the pilot testing, the City will install energy-efficient street lights throughout Burbank. The City will also update its Street Light Master Plan to include lighting efficiency requirements.	**Consistent.** The Design Guidelines for the pavilions recommend the use of solar-powered outdoor lighting.
Transportation	
T-1.1. Pedestrian Enhancements. The City will complete the City of Burbank Pedestrian Master Plan, which includes policies, programs, and design guidelines that will enable the City to foster a safer, more attractive, and usable pedestrian environment for residents and visitors. The Master Plan should identify priority improvements and available funding to support implementation. The City will also continue to include pedestrian enhancements as part of its infrastructure projects.	**Consistent.** The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians.
T-1.4. Bicycle Infrastructure Expansion. The City will continue to expand bicycle infrastructure within public rights-of-way, including on-street bicycle lanes and routes, bicycle parking, and directional signage	**Consistent.** See T-1.1. The Common Elements Typical Project would include installation of bike racks at all project sites or at set intervals along the LA River Trail.
T-1.5. Bicycle Accommodation Ordinance. The City will adopt its draft bicycle accommodation ordinance by June 2013. The City will also provide technical assistance to developers during the building permit phase, including best practice examples, to ensure successful implementation.	**Consistent.** See T-1.1 and T-1.5.
T-2.1. Transportation Management Organization Expansion. The City will work with the Transit Management Organization (TMO) to expand the geographic reach of its programs and the extent of services it currently provides. The City will require that all new businesses with 25 or more employees located within the TMO boundary become TMO members and fulfill reporting requirements.	**Consistent.** Development under the Common Elements Typical Project would comply with all applicable City of Burbank programs and ordinances.
Water Conservation	
W-1.1. Water Conservation Programs. The City will implement water conservation programs described in the Urban Water Management Plan (UWMP) in support of BWP's goal to reduce water consumption by 1% annually.	**Consistent.** The Design Guidelines for the pavilions recommend the following best practices that would reduce water: on-site water retention, detention, and filtration; capture of 100 percent of on-site rainfall for the 85 percent rain event; greywater and rainwater reuse; bioswales or treatment basins to collect stormwater runoff; and low-flow water fixtures.

Measures	Consistency
W-1.2. Recycled Water Use Master Plan. The City will implement water conservation programs described in the Urban Water Management Plan (UWMP) in support of BWP's goal to reduce water consumption by 1% annually.	Consistent. See W-1.1.
W-1.3. Stormwater Management Plan. The City will prepare a Stormwater Management Plan that seeks to apply best management practices, including LID features, into future system upgrades or extensions.	Consistent. See W-1.3.
Waste Reduction	
SW-1.1. Food Scrap and Compostable Paper Diversion Ordinance. The City will adopt a food scraps and compostable paper diversion ordinance, requiring all food waste and compostable paper to be diverted from the waste stream to composting facilities.	**Consistent.** If development under the Common Elements Typical Project is deemed a covered business under AB 341 and AB 1826 and/or a regulated entity under SB 1383, it would comply with the state laws on organic waste diversion.
SW-1.2. Yard Waste Diversion Ordinance. The City will adopt an ordinance banning disposal of yard waste in trash bins. Multi-family residential and non-residential properties that are not currently served by the City's solid waste collection program would need to contract with a yard waste collection service provider.	Consistent. See SW-1.1.
SW-1.4. Reusable Bags. Promote the environmental benefits of reusable shopping bags on the City website.	**Non-applicable.** The City of Burbank is responsible for implementing this measure.
SW-1.5. Recycling Ordinance. The City will adopt an ordinance requiring the provision of recycling bins and/or recycling areas in all residential and non-residential buildings. Multi-family residential and non-residential properties that are not currently served by the City's solid waste collection program would need to contract with a recycling collection service provider. The City will perform random spot-checks of multi-family residential and commercial buildings to ensure provision of recycling bins.	**Consistent.** The Common Elements Typical Project would include dual trash/recycling bins.

Summary

For all planning frames, the Common Elements Typical Project would be consistent with the 2017 Scoping Plan, SB 375, the 2020–2045 RTP/SCS, and other State regulations (e.g., LCFS, Title 24 standards, SLCP Reduction Strategy). For future development of the Common Elements Typical Project within the City of Long Beach in either Frame 1 or 2, the Common Elements Typical Project would be consistent with the City of Long Beach CAAP. For future development in the City of Carson in Frame 2, the Common Elements Typical Project would be consistent with the City of Carson CAP. For future development in the City of Burbank in Frame 7, the Common Elements Typical Project would be consistent with the City of Burbank GGRP.

However, for all planning frames, the Common Elements Typical Project would be potentially inconsistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, 2020 CCAP, Los Angeles County CAP, and the OurCounty Sustainability Plan. Implementation of the Design Guidelines related to waste, water, and energy would make the Common Elements Typical Project consistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, and the OurCounty Sustainability Plan. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that all of these measures will be incorporated into the design of the Common Elements Typical Project by project proponents in subsequent projects, given that they are not required. Furthermore, the 2020 CCAP measure LUT-12 and Los Angeles County CAP measure T29 related to electrified landscaping and construction equipment are not addressed by the Design Guidelines best practices for the Project. Therefore, construction and operation of the Common Elements Typical Project would potentially conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would therefore result in a potentially significant impact.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

In addition, apply the following mitigation measure.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Implementing agencies will require applicants of future development to implement the following GHG emissions-reduction strategies where feasible.

- Zero-emission and near-zero-emission construction equipment will be used, to the extent feasible.

Significance after Required Mitigation

With mitigation, the Common Elements Typical Project would no longer be inconsistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, 2020 CCAP, Los Angeles County CAP, and OurCounty Sustainability Plan. With implementation of Mitigation Measure GHG-1a, the Common Elements Typical Project would be consistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, and Los Angeles County 2020 CCAP action LUT-12 related to electrified landscaping equipment. With implementation of Mitigation Measure GHG-2, the Common Elements Typical Project would be consistent with the Los Angeles County 2020 CCAP action LUT-12 and Los Angeles County CAP action T29 (electrified construction equipment). Therefore, the Common Elements Typical Project would not conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Impacts for construction and operation would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for projects for later activities when not carried out by the County.

Multi-Use Trails and Access Gateways

As discussed above, before implementation of mitigation, the Common Elements Typical Project would result in a potentially significant impact due to inconsistencies with State regulatory programs related to the following emission sources: construction, energy, water, and waste. The Multi-Use Trails and Access Gateways Typical Project also includes these emission sources, excluding energy (see Table 3.7-5). Given the similarity between the Multi-Use Trails and Access Gateways Typical Project and the Common Elements Typical Project in terms of the types of emission sources associated with operation (e.g., construction, water, waste), GHG impacts from the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above.

For all planning frames, the Multi-Use Trails and Access Gateways Typical Project would be consistent with the 2017 Scoping Plan, SB 375, 2020–2045 RTP/SCS, and other State regulations (e.g., LCFS, Title 24 standards, SLCP Reduction Strategy). For future development of the Multi-Use Trails and Access Gateways Typical Project within the City of Long Beach in either Frame 1 or 2, the Project would be consistent with the City of Long Beach CAAP. For future development in the City of Carson in Frame 2, the Multi-Use Trails and Access Gateways Typical Project would be consistent with the City of Carson CAP. For future development in the City of Burbank in Frame 7, the Project would be consistent with the City of Burbank GGRP. The Multi-Use Trails and Access Gateways Typical Project would not include any buildings or infrastructure that would consume electricity or natural gas. Therefore, the GHG plans' measures related to building energy described for the Common Elements Typical Project would not apply to the Multi-Use Trails and Access Gateways Typical Project.

However, for all planning frames, the Multi-Use Trails and Access Gateways Typical Project would be potentially inconsistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, 2020 CCAP, Los Angeles County CAP, and OurCounty Sustainability Plan. Implementation of the Design Guidelines related to waste and water would make the Multi-Use Trails and Access Gateways Typical Project consistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, and OurCounty Sustainability Plan. However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that all of these measures will be incorporated into the design of the Multi-Use Trails and Access Gateways Typical Project given that they are not required and the decision to implement them would be determined by the subsequent project proponent. Furthermore, the 2020 CCAP measure LUT-12 and Los Angeles County CAP measure T29 related to electrified landscaping and construction equipment are not addressed by the Design Guidelines best practices for the Project. The construction and operation of Multi-Use Trails and Access Gateways Typical Project would potentially conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; this impact would therefore be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1b: Implement Operations GHG Emissions Reduction Strategies Specific to Emission Sources of Multi-Use Trails and Access Gateways.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

With mitigation, the Multi-Use Trails and Access Gateways Project would no longer be inconsistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, 2020 CCAP, Los Angeles County CAP, and OurCounty Sustainability Plan. With implementation of Mitigation Measure GHG-1a, the Multi-Use Trails and Access Gateways Typical Project would be consistent with the 2008 Scoping Plan and First Update, SB 32, EO S-3-05, and 2020 CCAP action LUT-12 related to electrified landscaping equipment. With implementation of Mitigation Measure GHG-2, the Multi-Use Trails and Access Gateways Typical Project would be consistent with the 2020 CCAP action LUT-12 and Los Angeles County CAP action T29 (electrified construction equipment). Therefore, the Multi-Use Trails and Access Gateways Typical Project would not conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Impacts for construction and operation would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for projects for later activities when carried out by the County.

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The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with any of the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

Impacts from the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above for Impact 3.7(b). It should be noted that many of the design components of KOP Category 1 (e.g., lookouts, boardwalks, vegetated buffer) are passive (i.e., no emissions are associated with them) and therefore would likely not result in a relatively high amount of GHG emissions during operations. However, the lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for KOP Category 1. It is assumed that development under KOP Category 1 would be greater than the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans

analyzed in detail for the Common Elements Typical Project. Impacts related to the potential for construction and operation of KOP Category 1 to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Because not all emissions sources identified for the Common Elements Typical Project would occur as part of the operations activities associated with KOP Category 1, the GHG reduction strategies of Mitigation Measure GHG-1a should be assessed for their applicability to future development.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1, GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that KOP Category 1 would be consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 2

Impacts from KOP Category 2 would be similar to those of the Common Elements Typical Project described above for Impact 3.7(b). It should be noted that all of the design components of KOP Category 2 are passive (i.e., no emissions are directly associated with operation) and therefore this KOP category would result in only a minor amount of direct GHG emissions during operations. However, recreation uses (such as amphitheaters and parks) of KOP Category 2 design components could result in emissions from energy sources (e.g., outdoor lighting), water use requiring energy (e.g., conveyance and distribution), wastewater generation, or waste generation. Therefore, the GHG plans' measures related to outdoor lighting, water, mobile, and waste described for the Common Elements Typical Project could apply to KOP Category 2. The lack of specific sites or detailed design

information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for KOP Category 2. It is assumed that development under KOP Category 2 would be greater than the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans analyzed for the Common Elements Typical Project. Impacts related to the potential for KOP Category 2 to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Because not all emissions sources identified for the Common Elements Typical Project would occur as part of the operations activities associated with KOP Category 2, the GHG reduction strategies of Mitigation Measure GHG-1a should be assessed for their applicability to future development.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1, GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that KOP Category 2 would be consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 3

Impacts from KOP Category 3 would be similar to those of the Common Elements Typical Project described above for Impact 3.7(b). It should be noted that all of the design components of KOP Category 3 are passive (i.e., no emissions are directly associated with operation) and therefore this KOP category would result in only a minor amount of direct GHG emissions during operations. It is anticipated that project operations would not include building energy or stationary sources (e.g., generators). However, recreational uses, such as parks and recreational fields, of KOP Category 3

design components could include outdoor lighting, water use requiring energy (e.g., conveyance, distribution, treatment), wastewater generation, or waste generation. Therefore, the GHG plans' measures related to outdoor lighting, mobile, water, and waste described for the Common Elements Typical Project could apply to KOP Category 3. The lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for KOP Category 3. It is assumed that development under KOP Category 3 would be greater than the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans analyzed for the Common Elements Typical Project. Impacts related to the potential for construction and operation of KOP Category 3 to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Because not all emissions sources identified for the Common Elements Typical Project would occur as part of the operations activities associated with KOP Category 3, the GHG reduction strategies of Mitigation Measure GHG-1a should be assessed for their applicability to future development.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1, GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that KOP Category 3 would be consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 4

Impacts from KOP Category 4 would be similar to those of the Common Elements Typical Project described above for Impact 3.7(b). Operation of this KOP category would require an unknown

amount of electricity during use of water pumps for diversion activities. It should be noted project operations would not include building energy or stationary sources (e.g., generators). However, design components could include water use requiring energy and waste generation. Therefore, the GHG plans' measures related to water mobile, and waste described for the Common Elements Typical Project could apply to KOP Category 4. The lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for KOP Category 4. It is assumed that development under KOP Category 4 would be greater than the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans analyzed for the Common Elements Typical Project. Impacts related to the potential for construction and operation of KOP Category 4 to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Because not all emissions sources identified for the Common Elements Typical Project would occur as part of the operations activities associated with KOP Category 4, the GHG reduction strategies of Mitigation Measure GHG-1a should be assessed for their applicability to future development.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1,GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that KOP Category 4 would be consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 5: Floodplain Reclamation

Impacts from KOP Category 5 would be similar to those of the Common Elements Typical Project described above for Impact 3.7(b). It should be noted that project operations would not include building energy or stationary sources (e.g., generators). However, recreational uses, such as farmers markets and recreational fields, of KOP Category 5 design components would require outdoor lighting and result in water consumption and waste generation. Therefore, the GHG plans' measures related to outdoor lighting, mobile, water, and waste described for the Common Elements Typical Project could apply to KOP Category 5. However, the lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for KOP Category 5. It is assumed that development under KOP Category 5 would be greater than the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans analyzed for the Common Elements Typical Project. Impacts related to the potential for construction and operation of KOP Category 5 to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Because not all emissions sources identified for the Common Elements Typical Project would occur as part of the operations activities associated with KOP Category 5, the GHG reduction strategies of Mitigation Measure GHG-1a should be assessed for their applicability to future development.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1, GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that KOP Category 5 would be

consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

KOP Category 6

Impacts from KOP Category 6 would be similar to those of the Common Elements Typical Project described above for Impact 3.7(b). It should be noted that project operations would result in GHG emissions from numerous sources, including building energy, vehicle trips, area sources from landscaping equipment, stationary sources, water, and waste from all design components. The lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for KOP Category 6. It is assumed that development under KOP Category 6 would be greater than the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans analyzed for the Common Elements Typical Project. Impacts related to the potential for construction and operation of KOP Category 6 to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Because not all emissions sources identified for the Common Elements Typical Project would occur as part of the operations activities associated with KOP Category 6, the GHG reduction strategies of Mitigation Measure GHG-1a should be assessed for their applicability to future development.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1, GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that KOP Category 6 would be

consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOPs' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

Construction would involve GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. Operation would involve GHG emissions from building natural gas use, stationary sources, worker and visitor vehicle trips, and other sources. Because details about the *2020 LA River Master Plan* construction and operation scenarios are unknown, GHG emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the associated construction and operation GHG emissions could potentially result in an inconsistency with one or more of the GHG plans analyzed for the Typical Projects. Impacts related to the potential for construction and operation of the *2020 LA River Master Plan* to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant.

Impact Determination

Impacts for construction and operation would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

In addition, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b. Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing TDM strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT this mitigation measure would also reduce GHG emissions from the mobile sector.

Significance after Required Mitigation

Impacts for construction and operation would be significant and unavoidable.

Although Mitigation Measures GHG-1, GHG-2, and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that the *2020 LA River Master Plan* would be consistent with the applicable GHG regulatory programs. With mitigation, impacts would be significant and unavoidable.

Cumulative Impacts

The analysis of greenhouse gas emissions is cumulative by its nature, and the geographic context is global. The preceding analysis addresses all cumulative impacts of the proposed Project, and a separate cumulative discussion is not required.

Section 3.8
Hazards and Hazardous Materials

3.8.1 Introduction

This section describes the geographic and regulatory setting for hazards and hazardous materials, discusses impacts that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts.

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under California Code of Regulations (CCR) Title 22, the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (CCR Title 22, Chapter 11, and Article 3). A hazardous material is defined in CCR Title 22 as:

> [a] substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (CCR Title 22 Section 66260.10).

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transport, use, or disposal of hazardous materials. This section also addresses emergency response/evacuation, airport safety, and wildfire hazards. For additional discussion related to emergency response, please refer to Section 3.14, *Public Services*. For a discussion of wildfire hazards in or near State responsibility areas or lands classified as Very High Fire Hazard Severity Zones, see Section 3.19, *Wildfire*.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.8.2 Setting

3.8.2.1 Geographic

The following section contains a regional description of hazards and hazardous materials conditions in the project area, followed by a more detailed description by frame.

Regional Hazardous Materials and Land Use

The LA River passes through 18 jurisdictions along its 51-mile journey from the Pacific Ocean in Long Beach to the Santa Susana Mountains. As such, the *2020 LA River Master Plan* study area[1] consists of multiple uses such as residential, local and neighborhood commercial, office use, entertainment industry, and dense urban, including heavy and light industrial.

Due to the nature of their use, residential and office uses typically do not pose significant hazardous material impacts. Hazardous materials are not typically handled in significant amounts, and materials typically used for such activities as cleaning and maintenance are not materials classified as acutely hazardous. Industrial and commercial land uses have a higher likelihood of hazardous materials impacts.

Industrial land use can encompass a wide range of business operations that have the potential to create hazardous materials impacts. Industrial facilities store hazardous materials in underground storage tanks (USTs) and/or aboveground storage tanks, and in designated storage locations. Age and improper maintenance of storage tanks are common causes of soil and groundwater contamination. Improper handling and storage of hazardous material containers can lead to hazardous material incidents.

Commercial locations can include vehicle repair sites, gasoline fueling stations, and dry cleaning facilities. Like industrial facilities, some commercial sites store hazardous materials in storage tanks and in designated areas within the facility. Hazardous materials spills and leaks in vehicle repair and fueling locations can lead to hydrocarbon-impacted soil and groundwater. Improper storage and use of hazardous materials in dry cleaning facilities can lead to chlorofluorocarbon-contaminated soil and groundwater.

A review of the State Water Resources Control Board's (SWRCB's) GeoTracker and the California Department Toxic Substances Control's (DTSC's) EnviroStor websites identified the following types of hazardous materials sites within the study area:

- **Leaking Underground Storage Tank (LUST) Cleanup Sites** include all UST sites that have had an unauthorized release (i.e., leak or spill) of a hazardous substance, usually fuel hydrocarbons, and are being (or have been) cleaned up. In GeoTracker, LUST sites consist almost entirely of fuel-contaminated LUST sites, which are regulated pursuant to Title 23 of the CCR, Chapter 16, Article 11.
- **Cleanup Program Sites** include all non-federally owned sites that are regulated under SWRCB's Site Cleanup Program and/or similar programs conducted by each of the nine Regional Water Quality Control Boards (RWQCBs). Cleanup Program Sites are also commonly referred to as "Site

[1] The study area is defined as a 2-mile-wide corridor—1 mile on each side of the river—that follows the centerline of the LA River for its entire 51 miles.

Cleanup Program Sites." Cleanup Program Sites are varied and include but are not limited to pesticide and fertilizer facilities, railyards, ports, equipment supply facilities, metals facilities, industrial manufacturing and maintenance sites, dry cleaners, bulk transfer facilities, refineries, mine sites, landfills, Resource Conservation and Recovery Act (RCRA)/Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanups, and some brownfields. Unauthorized releases detected at Cleanup Program Sites are highly variable and include but are not limited to hydrocarbon solvents, pesticides, perchlorate, nitrate, heavy metals, and petroleum constituents.

- **Military Cleanup Sites** include all cleanup sites on existing military bases or those to be transferred. Military Cleanup Sites include a wide range of discharges, but are primarily regulated under RCRA/CERCLA standards by each of the nine RWQCBs.
- **Military Privatized Sites** include all former military bases/facilities that have been transferred for civilian reuse but are still undergoing (or have undergone) cleanup activity under the direction of SWRCB and/or one of the nine RWQCBs.
- **Military UST Sites** include all petroleum-related LUST cleanup sites on existing military bases (or those to be transferred) and regulated by SWRCB and/or one of the nine RWQCBs. Military LUST sites are non-CERCLA and are therefore regulated under Title 23 of the CCR, Chapter 16, Article 11 standards.
- **DTSC Cleanup Sites** include the following sub-categories:
    - *Cal-Mortgage:* Under a Memorandum of Understanding with the Cal-Mortgage Loan Insurance Division of the Office of Statewide Health Planning and Development, DTSC reviews environmental documents for sites applying for their guaranteed loan insurance program for the construction, improvement, and expansion of healthcare facilities. The loan applicants are either public entities or non-profit groups. The environmental review is done as part of the real estate due diligence process, and the properties are not expected to have had hazardous substances releases.
    - *Closed Base:* Identifies closed military facilities with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity. Facilities/sites with confirmed releases are generally considered high priority and high potential risk. Closed Base facilities/sites are further defined as State Response, Federal Superfund, or Military Evaluation.
    - *Corrective Actions:* Investigation or cleanup activities at RCRA or State-only hazardous waste facilities (that were required to obtain a permit or have received a hazardous waste facility permit from DTSC or U.S. Environmental Protection Agency [EPA]).
    - *Evaluation:* Identifies suspected, but unconfirmed, contaminated sites that need or have gone through a limited investigation and assessment process. If a site is found to have confirmed contamination, it will change from Evaluation to either a State Response or Voluntary Cleanup site type. Sites found to have no contamination at the completion of the limited investigation and/or assessment process result in a No Action Required (for Phase I assessments) or No Further Action (for Preliminary Endangerment Assessments or Phase II assessments) determination.
    - *Expedited Remedial Action Program:* Identifies sites in the Expedited Remedial Action Program. These are confirmed release facilities/sites worked on by responsible parties with

oversight of the cleanup by DTSC. This is a statewide pilot program limited to 30 facilities/ sites. These confirmed facilities/sites are generally high priority and high potential risk.

- *Federal Superfund (National Priorities List):* Identifies sites where EPA proposed, listed, or delisted a site on the National Priorities List. The list of sites is developed and maintained by EPA, which typically has primary regulatory oversight for the sites listed on the National Priorities List.
- *Formerly Used Defense Sites:* Identifies military facilities that were Formerly Used Defense Sites with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity. Facilities/sites with confirmed releases are generally considered high priority and high potential risk. Formerly Used Defense Sites are further defined as State Response, Federal Superfund, or Military Evaluation sites.
- *Hazardous Waste Property or Border Zone Property Evaluation:* Identifies facilities/sites that went through the Hazardous Waste Property or Border Zone Property evaluation process. (Chapter 6.5, Health and Safety Code Section 25221.)
- *Historical:* Identifies sites from an older database where no site type was identified. Most of these sites have a status of Referred or No Further Action. DTSC is working to clean up this data by identifying an appropriate site type for each Historical site.
- *Open Base:* Identifies open military facilities with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity. Facilities/sites with confirmed releases are generally considered high priority and high potential risk. Open Base facilities/sites are further defined as State Response, Federal Superfund, or Military Evaluation.
- *Permitted:* Facilities/sites that were required to obtain a permit or have received a hazardous waste facility permit from DTSC or EPA in accordance with Section 25200 of the Health and Safety Code or the RCRA.
- *School:* Identifies proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. School sites are further defined as "Cleanup" (remedial actions occurred) or "Evaluation" (no remedial action occurred) based on completed activities. All proposed School sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.
- *State Response:* Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high priority and high potential risk.
- *Tiered Permit:* A corrective action cleanup project on a hazardous waste facility that either was eligible to treat or permitted to treat waste under the Tiered Permitting system. Facilities in this category fall under the Permit by Rule tier or Conditionally Authorized or Exempt tiers.
- *Voluntary Cleanup:* Identifies sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Figures 3.8-1 through 3.8-9 show the hazardous materials sites within the study area, based on a review of SWRCB's GeoTracker and DTSC's EnviroStar websites conducted in August 2020.

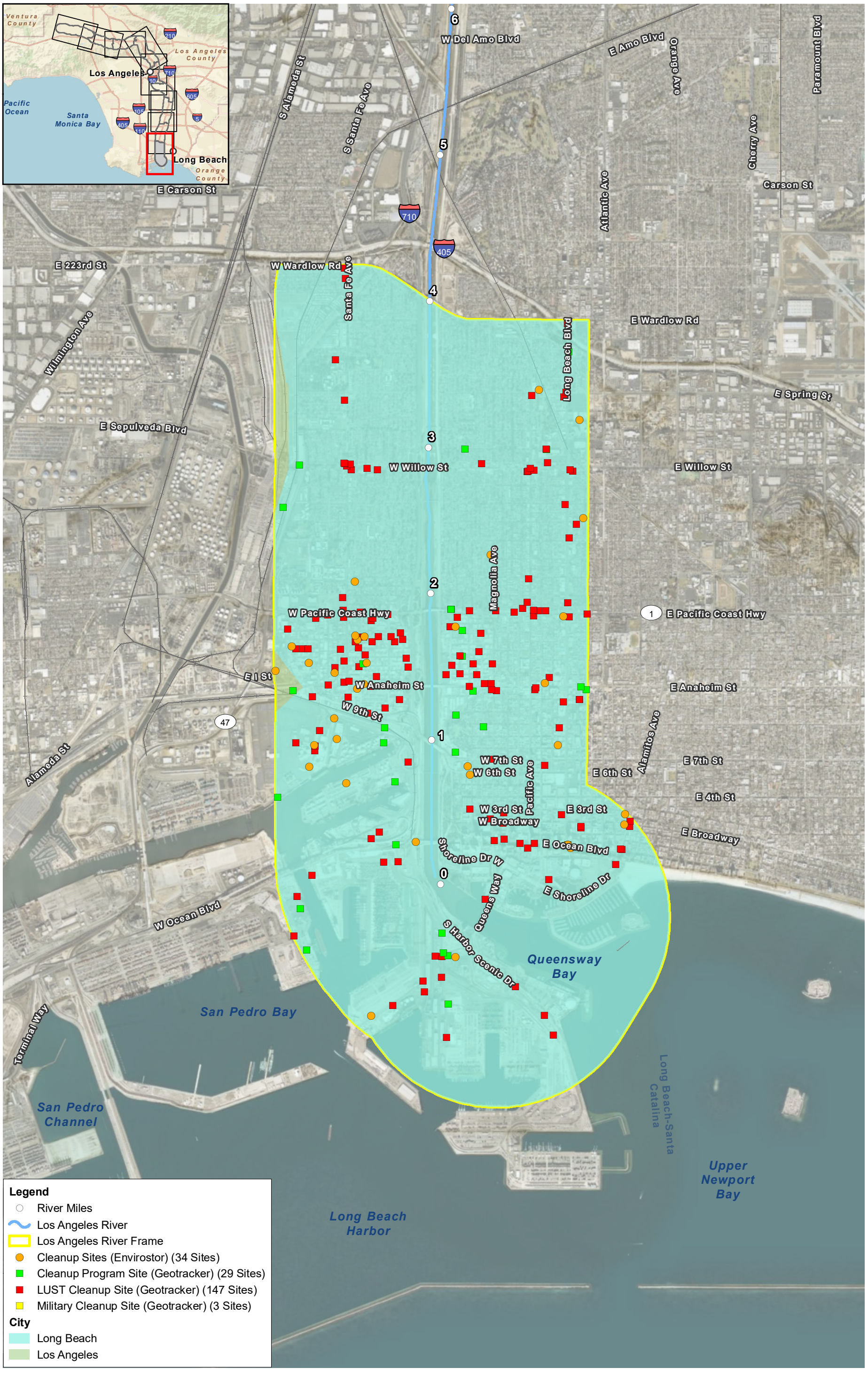

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Figure 3.8-1
Hazmat Cleanup Sites within Frame 1

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

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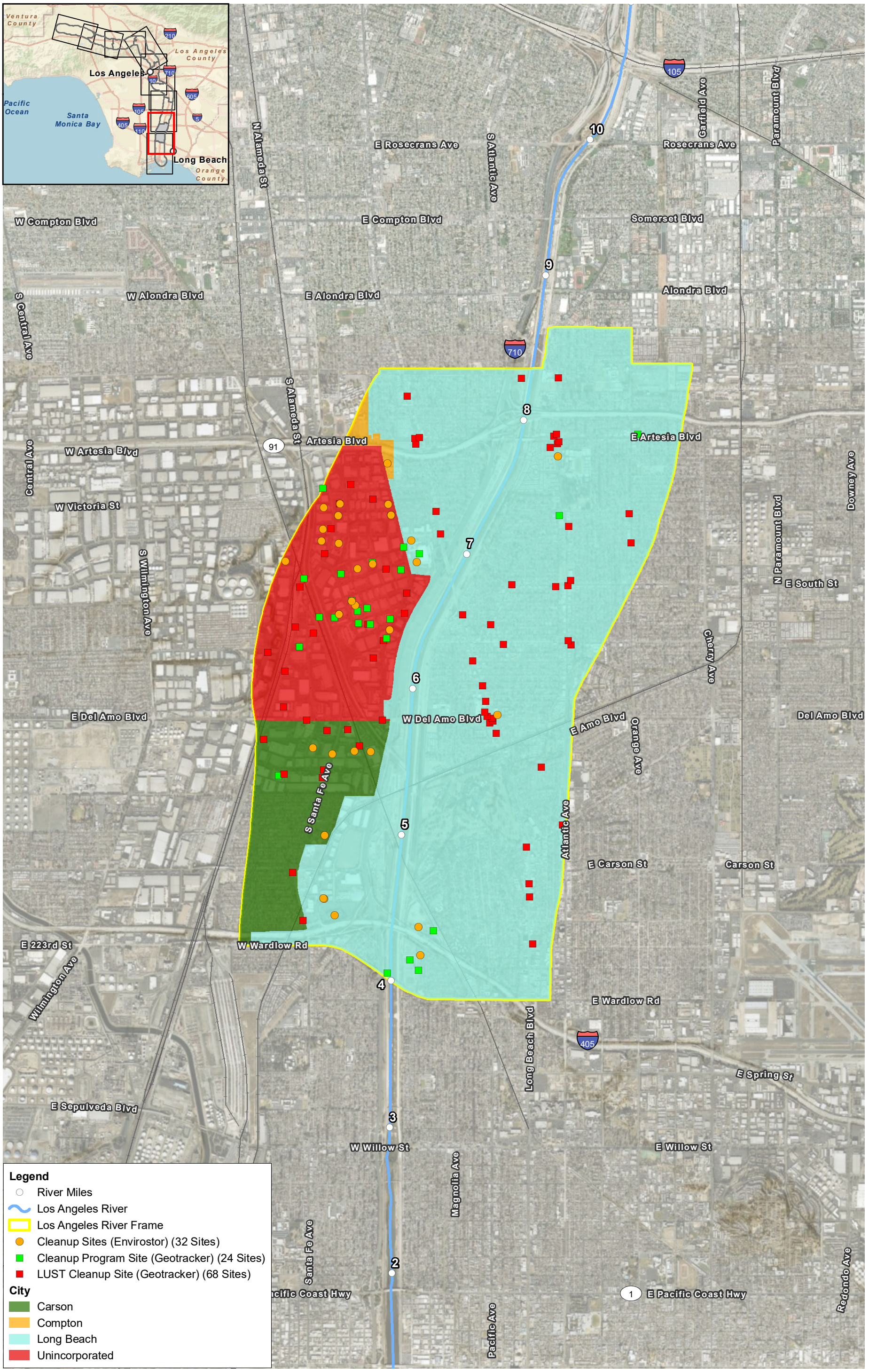


Figure 3.8-2
Hazmat Cleanup Sites within Frame 2

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

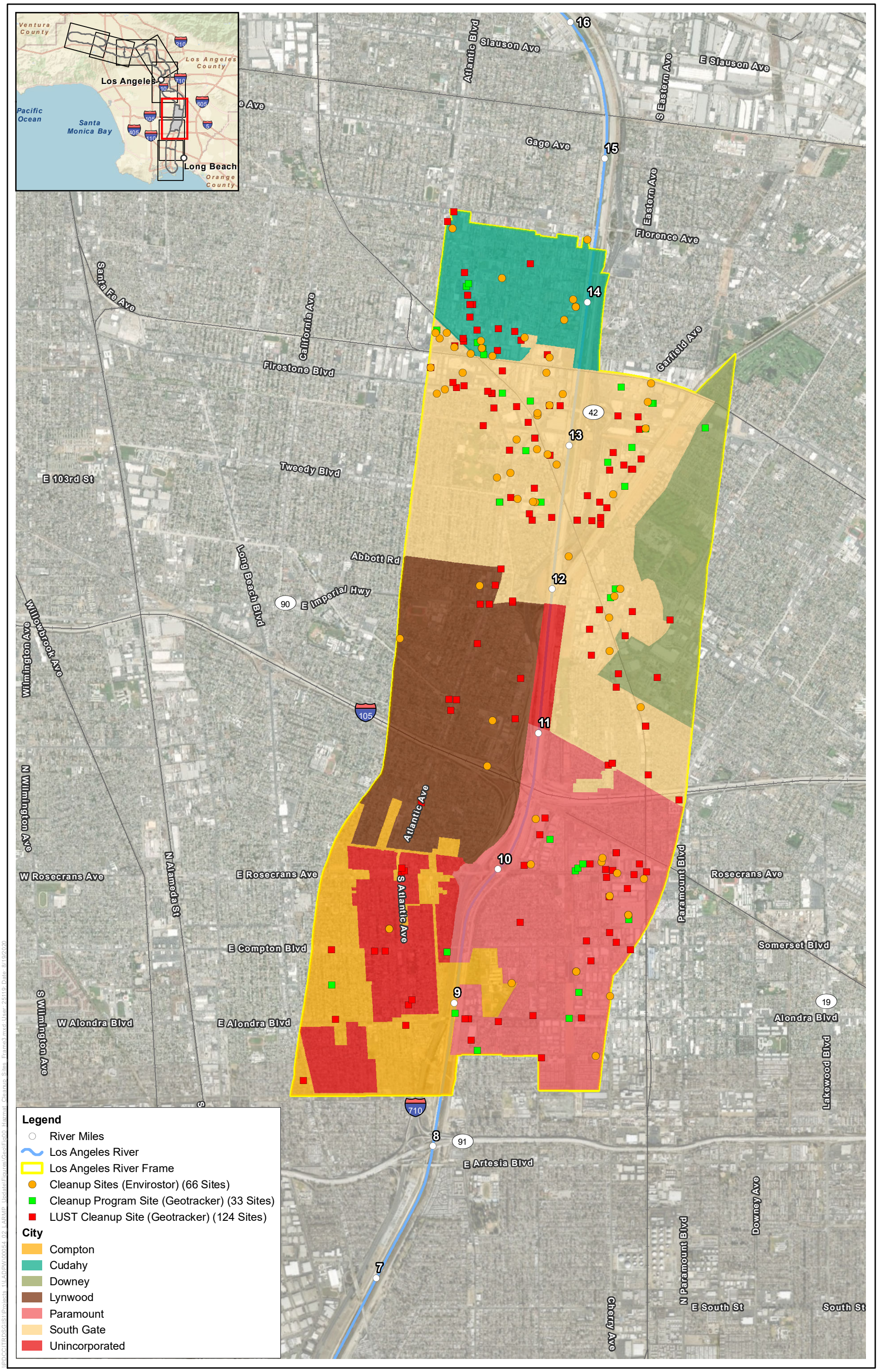
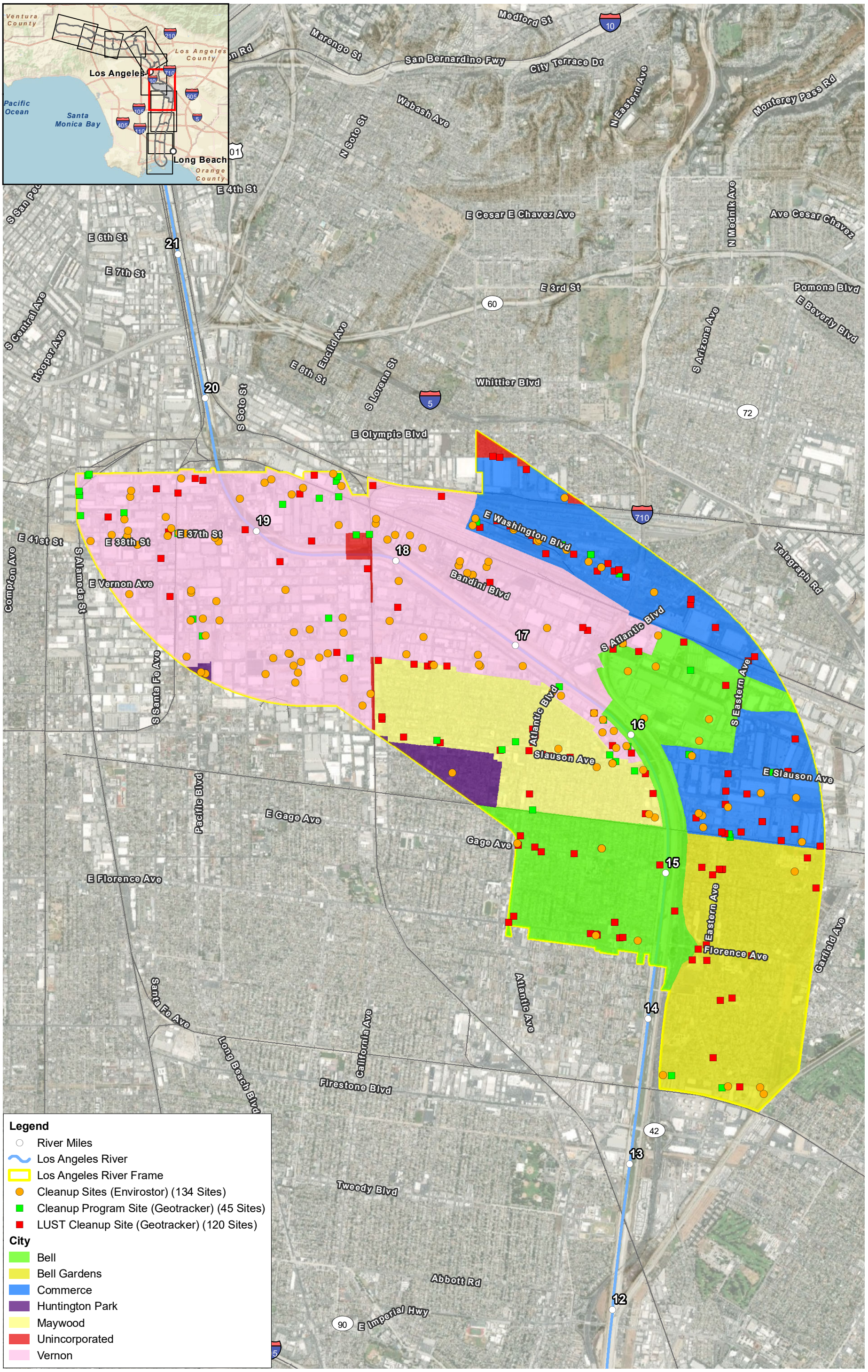


Figure 3.8-3
Hazmat Cleanup Sites within Frame 3

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI



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Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

Figure 3.8-4
Hazmat Cleanup Sites within Frame 4

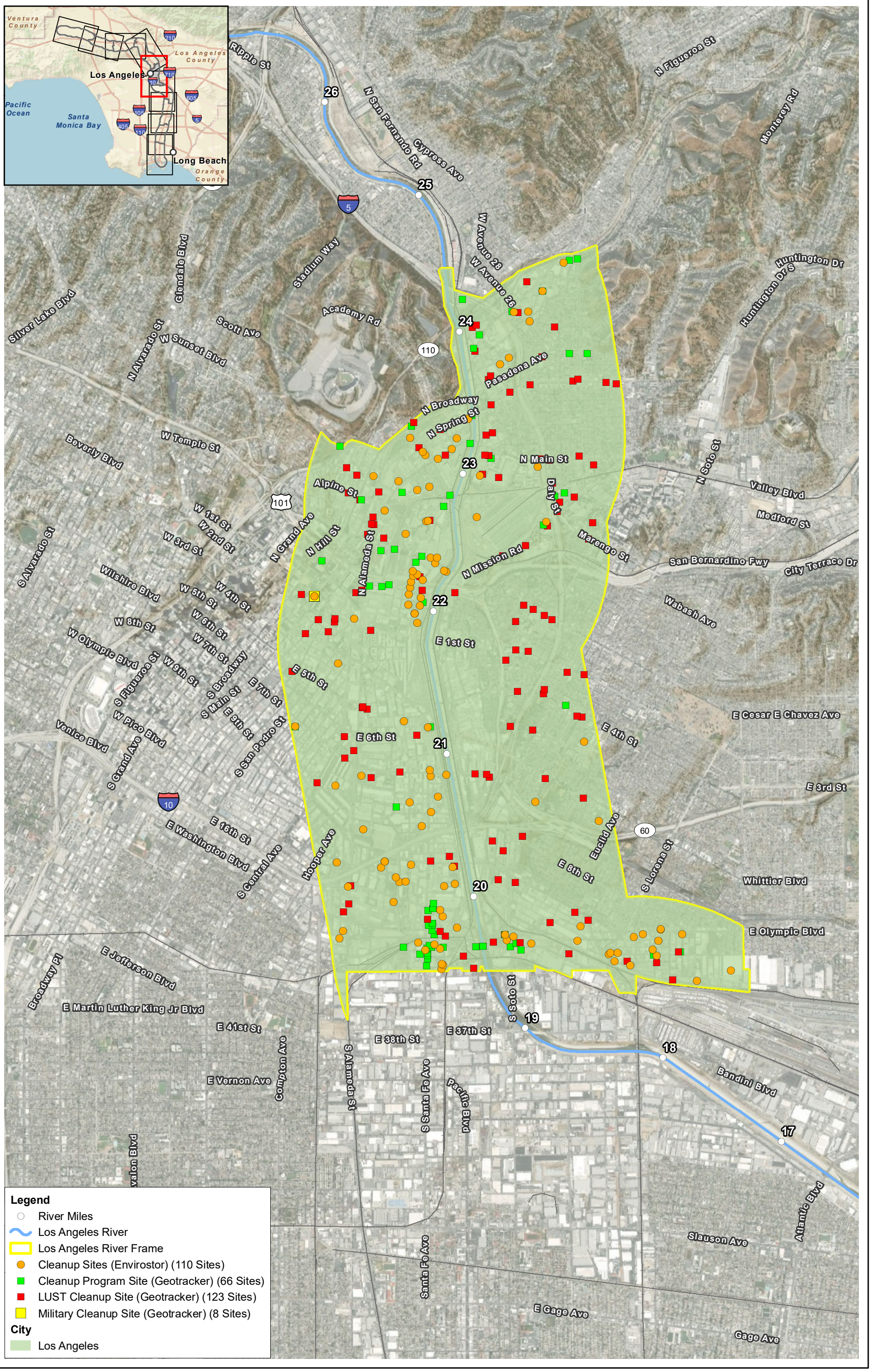


Figure 3.8-5
Hazmat Cleanup Sites within Frame 5

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

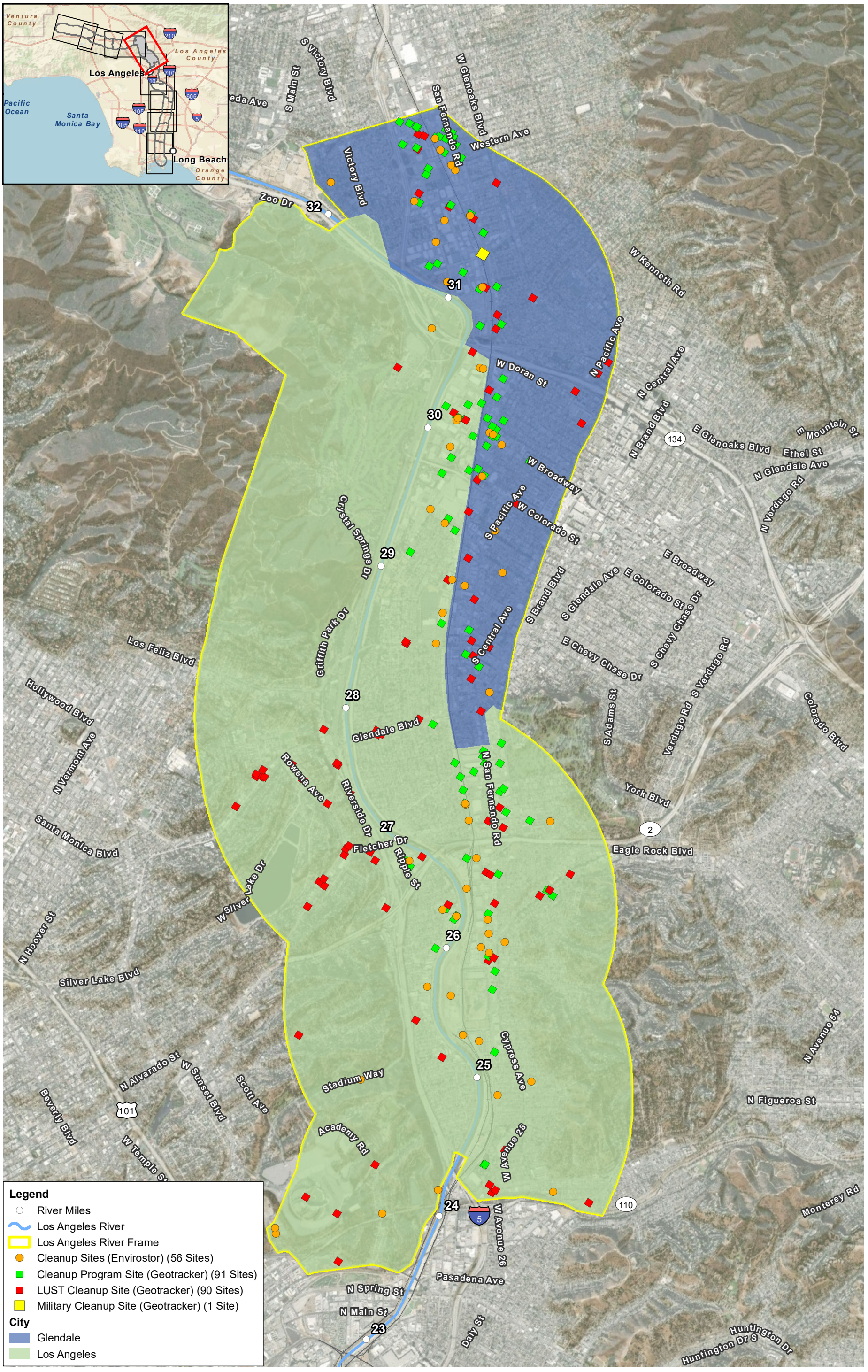
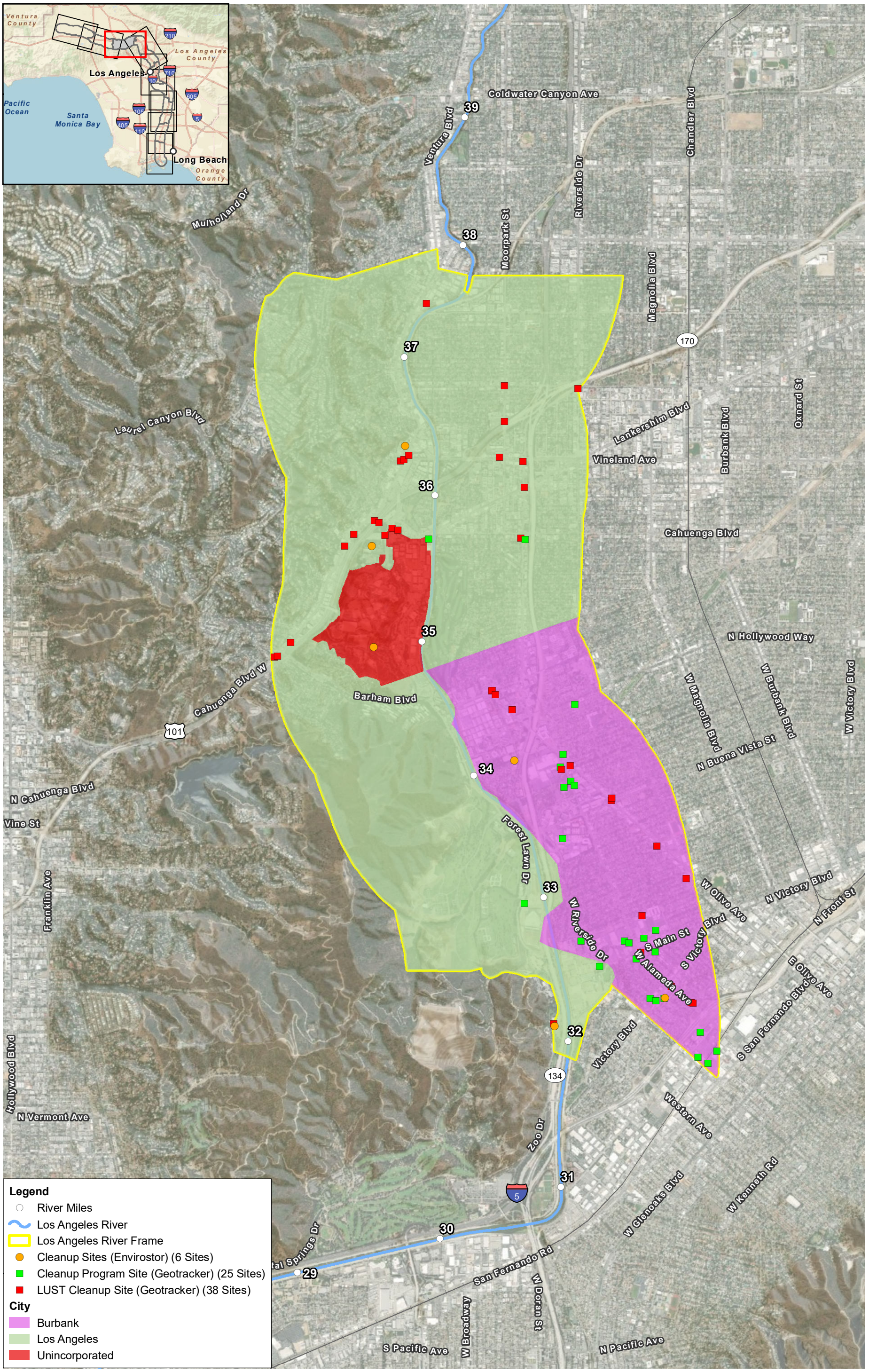


Figure 3.8-6
Hazmat Cleanup Sites within Frame 6

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI



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Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

Figure 3.8-7
Hazmat Cleanup Sites within Frame 7

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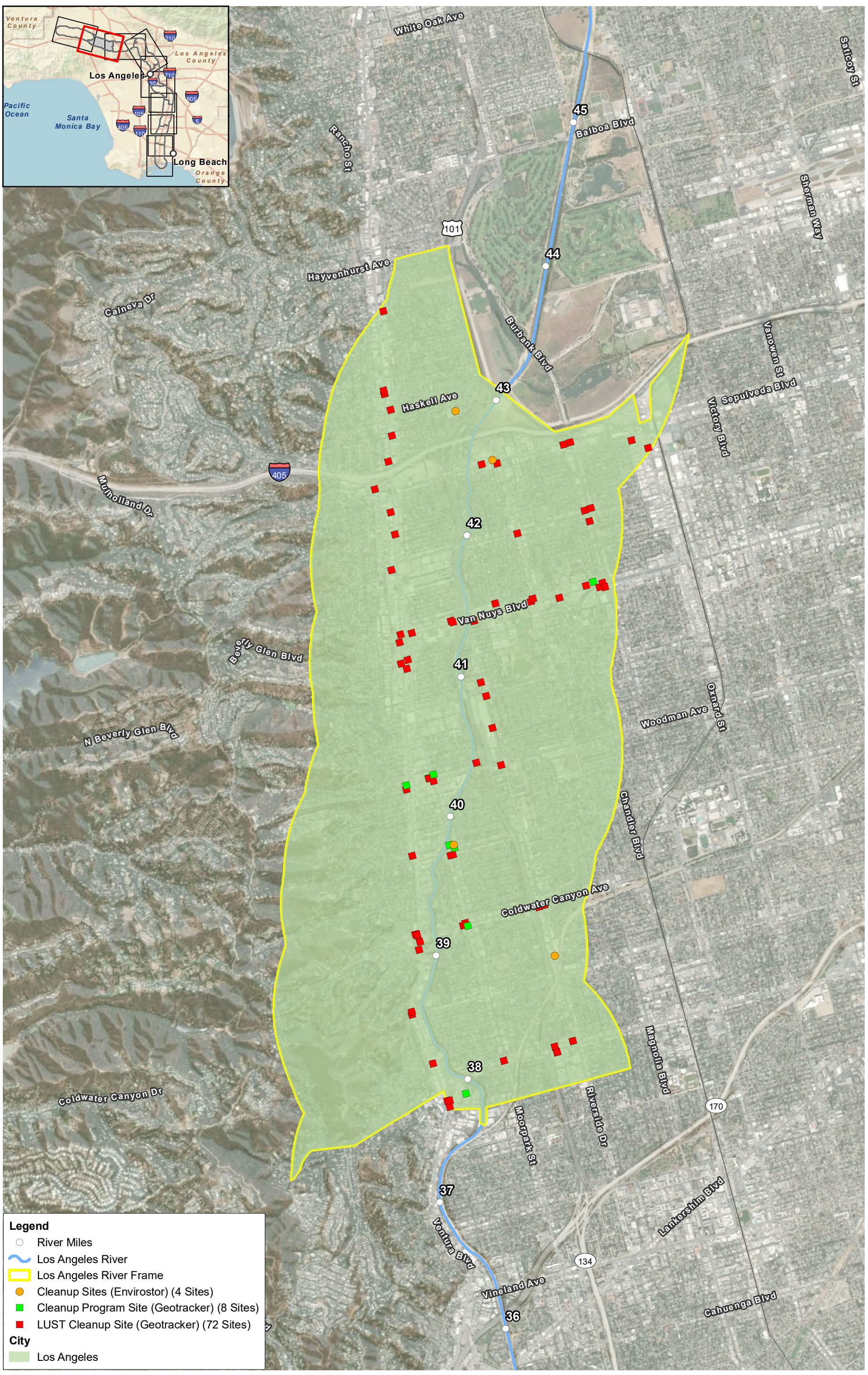

Figure 3.8-8
Hazmat Cleanup Sites within Frame 8

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

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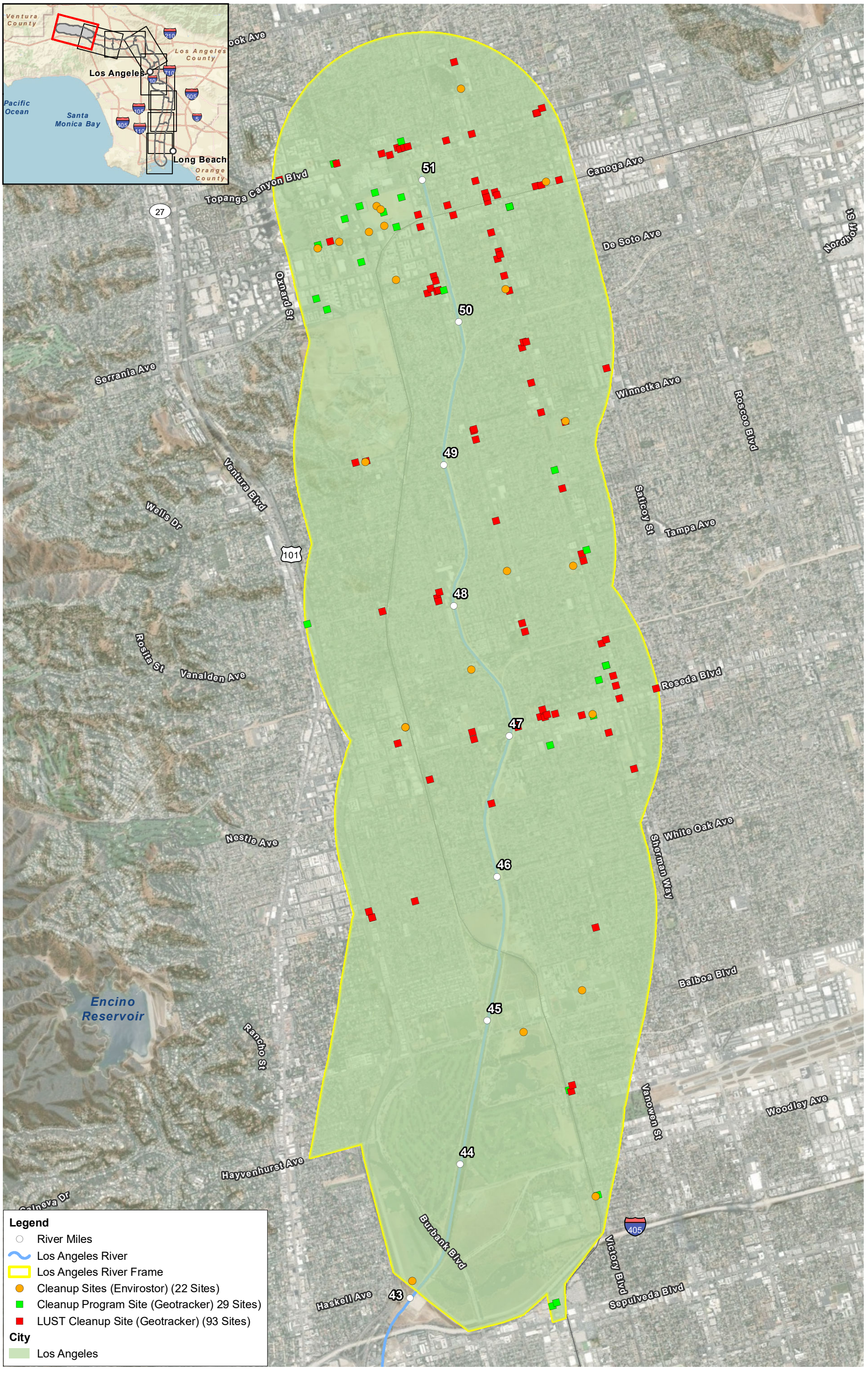


Figure 3.8-9
Hazmat Cleanup Sites within Frame 9

Sources: Department of Toxic Substances Control; State Water Resources Control Board; County of Los Angeles; ESRI

Project Study Area Setting

Frame 1

The Frame 1 project study area setting contains a general description of hazards for the Cities of Long Beach and Los Angeles. As seen on Figure 3.8-1, a review of SWRCB's GeoTracker and DTSC's EnviroStar websites conducted in August 2020 identified a total of 34 Cleanup Sites, 29 Cleanup Program Sites, 147 LUST Cleanup Sites and 3 Military Cleanup Sites within Frame 1's study area.

City of Long Beach

Hazardous Materials Historic Use

Industrial use, including oil production and aviation, has long been a part of Long Beach's history. In 1921, oil was discovered in Signal Hill. Soon after, the ownership, production, and sale of oil became Long Beach's primary industry. In 1937, Reeves Field opened as a permanent naval air base on Terminal Island, followed by the Roosevelt Naval Base, Shipyard, and Hospital. During World War II, the naval dry docks provided routine and battle damage repairs to a parade of tankers, cargo ships, troop transports, destroyers, and cruisers.

Douglas Aircraft Company and a Navy presence in Long Beach were huge economic factors and contributed to the city's significant population growth between 1940 and 1950. Between 2000 and 2010, new land use plans were put in place for downtown, select transit-oriented districts emerged, and lands formerly occupied by McDonnell-Douglas (and later Boeing) aircraft manufacturing operations were redeveloped.

Hazardous Materials and Current Land Use

Land use within Long Beach is primarily residential, constituting 44 percent of all land. Commercial uses represent 8 percent of total land use and consist of major commercial corridors, traditional retail strip commercial, pedestrian-oriented neighborhood retail areas, and auto-oriented shopping centers, with downtown being the primary commercial hub of the city. Industrial uses occupy about 13 percent of the land area in the city. Varied industrial districts have been established throughout Long Beach, particularly near the Port of Long Beach (POLB), rail lines, and freeways.

The POLB, in San Pedro Bay, is the second largest container port in the United States, behind the adjoining Port of Los Angeles. The POLB is also a key transportation hub in the global trade marketplace, with more than $140 billion worth of cargo moving through the POLB every year, from electronics and furniture to vehicles and petroleum.

A review of the SWRCB's GeoTracker and the California DTSC's EnviroStor websites for records along the western portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, Military Cleanup Sites, and DTSC Cleanup Sites) within the study area (SWRCB 2020). See Figure 3.8-1.

Schools

The City of Long Beach is served by the Long Beach Unified School District (LBUSD). LBUSD educates more than 72,000 students, from preschool to high school, in 85 public schools in the Cities of Long Beach, Lakewood, Signal Hill, and Avalon on Catalina Island (LBUSD 2020). Consequently, future

projects associated with the *2020 LA River Master Plan* could occur near a school site. Section 3.14, *Public Services*, describes schools within the study area.

Airports

At its closest point, the Long Beach Airport is approximately 2.25 miles from the LA River and 1.25 miles beyond the eastern boundary of the project study area. According to the Los Angeles County Airport Land Use Commission's Airport Influence Area for the Long Beach Airport, the study area is not within the airport's planning boundaries or influence areas (Los Angeles County Airport Land Use Commission 2003).

Emergency Response

The City of Long Beach's Emergency Operations Plan (EOP) addresses the planned response by the City of Long Beach to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies (City of Long Beach 2015). The plan was designed to be used in all emergencies as well as facilitate response and short-term recovery activities. The operational concepts reflected in the plan focus on potential large-scale disasters, which can generate unique situations requiring unusual emergency responses. As stated in the plan:

> [t]he purpose of the EOP is to guide the mitigation, response and recovery efforts of the City of Long Beach before, during, and after an emergency by:
>
> - Describing the authority, responsibilities, functions, and operations of civil government during local emergencies, states of emergency and war emergencies.
> - Providing a basis for the conduct and coordination of operations and the management of critical resources during emergencies.
> - Providing a basis for incorporating the City Emergency Operations Center (EOC), non-governmental agencies and organizations with required emergency resources into the response plan. (City of Long Beach 2015.)

Responding agencies can include such agencies as the Fire Department, Health Department, Police Department, Department of Health And Human Services, and Public Works Department depending on the incident type. Evacuation is coordinated by the Long Beach Police Department.

Wildfire Hazards

According to the California Department of Forestry and Fire Protection's (CAL FIRE's) Very High Fire Hazard Severity Zones in Local Responsibility Area (LRA) Los Angeles County, the City of Long Beach is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Los Angeles

Hazardous Materials Historic Use

Various industrial uses have long been a part of the City of Los Angeles. The city grew into an industrial center, starting in the late 1800s, when several railroads selected it as their western terminus. In 1892, oil was discovered in what is now downtown Los Angeles, and later in other areas of the city. During World War II, the city was a center for production of aircraft and war supplies. The postwar growth boomed in the city by continuing aircraft-related industries and oil production and refining as well as attracting automotive assembly plants, furniture production, clothing manufacturing, and many other industries that spread out along major thoroughfares.

During this time, industrial growth occurred without regulation; homes and neighborhoods were sited without regard to proximity to industry. Defense industries commonly stored industrial solvents in ponds. Small businesses that used hazardous materials—including dry cleaners, gas stations, automotive repair shops, and manufacturing facilities—commonly disposed of petroleum products and other hazardous waste into the ground. Lead paint was used commonly and without regulation until 1978 in residential neighborhoods and public facilities. Sprawling agricultural land that preceded urban development was characterized by the use of organochlorine pesticides until the 1970s and 1980s. In 1976, government regulation addressed the use of polychlorinated biphenyls, which are still commonly used in the manufacture and construction of transformers, electrical and hydraulic equipment, and some common household items. During the 1970s, the larger industries gradually left the city and government introduced regulations regarding disposal of hazardous materials. Through regulation and oversight, portions of the aforementioned contamination have been addressed and remediated; however, affected sites (from historical and, in some cases, more current hazardous materials use) continue to exist throughout the city (Ninyo and Moore 2018).

Hazardous Materials and Current Land Use

Land use within the City of Los Angeles is primarily residential, constituting 60 percent of all acreage. Public land is the second most common land use, representing 20 percent of acreage, while commercial and industrial land uses each represent 7 percent of acreage.

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the project footprint within the City of Los Angeles identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, Military Cleanup Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-1).

Schools

The city is primarily served by Los Angeles Unified School District (LAUSD), which is the second largest school district in the country. LAUSD enrolls more than 600,000 students in kindergarten through 12th grade at over 1,000 schools and over 200 public charter schools with boundaries that spread over 720 square miles (LAUSD 2020). The city consists of various private schools, daycare centers, after school centers, and other educational centers. Future projects associated with the *2020 LA River Master Plan* could occur near a school site. Section 3.14, *Public Services*, describes schools closest to the project study area.

Airports

Los Angeles International Airport (LAX) is within the City of Los Angeles. At its closest point, it is approximately 9 miles to the southwest of the project study area's western boundary in the City of Vernon. Due to its location, LAX does not pose airport hazards in the study area.

Emergency Response

The Los Angeles City Fire Department (LAFD) is responsible for emergency medical services and fire protection in Los Angeles. In the event of an emergency, LAFD—along with other city agencies—would implement all appropriate emergency procedures outlined in the *City of Los Angeles 2018 Local Hazard Mitigation Plan* (City of Los Angeles Emergency Management Department 2018; described in more detail in Section 3.8.2.2, *Regulatory*). The plan was implemented to reduce risks from disasters to the people, property, economy, and environment within the city.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, very high fire hazards within the city are concentrated north of West Hollywood, south of Burbank, and west of, through, and to the east of the City of Glendale. Portions of the project study area near Sherman Oaks, Toluca Lake, Universal City, etc. overlap with this area (CAL FIRE 2011a). However, no Very High Fire Hazard Severity Zones are within Frame 1. Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Frame 2

The Frame 2 project study area setting contains a general description of hazards for the Cities of Carson and Compton. The potential for hazards related to other Frame 2 cities have been previously described above. As seen in Figure 3.8-2, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 32 Cleanup Sites, 24 Cleanup Program Sites, and 68 LUST Cleanup Sites in Frame 2.

City of Carson

Hazardous Materials Historic Use

The City of Carson has a relatively long history of urban use, including industrial, commercial, and oil field development dating back to the early 1920s. Many of these uses have involved the use, storage, and/or generation of hazardous materials that were and continue to be required for even the most routine industrial and manufacturing processes. As a result of this long history of industrial and commercial development, and the fact that waste management practices and regulations were either not in place or not up to current standards, several sites in the City of Carson could have been affected by previous releases of contaminated materials.

Since the 1980s, hazardous materials have been governed by a variety of environmental regulations that require proper storage, handling, employee and public noticing, spill contingency planning, business/environmental management plans, and other emergency response measures necessary to ensure public safety and to minimize the risk of accidental releases or environmental impacts. A number of freight trains traverse the city, hauling various types of hazardous and explosive materials, including chlorine gas and low-pressure natural gas. Several fixed-site industrial firms require the use of potentially hazardous materials to operate their businesses. Finally, there are numerous underground pipelines within the city limits that carry flammable and hazardous liquids. (City of Carson 2004.)

Hazardous Materials and Current Land Use

The City of Carson is primarily industrial, constituting 50 percent of all land. Industrial areas are composed of manufacturing, processing, warehousing, and distribution. Commercial uses represent 4 percent of total land use. Commercial land uses encompass those retail and service establishments that are planned to serve neighborhood, city-wide, or regional clientele. Residential land uses include 29 percent of all land use in the city (City of Carson 2004).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-2).

Schools

The City of Carson is served by LAUSD, described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

There are no airports in the City of Carson.

Emergency Response

The City of Carson has developed a comprehensive *Hazardous Material Response Plan* to manage hazardous materials emergencies and to minimize their effects. The Los Angeles County Fire Department (LACoFD) is responsible for responding to hazardous material release incidents in Carson. LACoFD is a member of a Certified Unified Program Agency (CUPA), which conducts inspections of businesses, manages and reviews various hazardous waste permits for business plans, and oversees cleanups. First response to all hazardous materials incidents within the city is conducted by LACoFD.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Carson is not within a high fire hazard zone. Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Compton

Hazardous Materials Historic Use

Until recently, most of the commercial retail and service uses were located along the city's major arterial corridors such as Long Beach Boulevard, Compton Boulevard, Alondra Boulevard, Rosecrans Avenue, and Central Avenue. Commercial development in these areas is characterized by strip commercial development and smaller neighborhood commercial centers. The industrial land uses in the city are quite varied and include industrial, manufacturing, and warehousing. Older and generally more specialized manufacturing uses are located along Alameda Street, adjacent to the railroad. Currently, the Alameda Corridor is used exclusively for goods movement from the facilities in the Port of Los Angeles and POLB to the rail yards south and southeast of downtown Los Angeles.

Also, the City of Compton is crisscrossed by numerous high-pressure natural gas and petroleum pipelines. Construction activities in their vicinity can include explosion, fire, or spillage, resulting in earth and groundwater contamination (City of Compton 2011).

Hazardous Materials and Current Land Use

Commercial land uses (8 percent of total land use) generally extend along the major arterial roadways in the city, with residential neighborhoods in the interior areas behind the commercial frontages. Residential development (55 percent of total land use) is the predominant land use and is scattered throughout the city. Industrial development (19 percent of total land use) is generally concentrated along the State Route 91 corridor and along Alameda Street. The total land area governed by the City of Compton General Plan consists of approximately 7,102 acres (11.1 square miles), 588 acres of which are unincorporated County areas (City of Compton 2011).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-2).

Schools

The city is served by Compton Unified School District. The district currently serves nearly 26,000 students at 36 school sites. Section 3.14, *Public Services*, describes schools closest to the LA River footprint (Compton Unified School District 2020).

Airports

The Compton/Woodley Airport is approximately 1.8 miles from the western boundary of the study area and 2.8 miles from the LA River. The project study area is outside of the Aircraft Operating Area and all airport safety zones (AECOM 2016).

Emergency Response

The Compton Fire Department is responsible for programs to protect residents and properties from accidents involving hazardous materials. Programs include documenting all storage and usage of hazardous materials. Vehicles carrying hazardous materials through the city are restricted to the travel routes designated in the *Los Angeles County Hazardous Waste Management Plan.* The *Los Angeles County Hazardous Waste Management Plan* establishes siting criteria for hazardous waste treatment, transfer, and disposal sites. The criteria outlined for the County have been adopted by the City (City of Compton 2011).

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Compton is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Long Beach

The project study area setting for the City of Long Beach is described above in the Frame 1 discussion.

Unincorporated County

Hazardous Materials Historic Use

The unincorporated County area within Frame 2 would have similar historic hazardous materials uses as other cities within Frame 2.

Hazardous Materials and Current Land Use

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-2).

Schools

The unincorporated County area within Frame 2 is served by LAUSD, which is described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools closest to the LA River footprint

Airports

The Compton/Woodley Airport is approximately 1.8 miles from the western boundary of the study area and 2.8 miles from the LA River.

Emergency Response

The Los Angeles County Sheriff's Department and the LACoFD provide emergency services within unincorporated County areas.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the unincorporated County area within Frame 2 is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire,* contains additional analysis related to potential wildfire effects in the project study area.

Frame 3

As seen in Figure 3.8-3, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 66 Cleanup Sites, 33 Cleanup Program Sites, and 124 LUST Cleanup Sites in Frame 3.

City of Compton

The project study area setting for the City of Compton is described above in the Frame 2 discussion.

City of Cudahy

Hazardous Materials Historic Use

The City of Cudahy encompasses 1.2 square miles in southeastern Los Angeles County, bounded by the City of Maywood to the north, Bell Gardens to the east, South Gate to the south, and Huntington Park to the west. Cudahy consists predominantly of dense residential development, with retail, commercial, light industrial, and public uses found along main streets. Within Cudahy, several commercial and industrial properties have been contaminated by past or current business practices.

Hazardous Materials and Current Land Use

City streets and railroad tracks that pass through or near Cudahy are used to transport hazardous and toxic substances, including the designated truck routes of Florence Avenue, Atlantic Avenue, and Salt Lake Avenue. Five oil and natural gas pipelines are in and near the City of Cudahy. Chevron has three lines in the eastern section of Cudahy, and Arco has two lines along Salt Lake Avenue. In addition, Cudahy has several potentially hazardous sites, hazardous waste handlers, cleanup sites, and other hazards that require local, State, or federal assessment, inventory, and/or oversight (City of Cudahy 2018).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-3).

Schools

The City of Cudahy is served by LAUSD, described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Cudahy.

Emergency Response

The City of Cudahy contracts for law enforcement and fire response services with Los Angeles County agencies (specifically, LACoFD and the Los Angeles County Sheriff's Department). Because these agencies serve other, larger areas in addition to Cudahy, there are no local sheriff or LACoFD fire stations within the city limits.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Cudahy is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Downey

Hazardous Materials Historic Use

As mentioned in Section 3.8.2, *Setting*, above, there is a connection between land use and potential for hazardous materials use. Downey is composed primarily of residential land uses (61 percent of total land use), followed by commercial use (11 percent) and industrial uses (9 percent). The extension of the Southern Pacific Railroad through Downey played a pivotal role in bringing people throughout the country to the city for potential business and agricultural benefits. At the beginning of the twentieth century, the downtown Downey area contained a Sunkist packing plant, a department store, banks, restaurants, and mercantile shops. Downey remained largely agrarian until the development of the local aircraft industry during the post-World War II years, with light industry and tract homes replacing orange groves (Downey Chamber of Commerce 2020).

Hazardous Materials and Current Land Use

Types of commercial and industrial land uses that are found within the City of Downey and handle hazardous materials include dry cleaners, medical and dental offices and laboratories, hospitals, machine shops, auto and truck repair and maintenance, and manufacturing. City land uses that are no longer in operation but may still be considered contaminated include pesticides on past agricultural uses, and industrial and UST sites with soil and groundwater contamination. In addition, the inactive landfill at Rio San Gabriel Park is continually monitored.

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the western portion of the city (where the project study area is located) identified multiple hazardous material

cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-3).

Schools

The city is served by Downey Unified School District. The District serves 32,222 students in 21 school sites (DUSD 2020). Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Downey.

Emergency Response

The City of Downey's Hazardous Materials Emergency Response Team responds to uncontrolled releases of hazardous materials, including those associated with unpermitted activities such as illegal dumping and illegal drug laboratories. In addition, the City of Downey has an EOP that has among its objectives to provide direction and control of emergency operations and to coordinate operations with the emergency service organizations of other jurisdictions. The Downey Fire Department and Downey Police Department provide emergency services.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Downey is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Lynwood

Hazardous Materials Historic Use

Hazardous materials are commonly used by all segments of the city, including manufacturing and service industries, commercial enterprises, agriculture, military bases, hospitals, schools, and households. In recent years there has been a decrease in the reported number of hazardous material incidents in the city. Greater governmental controls and an enhanced awareness on the part of both the general public and the City of Lynwood's emergency services play an important role.

Hazardous Materials and Current Land Use

According to the *City of Lynwood General Plan's* Safety Element, the most common hazardous materials and hazardous waste issues within the city are related to transportation accidents, illegal dumping, UST leaks, leaking natural gas pipelines, commercial/industrial wastes, pesticides, and illegal drug laboratories (City of Lynwood 2003).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites and DTSC Cleanup Sites) within the study area (see Figure 3.8-3).

Schools

The city is served by the Lynwood Unified School District. The District serves more than 15,000 students through 12 elementary schools, three middle schools, three high schools, and preschool (LUSD 2020). Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Lynwood.

Emergency Response

The *Hazardous Materials Incident Emergency Response Plan* for the City of Lynwood is currently being revised and is on file with the City of Lynwood's Emergency Operations Office. LACoFD is the administering agency. The plan provides a classification system to be used in determining the level of response required to handle the incident. Classification criteria are based on the level of expertise needed, extent of municipal County and State government involvement, extent of injuries and/or deaths, and whether evacuation of civilians is necessary (City of Lynwood 2003). The Los Angeles County Sheriff's Department provides police services.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Lynwood is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Paramount

Hazardous Materials Historic Use

Approximately 52% of the City of Paramount is developed with residential uses. Industrial land uses account for 23% of the city's total land area, and commercial land uses account for 5%. The remaining 20% of the city's land area is devoted to streets, freeways, and other rights-of-way. Prior to incorporation, the City of Paramount was largely a rural dairy community. Eventually, the dairies were discontinued and these farming activities were replaced by factories or homes. As previously mentioned, hazardous materials use is common in industrial and agricultural activities.

Hazardous Materials and Current Land Use

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the western portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-3).

Schools

The city is served by the Paramount Unified School District. The school district serves more than 14,875 students through 10 elementary schools, four middle schools, and three high schools. Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

There are no airports in the City of Paramount.

Emergency Response

The City of Paramount has maintained a contract with LACoFD since incorporation. LACoFD currently operates one station in the city. The City of Paramount, through general plan policies, enforces LACoFD's ongoing prevention and inspection programs, and the continued maintenance of the high standards related to emergency response. The City of Paramount contracts for law enforcement services from the Los Angeles County Sheriff's Department.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Paramount is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of South Gate

Hazardous Materials Historic Use

As mentioned in Section 3.8.2, *Setting*, above, there is a connection between land use and potential for hazardous materials use, including higher usage in commercial, industrial, and agricultural settings. The City of South Gate is 7.5 square miles and hosts a diverse mix of residential, commercial, industrial, and public buildings and land uses. By 1880, agriculture had replaced cattle ranching as the city's primary industry. When the city was incorporated in 1923, it had a population of around 2,500. As California boomed in the 1920s through the 1950s, so did South Gate. Major manufacturers such as Ameron, Firestone Tires, General Motors, Purex, the Star Roofing Company (now U.S. Gypsum), and the Weiser Hardware Company have operated or currently operate in the city.

Hazardous Materials and Current Land Use

Approximately 41% of South Gate is developed with residential uses. Industrial land uses account for 16% and commercial land uses account for 6%. Remaining land use in South Gate is divided between parks, schools, civic/institutional, vacant, public works/water bodies/easements, and transportation uses. A prime area of concern for hazardous material releases is rail accidents. Two rail lines run through South Gate and a third runs immediately east of the city, carrying four to 41 trains each day. Trains carrying hazardous materials may use any of these rail lines, and an accident involving hazardous materials on any of these rail lines may create a health and safety risk in South Gate. Several sites in South Gate also have known or potential contamination from past activities involving hazardous materials (City of South Gate 2018).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-3).

Schools

The city is served by LAUSD, described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of South Gate.

Emergency Response

The Los Angeles County Office of Emergency Management is responsible for maintenance of the County EOC. The EOC serves as a first responder for disaster events in the County, including incorporated cities. The City of South Gate's EOC is within the South Gate Police Department. The City of South Gate contracts for fire services from the LACoFD.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of South Gate is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Unincorporated County

Hazardous Materials Historic Use

Unincorporated County areas within Frame 3 would have historic hazardous materials uses that are similar to those for other cities within Frame 3.

Hazardous Materials and Current Land Use

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-2).

Schools

The unincorporated County area within Frame 3 is served by Compton Unified School District. Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

The Compton/Woodley Airport is approximately 1.7 miles from the western boundary of the study area and 2.7 miles from the LA River.

Emergency Response

The Los Angeles County Sheriff's Department and the LACoFD provide emergency services within unincorporated County areas.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the unincorporated County area within Frame 3 is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Frame 4

The Frame 4 project study area setting contains a general description of hazards for the Cities of Bell, Bell Gardens, Commerce, Huntington Park, Maywood, and Vernon. As seen in Figure 3.8-4, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 134 Cleanup Sites, 45 Cleanup Program Sites, and 120 LUST Cleanup Sites in Frame 4.

City of Bell

Hazardous Materials Historic Use

As mentioned in Section 3.8.2, *Setting*, above, there is a connection between land use and potential for hazardous materials use. The City of Bell has a total land area of 2.6 square miles. Commercial development is concentrated along the city's major thoroughfares that include Florence Avenue, Gage Avenue, and Atlantic Avenue. The primary industrial area in the city is in the Cheli area east of Interstate 710. A large portion of this area is owned by the federal government. Land devoted to industrial uses account for approximately 390 acres—or 21.7 percent—of the city's total land area.

Hazardous Materials and Current Land Use

Hazardous material users and generators in the City of Bell include gasoline stations, auto repair shops, printers and photo labs, clinics, dry cleaners, schools, fire stations, and a variety of other commercial and industrial land uses. There are several sites listed in EPA's Envirofacts Database as being handlers and/or users of hazardous materials within the city. In addition, multiple sites are identified as undergoing cleanup and remediation in EPA's Database. As of 2018, two "Superfund" sites were listed as being within the city.

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-4).

Schools

The City of Bell is served by LAUSD, described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Bell.

Emergency Response

The 2015 City of Bell EOP is designed as a reference and guidance document and is the foundation for disaster response and recovery operations for the City of Bell. The EOP establishes the emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of the duties of the City of Bell as a member of the Los Angeles Operational Area (OA) with other OA member organizations, in both response and recovery procedures. The plan builds upon previous efforts to enhance the City of Bell's emergency and disaster preparedness, response, and recovery capabilities (City of Bell 2015). Emergency services are provided by the Bell Police Department and the LACoFD.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Bell is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Bell Gardens

Hazardous Materials Historic Use

As mentioned above, there is a link between land use and higher hazardous materials use. The City of Bell Gardens is in one of the most densely developed areas in the western United States. The city is in an industrial belt that begins south of downtown Los Angeles and extends eastward through Vernon, Commerce, Montebello, Bell Gardens, Pico Rivera, and Santa Fe Springs. Agriculture was predominant in the area during the early 1900s. Agricultural communities were short-lived due to urbanization that followed in the 1920s and 1930s. Nearby Vernon fueled development of surrounding communities that provided housing and services to those working in the industrial belt. Defense plants were constructed in the city in the 1940s.

Hazardous Materials and Current Land Use

There are several industries that use and generate hazardous materials and waste within the City of Bell Gardens. In addition to hazardous materials users, transportation routes can present risks for hazardous materials spills. Railroads within the city are used for transport of hazardous materials and waste, and petroleum and chemical trains could be subject to accidental spills (City of Bell Gardens 1995).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the western portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-4).

Schools

The city is served by Montebello Unified School District. The district is composed of 18 elementary schools, six intermediate schools, three high schools, four adult schools, and one continuation high school. It serves a student population of more than 35,500 K–12 and 34,000 adult students (Montebello Unified School District 2020). The district encompasses all of the Cities of Montebello and Bell Gardens and portions of the Cities of Monterey Park, Commerce, Pico Rivera, East Los Angeles, and South San Gabriel. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Bell Gardens.

Emergency Response

The City of Bell Gardens has adopted the *Multi-Hazard Functional Plan for Emergency Operations* (City of Bell Gardens 1995). The plan addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. Emergency services are provided by the Bell Gardens Police Department and the LACoFD.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Bell Gardens is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Commerce

Hazardous Materials Historic Use

As mentioned, there is a link between land use and higher hazardous materials use, particularly within industrial settings. Industrial land use has been the preeminent land use in Commerce. The city, in conjunction with the nearby industrial districts in the neighboring Cities of Los Angeles and Vernon, represents one of the largest concentrations of industrial development in the country.

Hazardous Materials and Current Land Use

Approximately 8% of the city is developed with residential uses. Industrial land uses account for the majority of land use at 61%, and commercial land uses account for 10%. Industries that use, produce, and store a variety of hazardous materials are located in the City of Commerce. In addition, the freeways and railroads that traverse the city carry relatively high volumes of industrial traffic, posing a potential for hazardous materials spills. Also, inactive landfill sites are within the city, requiring special treatment and consideration in land use decisions.

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the western portion of the city (where the project study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-4).

Schools

The city is served by Montebello Unified School District. The school District is discussed above under *City of Bell Gardens*. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Commerce.

Emergency Response

The Emergency Preparedness Division coordinates the City of Commerce's emergency response. The city's EOC serves as the headquarters for first responders in an emergency, such as an earthquake or other major disaster. The EOC features a fully integrated audio/visual and communications system, allowing staff to track progress on incidents and EOC functions. Commerce's first responders have a fully functional facility from which to conduct emergency response operations (City of Commerce 2020). Emergency services are provided by the Los Angeles County Sheriff's Department and the LACoFD.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Commerce is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Huntington Park

Hazardous Materials Historic Use

The City of Huntington Park has developed as a suburban community, providing a centralized location for workers employed in the City of Los Angeles and the surrounding industrial Cities of Commerce, Vernon, and South Gate. Therefore, hazardous materials use is less prevalent in Huntington Park than in some of the surrounding cities with higher concentrations of industrial use. The City of Huntington Park is bounded on the north by the Cities of Vernon and Maywood; on the south by the City of South Gate and unincorporated County areas; on the east by the Cities of Cudahy, Bell, and Maywood; and on the west by the City of Los Angeles and unincorporated County areas.

Hazardous Materials and Current Land Use

The City of Huntington Park contains a variety of uses; however, the most prominent land use in the city is residential (78%). The heaviest concentration of commercial uses (8%) is in the city's downtown area along the Pacific Boulevard corridor, which functions as the city's central business district. The city's main industrial district (industrial uses account for 3%) is generally bounded by Santa Fe Avenue, Pacific Boulevard, the City of Vernon to the east, and Randolph Street to the south.

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the northeastern portion of the city (where the study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-4)

Schools

The City of Huntington Park is served by LAUSD, which operates a total of 24 schools in the city. LAUSD is described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Huntington Park.

Emergency Response

The City of Huntington Park contracts its fire services through LACoFD. LACoFD operates two fire stations in the city. As it relates to emergency preparedness, the City of Huntington Park originally adopted a *Civil Defense and Disaster Plan* in 1972 and updated this plan in February 1983. The Huntington Park Police Department has adopted procedures for dealing with hazardous spills on the highway. These procedures are based on the California Highway Patrol's and the Federal Department of Transportation's emergency response materials (City of Huntington Park 1991).

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Huntington Park is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Maywood

Hazardous Materials Historic Use

Commercial development in the city is generally spread out across two major arterials: Slauson Avenue and Atlantic Boulevard. Industrial development is generally located along the periphery of the city, adjacent to residential neighborhoods. New industrial activity is currently occurring along Maywood Avenue in the western section of the city. Land in the eastern section along Walker Avenue and 59th Place is currently designated industrial. Industrial and commercial uses are more likely to handle significant amounts of hazardous materials.

Hazardous Materials and Current Land Use

Approximately 57% of the City of Maywood is developed with residential uses. Industrial land uses account for 6% and commercial land uses account for 9%. A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the eastern portion of the city (where the study area is located) identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-4).

Schools

The City of Maywood is served by LAUSD, described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Maywood.

Emergency Response

Fire services in the City of Maywood are provided by LACoFD. As of July 2010, the City of Maywood contracted with the Los Angeles County Sheriff's Department for police services.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Maywood is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

City of Vernon

Hazardous Materials Historic Use

The City of Vernon was founded in 1905 as an industrial city and remains that way today. At the turn of the twentieth century, Vernon was largely farmland. However, its location south of downtown Los Angeles and the presence of major rail lines led influential businessmen and property owners to encourage railroad companies to run spur lines into the adjacent farmlands. These rail extensions enabled the creation of an "exclusively industrial" city. By the 1920s, Vernon was attracting large stockyards and meatpacking facilities, including slaughtering operations. While the stockyards are no longer present, meat processing remains a signature business in the city. During the 1920s and 1930s, Vernon became the location of choice for many heavy industrial plants, including steel,

aluminum, paper, and glass producers. Automobile assembly, canning, and other manufacturing operations also were established in the city in this period (City of Vernon 2015).

Hazardous Materials and Current Land Use

Within Vernon, human-caused hazards include the risk of explosion or leaks from stored chemical and petroleum products, or from derailment or collision of railcars or trucks carrying hazardous chemical or materials. Chemical spills are also a concern because of the industrial nature of the uses in Vernon. Fire hazards are prevalent due to the nature of the industrial uses and intensely developed character of properties in the city (City of Vernon 2015).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area (see Figure 3.8-4).

Schools

The City of Vernon is served by LAUSD, described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools within the study area.

Airports

There are no airports in the City of Vernon.

Emergency Response

The City of Vernon's *Standardized Emergency Management System Multi-Hazard Functional Plan* discusses and contains programs and plans for emergency responses to safety concerns. This document includes pre-emergency preparedness plans and programs for mutual aid between organizations for virtually any emergency situation. Emergency services are provided by the Vernon Fire Department and the Vernon Police Department.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the City of Vernon is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Unincorporated County

Hazardous Materials Historic Use

Unincorporated County areas within Frame 4 would share similar historic hazardous materials use as other cities within Frame 4.

Hazardous Materials and Current Land Use

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified multiple hazardous material cleanup sites (including LUST Cleanup Sites and Cleanup Program Sites) within the study area (see Figure 3.8-2).

Schools

The unincorporated County areas within Frame 4 are served by LAUSD, as described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

There are no airports within or near the unincorporated County areas within Frame 4.

Emergency Response

The Los Angeles County Sheriff's Department and the LACoFD provide emergency services within unincorporated County areas.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the unincorporated County area within Frame 3 is not within a high fire hazard zone (CAL FIRE 2011a). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Frame 5

City of Los Angeles

The project study area setting for the City of Los Angeles is described above in the Frame 1 discussion. As seen in Figure 3.8-5, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 110 Cleanup Sites, 66 Cleanup Program Sites, 123 LUST Cleanup Sites, and 8 Military Cleanup Sites in Frame 5.

Frame 6

The Frame 6 project study area setting contains a general description of hazards for the City of Glendale. The City of Los Angeles has been previously described in the Frame 1 discussion. As seen in Figure 3.8-6, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 56 Cleanup Sites, 91 Cleanup Program Sites, 90 LUST Cleanup Sites, and 1 Military Cleanup Site in Frame 6.

City of Los Angeles

The project study area setting for the City of Los Angeles is described above in the Frame 1 discussion.

City of Glendale

Hazardous Materials Historic Use

LUSTs have been recognized since the early 1980s as the primary cause of groundwater contamination by gasoline compounds and solvents in the City of Glendale.

Hazardous Materials and Current Land Use

Approximately 31% of the City of Glendale is developed with residential uses. Industrial land uses account for 2% and commercial land uses account for 3%. Within the City of Glendale, there are numerous hazardous materials Small Quantity Generator[2] sites along with some Large Quantity Generators (DTSC 2020). In addition, there are sites within the city with historical releases to air, soils, and groundwater.

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites for records along the southwestern portion of the city identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Cleanup Program Sites, Military Cleanup Sites, and DTSC Cleanup Sites) within the study area (Figure 3.8-6).

Schools

The City of Glendale is served by the Glendale Unified School District. The school district comprises 32 schools serving more than 26,000 students in transitional kindergarten through 12th grade (GUSD 2020). Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

There are no airports in the City of Glendale.

Emergency Response

The City of Glendale operates its own Emergency Operations Center (EOC). The EOC is tasked with coordinating the city's disaster operations coordinating the emergency response of city departments, government agencies, and volunteer groups in response to emergencies, disasters, or other significant events. The goals of these agencies are to improve public and private sector readiness and to mitigate local impacts resulting from natural or technological emergencies.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Glendale, the northern half of the city is mostly within a high fire hazard zone, including overlapping with portions of the project study area (CAL FIRE 2011b). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Frame 7

The Frame 7 project study area setting contains a general description of hazards for the City of Burbank. The City of Los Angeles and the unincorporated County areas have been previously described. As seen in Figure 3.8-7, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 6 Cleanup Sites, 25 Cleanup Program Sites, and 38 LUST Cleanup Sites in Frame 7.

[2] Generators of 1,000 kilograms or more of hazardous waste per month, excluding universal wastes, and/or more than 1 kilogram of acutely or extremely hazardous per month are referred to as Large Quantity Generators. Generators of less than 1,000 kilograms of hazardous waste per month, excluding universal wastes, and/or 1 kilogram or less of acutely or extremely hazardous waste per month are defined as Small Quantity Generators.

City of Los Angeles

The project study area setting for the City of Los Angeles is described above in the Frame 1 discussion.

City of Burbank

Hazardous Materials Historic Use

Burbank established a unique economic identity, first as home to the aviation industry and then to the entertainment industry. Aviation in the mid-1920s was still in its infancy when the Lockheed Aircraft Company purchased a piece of Burbank farmland and built a plant for the production of its planes. By the time the United States entered World War II, Lockheed had about 94,000 employees producing 19,000 planes. The wartime effort of the aviation industry had pushed Burbank's population to 53,899 in 1943. On June 28, 1978, the Burbank-Glendale-Pasadena Airport was purchased from Lockheed. Industrial land uses, such as aviation facilities, are considered uses with a higher frequency of hazardous materials use (City of Burbank 2020).

Hazardous Materials and Current Land Use

Approximately 36% of the City of Burbank is developed with residential uses. Industrial land uses account for 4% and commercial land uses account for 10%. Hazardous materials such as cleaning products, paints, solvents, and fuels are commonly used and found in small quantities throughout the city. Also, hazardous materials are transported through Burbank on roadways, by rail, by pipeline, and in the air. The Southern Pacific Railroad operates several miles of rail lines in the city that may be used to transport hazardous materials. Types of hazardous cargo regularly transported into, out of, and through the city consist of flammable liquids, corrosive materials, compressed and/or poisonous gases, explosives, flammable solids, and irritating materials. The City of Burbank operates one active landfill, Burbank Landfill, in the Verdugo Mountains. In addition, there are two former landfill sites in the city: the former Stough Park Landfill and the former Sunset Canyon Dump.

Several large pipelines are in the City of Burbank. These underground pipelines, typically 42 inches below the ground surface, include gas fuel supply lines and crude-oil shipping lines. The Pacific Pipeline System, Inc., is a crude-oil pipeline that runs parallel to the Southern Pacific Railroad's right-of-way. The Four Corners Pipeline Company has a petroleum pipeline that runs from north to south following Glenoaks Boulevard to Tulare Avenue, traveling south on Sixth Street to Glendale. A Southern California Gas Company natural gas pipeline runs south on Glenoaks Boulevard to Glendale. Other smaller pipelines that also contain natural gas follow Hollywood Way, Verdugo Avenue, and Burbank Boulevard (City of Burbank 2013).

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified multiple hazardous material cleanup sites (including LUST Cleanup Sites, Military Cleanup Sites, Cleanup Program Sites, and DTSC Cleanup Sites) within the study area in the city (Figure 3.8-7).

Schools

The city is served by Burbank Unified School District. Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

The Hollywood Burbank Airport is approximately 2.3 miles from the northern boundary of the study area and 3.3 miles from the LA River. The project study area is outside of the Airport Influence Area and all airport safety zones (Los Angeles County Airport Land Use Commission 2003).

Emergency Response

The Burbank Police Department responds to emergency situations and patrols neighborhoods and commercial areas of the city. The Burbank Fire Department consists of six divisions: Fire Prevention, Suppression, Emergency Medical Services, Disaster Preparedness, Equipment Maintenance, and Training and Safety. A Fire Training Center in the city is used both for training purposes and as an EOC in times of emergency. The Burbank Fire Department is a member of the Verdugo Fire Communications Center, a regional communications center that fields calls for service for the Cities of Burbank, Glendale, Pasadena, Alhambra, Arcadia, Monrovia, Montebello, Monterey Park, San Gabriel, San Marino, Sierra Madre, and South Pasadena. The communications center was established by the Cities of Burbank, Glendale, and Pasadena under a "no borders" agreement in which the closest fire station to a reported incident responds to the call, regardless of jurisdiction (City of Burbank 2013).

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Burbank, the northeastern portion of the city is within a high fire hazard zone. Additionally, a small portion on the southern tip of the city is within a high fire hazard zone. A portion of the project study area overlaps with this area (CAL FIRE 2011c). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Unincorporated County

Hazardous Materials Historic Use

The unincorporated County area within Frame 7 would share similar historic hazardous materials use as other cities within Frame 7.

Hazardous Materials and Current Land Use

A review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified multiple hazardous material cleanup sites (LUST Cleanup Sites) within the study area (see Figure 3.8-2).

Schools

The unincorporated County area within Frame 7 is served by LAUSD, as described above for the City of Los Angeles in Frame 1. Section 3.14, *Public Services*, describes schools closest to the LA River footprint.

Airports

The closest airport is the Hollywood Burbank Airport, located 3.5 miles north of the unincorporated County area within Frame 7.

Emergency Response

The Los Angeles County Sheriff's Department and the LACoFD provide emergency services within unincorporated County areas.

Wildfire Hazards

According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA Los Angeles County, the unincorporated County area within Frame 7 is located within a high fire hazard zone (CAL FIRE 2011c). Section 3.19, *Wildfire*, contains additional analysis related to potential wildfire effects in the project study area.

Frame 8

City of Los Angeles

The project area setting for the City of Los Angeles is described above in the Frame 1 discussion.

As seen in Figure 3.8-8, a review of SWRCB's GeoTracker and DTSC's EnviroStar websites identified a total of 4 Cleanup Sites, 8 Cleanup Program Sites, and 72 LUST Cleanup Sites in Frame 8.

Frame 9

City of Los Angeles

The project area setting for the City of Los Angeles is described above in the Frame 1 discussion.

As seen in Figure 3.8-9, a review of SWRCB's GeoTracker and DTSC's EnviroStor websites identified a total of 22 Cleanup Sites, 29 Cleanup Program Sites, and 93 LUST Cleanup Sites in Frame 9.

3.8.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of hazards and hazardous materials in this PEIR.

Federal

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The federal Toxic Substances Control Act (1976) and the RCRA established a EPA-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/ Superfund Amendments and Reauthorization Act

CERCLA, commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law (42 United States Code 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites,

provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enabled the revision of the National Contingency Plan. This plan (Title 40, Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation Hazardous Materials regulations cover all aspects of hazardous materials packaging, handling, and transport. Some of the topics covered include Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance).

State

California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) was created in 1991. It unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board, SWRCB, RWQCB, CalRecycle, DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed under the Cal/EPA "umbrella" for the protection of human health and the environment to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment and ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances Control

DTSC, a department of Cal/EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transport, disposal, treatment, reduction, cleanup, and emergency planning.

United States Code 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by SWRCB as having UST leaks or a discharge of hazardous wastes or

materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

Hazardous Waste Control Act (Section 25100 et seq.)

DTSC is responsible for enforcing the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a State hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than federal requirements.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9) provides authority to the CUPA. The program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of hazardous materials programs. Including the HazMat Business Plan Program, California Accidental Release Prevention Program, UST Program, Aboveground Storage Tank Program, Hazardous Waste Generator Program, and Incident Response.

California Code of Regulations, Title 8—Industrial Relations

Occupational safety standards exist in federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would apply to construction activities.

California Labor Code (Division 5, Parts 1, 6, 7, and 7.5)

The California Labor Code is a collection of regulations that include regulation of the workplace to ensure appropriate training on the use and handling of hazardous materials and operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who are in charge of handling hazardous materials are appropriately trained and informed with respect to the materials they handle. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

State Water Resources Control Board MS4 Permits

MS4 Permits require that cities and counties develop and implement programs and measures, including best management practices (BMPs), control techniques, system design and engineering methods, and other measures as appropriate, to reduce the discharge of pollutants in stormwater to the maximum extent possible. As part of permit compliance, these permit holders have created stormwater management plans for their respective locations. These plans outline the requirements for municipal operations, industrial and commercial businesses, construction sites, and planning

and land development. These requirements may include multiple measures to control pollutants in stormwater discharge. During implementation of specific projects under the program, project applicants are required to follow the guidance contained in the stormwater management plans as defined by the permit holder in that location.

Construction General Permit

SWRCB issued a statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit), effective July 1, 2010. Every construction project that disturbs 1 or more acres of land surface or that is part of a common plan of development or sale that disturbs more than 1 acre of land surface would require coverage under this Construction General Permit. To obtain coverage under this Construction General Permit, the landowner or other applicable entity must file Permit Registration Documents prior to the commencement of construction activity, which include a Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer, and mail the appropriate permit fee to SWRCB.

Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least 1 acre of total land area. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges; and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater discharges. BMPs are intended to reduce impacts to the maximum extent practicable (MEP), which is a standard created by Congress to allow regulators the flexibility necessary to tailor programs to the site-specific nature of municipal stormwater discharges. The SWPPP is required to be implemented and monitored regularly by a Qualified SWPPP Practitioner. Reducing impacts to the MEP generally relies on BMPs that emphasize pollution prevention and source control, with additional structural controls as needed. The Construction General Permit requires that specific minimum BMPs are incorporated into the SWPPP, depending on the project's sediment risk to receiving waters based on the project's erosion potential and receiving water sensitivity to sediment.

Regional

Los Angeles County General Plan

The following *Los Angeles County General Plan* goals and policies are relevant to the proposed Project (Los Angeles County 2015):

Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.

- **Policy S 3.1:** Discourage high density and intensity development in [Very High Fire Hazard Severity Zones].
- **Policy S 3.4:** Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.
- **Policy S 3.9:** Adopt by reference the County of Los Angeles Fire Department Strategic Fire Plan, as amended.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.
- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.
- **Policy S 4.5:** Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.

Operational Area Emergency Response Plan

Under the County of Los Angeles Office of Emergency Management, the *Operational Area Emergency Response Plan* addresses how the County of Los Angeles carries out centralized emergency management, should an emergency go beyond day-to-day response capabilities. It ensures the successful coordination of the response and the initiation of recovery operations among County departments in response to incidents in the unincorporated County areas and/or the incorporated areas of the County Operational Area. The *Operational Area Emergency Response Plan* also addresses interagency coordination of information, operations, and aid among the local governments within the OA.

Los Angeles County Integrated Waste Management Plan (California Code of Regulations Section 18755.5)

The California Integrated Waste Management Act of 1989, also known as Assembly Bill 939, mandates jurisdictions to meet a diversion goal of 50 percent by the year 2000 and requires each county to prepare and administer a *Countywide Integrated Waste Management Plan*. The plan is composed of each county's and its cities' solid waste reduction planning documents, an *Integrated Waste Management Summary Plan*, and a Countywide Siting Element. Public Works is responsible for preparing the *Integrated Waste Management Summary Plan* and the Countywide Siting Element. Public Works submits an Electronic Annual Report to CalRecycle to provide an annual update to the *Integrated Waste Management Summary Plan* and Countywide Siting Element.

All-Hazard Mitigation Plan

The *2019 County of Los Angeles All-Hazard Mitigation Plan* (County of Los Angeles 2019) discusses the hazard mitigation planning process, community profile, risk assessment process, mitigation strategies, and plan review, evaluation, and implementation. It addresses various hazards including earthquake hazards, flood hazards, wildfire, tsunami, dam failure, landslide, and climate change.

Local

City of Long Beach

City of Long Beach General Plan

The following *Long Beach General Plan Program, Public Safety Element* (City of Long Beach 1975) goals and policies are relevant to the proposed Project:

- **Management Goals**
  - 5. Establish safety guidelines to evaluate all potential safety hazards and mitigate existing problems.

- **Development Goals**
  - 3. Provide an urban environment, which is as safe from all types of hazards as possible.
  - 4. Continue to identify existing or proposed uses or activities that may pose safety hazards.
  - 8. Encourage development that would be most in harmony with nature and thus less vulnerable to natural disasters.
  - 9. Encourage development that would augment efforts of other safety-related Departments of the City (i.e. design for adequate access for firefighting equipment and police surveillance).
  - 11. Critically evaluate proposed public or private actions, which may pose safety hazards to residents or visitors.
- **Protection Goals**
  - 3. Reduce public exposure to safety hazards.
  - 4. Effectively utilize natural or man-made landscape features to increase public protection from potential hazards.
  - 10. Provide the maximum feasible level of public safety protection services.
- **Remedial Action Goals**
  - 1. Isolate areas of hazardous concern from other portions of the City.
  - 2. Eliminate uses which present safety hazards.

City of Los Angeles

City of Los Angeles General Plan

The following *City of Los Angeles General Plan* (City of Los Angeles 1996) goals and policies are relevant to the proposed Project:

Goal 1: A city where potential injury, loss of life, property damage, and disruption of the social and economic life of the city due to fire, water-related hazard, seismic event, geologic conditions, or release of hazardous materials disasters is minimized.

- **Policy 1.1.4:** Health/environmental protection. Protect the public and workers from the release of hazardous materials and protect city water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and the public from potential health and safety hazards associated with program implementation.

Goal 2: A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage, and disruption of the social and economic life of the city and its immediate environs.

- **Policy 2.1.2:** Health and environmental protection. Develop and implement procedures to protect the environment and public, including animal control and care, to the greatest extent feasible within the resources available, from potential health and safety hazards associated with hazard mitigation and disaster recovery efforts.
- **Policy 2.1.5** Response. Develop, implement and continue to improve the City's ability to respond to emergency events.
- **Policy 2.1.6** Standards/fire. Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression.

City of Los Angeles Fire Department Haz Mat Program

LAFD provides emergency response and guidance to hazardous materials incidents within the city. The LAFD Haz Mat Program uses a unified approach with allied agencies (i.e., LACoFD) and many stakeholders to provide preparedness, prevention, response, mitigation, and resiliency to hazardous materials emergencies. LAFD is an all-hazards response organization, and the Haz Mat Program is designed to address the natural, technological, or purposeful response challenges, including chemical, biological, radiological, nuclear, and explosive threats to the community and national security.

In compliance with California State guidelines, each governmental agency designated by the State of California as a CUPA is authorized to apply statewide standards to each facility within its jurisdiction that treats hazardous waste on site, generates hazardous waste or USTs, or stores hazardous materials. In May of 2008, DTSC delegated corrective action oversight authority under Chapter 6.5 of Division 20 of the California Health and Safety Code to implement corrective action under consent agreement at CUPA facilities within its jurisdiction. CUPAs are mandated by the State to establish a single billing statement process for the collection of the fees and surcharges associated with the practices of each of the regulated businesses. LAFD is concerned with public safety and the environment as it relates to the management of hazardous materials and hazardous waste.

In 1991, the responsibility for the Los Angeles County Hazardous Materials Control Program was transferred from the Los Angeles County Health Department to Deputy Health Officers at LACoFD. The LACoFD Deputy Health Officers assist LAFD in matters regarding public health and hazardous materials and waste release per a 1997 Memorandum of Understanding between LAFD and LACoFD. Various CUPA responsibilities are outlined in this Memorandum of Understanding; LACoFD is identified as a CUPA Partnering Agency in the areas of site mitigation, criminal investigations, and emergency response. In addition, the Los Angeles County Public Health Department continues to provide the City of Los Angeles with expertise in other areas of public health such as communicable diseases, pathogens, vector and rodent control, and severe biological and toxicological threats (e.g., anthrax). The Los Angeles County Public Health Department has been "Health Officer" for the city since 1964. In addition, the LACoFD Health and Hazardous Materials Division provides Tier 2 hazardous waste assessment and mitigation services.

City of Los Angeles 2018 Local Hazard Mitigation Plan

The *City of Los Angeles 2018 Local Hazard Mitigation Plan* (City of Los Angeles Emergency Management Department 2018) is the second comprehensive update to the city's hazard mitigation plan. The plan addresses natural hazards including earthquake, adverse weather, landslide/debris flow, wildland/urban interface fire, drought, flood, dam failure, sea level rise, and tsunami. The plan includes the following relevant plan objectives:

- Use hazard data while reviewing proposed development opportunities.
- Encourage the incorporation of mitigation measures into repairs, major alterations, new development, and redevelopment practices, especially in areas subject to substantial hazard risk.

City of Carson

The following *Carson General Plan* (City of Carson 2004) goals and policies are relevant to the proposed Project:

Goal: SAF-3: Minimize the effects from natural and urban disasters to reduce, to the extent possible, the social and economic impacts that these may have on the community.

Policies:

- **SAF-3.1** Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.
- **SAF-3.2** Maintain and update, as necessary, the SEMS Multi-Hazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

Goal: SAF-4: Minimize the threat to the public health and safety and to the environment posed by a release of hazardous materials.

Policies:

- **SAF-4.1** Strictly enforce federal, state and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.
- **SAF-4.4** Explore the possibility of identifying specific routes for the transport of hazardous materials, to include both railroad and street systems.
- **SAF-4.5** As truck routes within the City are altered, inform [the California Department of Transportation] and transporters of hazardous materials of the changes.
- **SAF-4.8** Maintain cooperative relationships with the chemical handlers, response agencies and community representatives through such organizations as South Bay Community Awareness and Emergency Response (CAER), to ensure an informed and coordinated response to chemical emergencies.

Goal: SAF-5: Minimize the public hazard from fire emergencies.

Policies:

- **SAF-5.1** Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service.
- **SAF-5.2** Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes.
- **SAF-5.5** Continue to enforce current regulations which relate to safety from fire, particularly in critical and high occupancy facilities.

City of Compton

The following *Compton General Plan 2030* (City of Compton 2011) goals and policies are relevant to the proposed Project:

Public Safety Goal 3. Protect life and property in Compton from urban fires with efficient fire protection services.

- **Public Safety Policy 3.5.** The City of Compton will assess the impacts of incremental increases in development density and traffic congestion on fire hazards and emergency response time, and ensure, through the design review process, that new development will not result in the reduction of emergency services.

Public Safety Goal 5. Protect residents, visitors, and workers in an emergency and provide continuity of vital services and functions.

- **Public Safety Policy 5.1.** The City of Compton will maintain and regularly update the City's Emergency Operations Plan and procedures for dealing with fire, earthquakes, flooding, hazardous materials, and terrorism.
- **Public Safety Policy 5.5.** The City of Compton will assess the impacts of incremental increases in development density and traffic congestion on emergency response time, and ensure,

through the design review process, that new development will not result in reduced emergency services below acceptable levels.

Public Safety Goal 6. Minimize risks to health and safety associated with handling, transporting, treating, generating, and storing hazardous materials.

- **Public Safety Policy 6.1.** The City of Compton will require businesses to disclose hazardous material use and generation to the Compton Fire Department.
- **Public Safety Policy 6.2.** The City of Compton will encourage and support the proper disposal of hazardous materials.

City of Cudahy

The following *Cudahy 2040 General Plan* (City of Cudahy 2018) goals and policies are applicable to the proposed Project:

GOAL OSCE-1: A sustainable urban environment protects valuable natural resources (water, air, and soil) and limits waste production.

- **Policy OSCE-1.17:** Ensure soil quality of potential urban agriculture sites and park sites are clean, safe, and conducive for agricultural and recreational uses.

GOAL SE-2: Enhanced resources for public safety.

- **Policy SE 2.1** Provide the highest possible quality of fire, police, and health protection for all Cudahy residents.
- **Policy SE 2.6** Work with the Sheriff's Department and the LA County Fire Department to determine and meet community needs for services.

GOAL SE-5: An environment that is reasonably safe from hazards.

- **Policy SE 5.1:** Implement mitigation measures included in Cudahy's 2015 Hazard Mitigation Plan and subsequent updates.
- **Policy SE 5.3:** Uphold environmental cleanup standards in place at the state and federal level for hazardous sites in Cudahy.
- **Policy SE 5.4:** Ensure land use decisions are in line with community health standards.

City of Cudahy 2015 Hazards Mitigation Plan

The City of Cudahy's *Local Natural Hazards Mitigation Plan* (City of Cudahy 2015) works in conjunction with other city plans, including the Safety Element of the *Cudahy 2040 General Plan* and EOP, and is tied to these other documents by reference. The plan discusses the hazard mitigation planning process, community profile, hazard identification, vulnerability, risk associated with natural hazards, multi-hazard and hazard-specific goals and action items, and plan maintenance. It addresses three hazards: earthquakes, floods, and severe weather events. The plan includes the following relevant goals:

Natural Systems

- Balance the need to protect and manage the natural resources and areas in the City (such as the channel of the Los Angeles River) with the need for hazard mitigation to protect lives and property in the developed areas, to reduce any conflict that may arise between these two objectives.
- Whenever possible, preserve, rehabilitate, and enhance the natural systems in ways that also provide natural hazard mitigation functions.

City of Downey

The following *Downey Vision 2025 General Plan* (City of Downey 2005) goals and policies are applicable to the proposed Project:

Goal 5.2. Protect the health, safety, and welfare of residents, workers, and visitors from the improper use, storage, handling, and disposal of hazardous materials.

- **Policy 5.2.1.** Monitor the generation, storage, and disposal of hazardous materials.
- **Policy 5.2.2.** Prevent contamination from hazardous materials.

Goal 5.3. Maintain and improve fire protection services.

- **Policy 5.3.1.** Provide adequate response to fire emergencies.

City of Lynwood

The following *City of Lynwood General Plan* (City of Lynwood 2003) goals and policies are applicable to the proposed Project:

Goal EP-1 Provide planning, response, and recovery capabilities to deal with the range of natural and manmade disasters that could impact the community.

- **Policy EP-1.3 Emergency Response Teams:** Ensure that the City's emergency response teams are prepared to respond to the public's needs in any emergency situation.

Goal HM-1 Protect the public health, safety, and welfare through the planning and implementation measures for the siting, reporting, and transportation of hazardous materials in or through the City of Lynwood.

- **Policy HM-1.5 Contamination Prevention:** Protect soils and surface and groundwater from contamination.
- **Policy HM-1.6 Emergency Evacuation Routes:** Require that haulers of hazardous substances use the City's evacuation routes.

City of Paramount

The following *Paramount General Plan* (City of Paramount 2007) goals and policies are applicable to the proposed Project:

- **Health and Safety Element Policy 17.** The City of Paramount will continue to provide efficient fire protection services.
- **Health and Safety Element Policy 23.** The City of Paramount will monitor, review and improve, as needed, the City's emergency response capabilities.

City of South Gate

The following of *South Gate General Plan 2035* (City of South Gate 2018) objectives and policies are applicable to the proposed Project:

Objective HC 8.2: Establish and maintain an effective emergency response program to respond to disasters and maintain continuity of life-support functions during an emergency.

Policies:

- **P.1** The City will follow the policies in the most recently adopted City of South Gate Natural Hazard Mitigation Plan. This plan will be periodically updated by the City.
- **P.2** Maintain and improve emergency services outlined in the Natural Hazards Mitigation Plan.

- **P.3** The City will continue its participation in the Standardized EMS (SEMS) program and Los Angeles County Emergency Survival Program.

Objective HC 9.1: Minimize South Gate residents' and employees' exposure to hazardous materials and waste.

Policies:

- **P.1** The City will regularly update Hazardous Waste Management procedures and actively implement appropriate Hazardous Waste Management policies recommended by the Los Angeles County Emergency Survival Program.
- **P.2** The City will enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.
- **P.3** The City should monitor the use and release of hazardous materials in the City.
- **P.4** The City should, to the extent possible, ensure on a case by case basis that new development near known locations of hazardous waste or materials is suitable for human habitation and does not pose higher than average health risks from exposure to hazardous material.

City of Bell

The following *City of Bell 2030 General Plan* (City of Bell 2018) issue and policy are applicable to the proposed Project:

Issue: To ensure that sufficient fire department resources are provided to address any potential emergency.

- **Health and Safety Element Policy 11.** The City of Bell shall establish and enforce standards that are designed to reduce the level of risk. The City shall work with the Los Angeles County Fire Department and other public agencies to discuss both risk and emergency preparation. Finally, the City shall work with the Fire Department and the larger community to review, and if necessary, develop new standards.

City of Bell Emergency Operations Plan

The City of Bell EOP includes a concept of operations section, discussion of hazards and threats to the city, and recovery and mitigation operations. The EOP addresses hazards including seismic hazards, hazardous materials, flooding, dam inundation, storms, terrorism, severe weather, transportation incidents, urban fires, infectious diseases, and high-pressure gas pipelines. The EOP does not include relevant policies or goals.

City of Bell Gardens

The following *City of Bell Gardens General Plan 2010* (City of Bell Gardens 1995) policies are applicable to the proposed Project:

- **Policy 1:** The City of Bell Gardens shall provide for the safety of the community through physical planning and maintaining an adequate level of police, fire, and emergency services and facilities.
- **Policy 3:** The City of Bell Gardens, through the County Fire Department, shall protect the community from hazardous materials and waste spills by identifying hazardous materials stored, utilized, or transported in the City and the City shall pursue local and state legislation for greater control of hazardous materials.

Commerce

The following *City of Commerce 2020 General Plan* (City of Commerce 2008) policies are applicable to the proposed Project:

- **Safety Policy 1.1.** The city of Commerce will strive to respond to all in-city emergency incidents within a five-minute or less response time.
- **Safety Policy 4.1.** The city of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards.
- **Safety Policy 4.4.** The city of Commerce will work with Federal, State, and County agencies, as well as the Industrial Council, to protect all city residents and workers from hazardous materials and the risks associated with the transportation of these materials.
- **Safety Policy 4.8.** The city of Commerce will work with the Los Angeles County Sheriff's Department to enforce the use of the hazardous materials transport routes identified in the Public Safety Element.

City of Huntington Park

The following *City of Huntington Park General Plan* (City of Huntington Park 1991) goals and policies are applicable to the proposed Project:

Safety Element

Goal 3.0: Protect life and property in Huntington Park from urban fires.

- **Policy 3.2:** Maintain mutual aid agreements with surrounding jurisdictions for fire protection.

Goal 4.0: Minimize risks to life and property associated with handling, transporting, treating, generating, and storage of hazardous materials.

- **Policy 4.1:** Locate new and relocate existing land uses involved in production, storage, transportation, handling, and/or disposal of hazardous materials a safe distance from other land uses that may be adversely affected by such activities.
- **Policy 4.5:** Cooperate with the County in local implementation of applicable portions of the Los Angeles Hazardous Waste Management Plan.

Public Facilities Element

Goal 1.0: Maintain desirable levels or police, fire, and emergency medical services in the City.

- **Policy 1.4:** Assess the impacts of incremental increases in development density and related traffic congestion on fire hazards and emergency response time, and ensure, through the design review process, that new development will not result in reduced emergency services below acceptable levels.

The following *City of Huntington Park Draft 2030 General Plan* (City of Huntington Park 2017) policies are applicable to the proposed Project:

- **Health & Safety Element Policy 3.** The City of Huntington Park shall maintain and periodically review emergency procedures for earthquakes in the City's Disaster Response Plan.
- **Health & Safety Element Policy 13.** The City of Huntington Park shall locate new and existing land uses involved in production, storage, transportation, handling, and/or disposal of hazardous materials a safe distance from other land uses that may be sensitive to such activities.

- **Health & Safety Element Policy 15.** The City of Huntington Park shall cooperate with the County in local implementation of applicable portions of the Los Angeles Hazardous Waste Management Plan.

City of Maywood

No *City of Maywood General Plan* policies are applicable to the proposed Project.

City of Vernon

The following *City of Vernon General Plan* (City of Vernon 2015) policies are applicable to the proposed Project:

Goal S-1 Minimize the risk to public health, safety, and welfare associated with the presence of natural and human-caused hazards.

- **Policy S-1.1:** Periodically update and maintain the Multi-hazard Functional Plan in an effort to identify potential contingencies and emergency conditions and define the necessary response by public safety and other personnel.

Goal S-2 Provide a high degree of protection for all residents and workers from hazardous materials and the hazards associated with transport of such materials.

Goal S-3 Maintain high standards for the provision of City emergency services.

- **Policy S-3.5:** Periodically review the City's emergency service equipment to determine if it is adequate to meet the needs of changing land uses and development types.
- **Policy S-3.8:** Continue to support the Vernon Fire Department in its effort to maintain its high rating.

Goal S-4 Provide a high degree of protection for all workers and residents in the event of any disaster.

- **Policy S-4.2:** Review the design of new development projects to consider public safety and issues such as emergency access, defensible space, and overall safety.

Emergency Management Plan

The *City of Vernon Emergency Management Plan* includes a discussion of a hazards, risks, and vulnerability assessment conducted by the City of Vernon in 2017. the hazards, risks, and vulnerability assessment lists many hazards, including dangerous goods spills, road transport accidents, explosions/emissions, and rail transport accidents. The three hazards determined to be of most concern to the City of Vernon are fire, flooding, and hazardous materials. The plan does not include relevant policies or goals.

City of Glendale

The following *City of Glendale General Plan* (City of Glendale 2003) goals and policies are applicable to the proposed Project:

Goal 4: Reduce the loss of life, injury, private property damage, infrastructure damage, economic losses and social dislocation and other impacts resulting from fire hazards.

- **Policy 4-1:** The City shall ensure to the extent possible that fire services, such as fire equipment, infrastructure, and response times, are adequate for all sections of the City.

Goal 5: Reduce threats to the public health and safety, and to the environment, from hazardous materials.

- **Policy 5-1:** The City shall strive to reduce the potential for residents, workers, and visitors to Glendale to being exposed to hazardous materials and wastes.

City of Burbank

The following *Burbank2035 General Plan* (City of Burbank 2013) goals and policies are applicable to the proposed Project:

Goal 4 Fire Protection: Burbank provides high-quality fire protection services to residents and visitors. Threats to public safety are reduced and property is protected from wildland and urban fire hazards.

- **Policy 4.1** Maintain a maximum response time of 5 minutes for fire suppression services. Require new development to ensure that fire response times and service standards are maintained.
- **Policy 4.2** Provide adequate staffing, equipment, technology, and funding for the Burbank Fire Department to meet existing and projected service demands and response times.

Goal 8 Hazardous Materials: Hazardous materials threats to public health and safety are reduced.

- **Policy 8.1** Review proposed projects involving the use or storage of hazardous materials.

3.8.3 Impact Analysis

3.8.3.1 Methods

There are several federal, State, and local laws regulating the management of hazardous materials. Implementation of these laws and the management of hazardous materials are regulated independently by different agencies at all levels of government. Of special concern are potentially contaminated sites within and immediately adjacent to the project footprint. Because the study area covers a 51-mile-long and 2-mile-wide corridor, a variety of land uses—including industrial, commercial, residential, and mixed-use areas—are present. Although some land uses, such as commercial and industrial, have more propensity to encounter hazardous materials, all land uses have some potential for hazardous materials. ICF conducted a desktop review of hazards and hazardous materials conditions within the project study area to support the discussion in this section.

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of part (KOP) categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.8.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.8(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

3.8(b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

3.8(c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

3.8(d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

3.8(e) Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area.

3.8(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

3.8(g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

3.8.3.3 Impacts and Mitigation Measures

Impact 3.8(a): Would the proposed Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

As Typical Projects contain the same features regardless of the frame in which they are built, the following discussion applies to Common Elements Typical Projects and Multi-Use Trails and Access Gateways Typical Projects in all frames. As such, construction activities arising from a Typical Project under all frames would involve routine transport, use, and disposal of hazardous materials such as solvents, paints, oils, and grease, materials that are typically used in construction projects. Such transport, use, and disposal would be compliant with applicable regulations such as those described under Section 3.8.2.2, *Regulatory*, which include regulations from RCRA, OSHA, the U.S.

Department of Transportation, and others. The regulations mentioned cover hazardous materials–related topics such as proper personal protective equipment, transport, handling, and disposal.

Although solvents, paints, oils, grease, fuel, and other materials would be transported, used, and disposed of during the construction of Typical Projects, these materials are typically used in construction projects and would not represent the transport, use, and disposal of acutely hazardous materials. Moreover, these hazardous materials are generally used in small amounts and any potential construction-related hazardous releases or emissions would be from such commonly used materials as those previously mentioned and would not include substances listed in 40 CFR 355 Appendix A, *Extremely Hazardous Substances and Their Threshold Planning Quantities*. Releases involving common construction hazardous materials would be small and localized, and spills that may occur would be contained and cleaned according to the Safety Data Sheet[3] (SDS) in the appropriate manner (OSHA 2012). A hazardous material SDS would include accidental release cleanup measures such as appropriate techniques for neutralization, decontamination, cleaning or vacuuming, and adsorbent materials.

The Common Elements Typical Project would disturb up to 3 acres, and the larger Multi-use Trails and Access Gateways Typical Project would be up to 5 miles long. Projects requiring greater than 1 acre of soil disturbance would be required to obtain NPDES coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Order No. 2009-0009-DWQ. The Construction General Permit would require the development and implementation of a SWPPP, which includes BMPs to regulate and prevent contamination of stormwater runoff. Construction BMPs can include the following:

- Maintenance activities, maintenance schedules, and long-term inspection procedures
- Controls for reducing or eliminating the discharge of pollutants
- Procedures for the proper disposal of waste (EPA 2018)

Transport, use, and disposal of hazardous materials during construction of all Typical Projects would be conducted according to all applicable regulations and requirements of a Construction General Permit (as required); therefore, construction of Typical Projects is not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

[3] SDS include information such as the properties of a chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200.

Operations

As operations activities associated with the Typical Projects would not differ from frame to frame, the following operational discussion applies to all frames. Implementation of the Typical Projects would attract visitors to areas within the study area. (It is expected that some Common Elements Typical Projects could attract up to 500 daily visitors and the Multi-use Trails and Access Gateways Typical Project could attract up to 1,000 daily visitors.) Operations associated with these projects would be recreational uses (such as those associated with pedestrian, bike. and multi-use trails) and commercial uses (such as those associated with pavilions, cafes, restrooms, bike racks, and art and performance spaces). Transport, use, and disposal of hazardous materials used in operations would be those associated with recreational, commercial, and maintenance uses. Their use would be minimal and they would consist of commonly used hazardous materials, such as solvents, paints, and fuels for equipment. Spills involving these materials would be contained and cleaned as they occur. Therefore, the likelihood of any release involving these materials would be minimal, the amount would be small and localized, and spills that may occur would be contained and cleaned as they occur consistent with applicable regulations under Section 3.8.2.2, *Regulatory*. In some cases, maintenance could involve the use of pesticides and/or herbicides. However, these materials would be used in small amounts, intermittently, and with proper care as dictated by their accompanying SDS. Operation of Typical Projects is not expected to create a significant hazard for the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on KOP categories only.

KOP Categories 1 through 6

Under the *2020 LA River Master Plan*, the multi-benefit design components of the KOP categories can be implemented individually or in combination with other design components as subsequent projects under the *2020 LA River Master Plan*. The specific location (e.g., in-channel/off-channel, frame), configuration, and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing agency, community needs, policy decisions, and availability of funding. Subsequent projects would be evaluated in light of the scope and content of this PEIR to determine whether additional CEQA analysis would be required.

Construction

The specific location and design for KOP Categories 1 through 6 have not yet been determined and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP Categories 1 through 6 would vary depending on the specific design component and its intended function. KOP categories would likely be larger than Typical Projects. The construction area (including staging areas) could be substantially larger than that for Typical Projects, have a longer construction duration with more intensive construction activities, involve additional temporary lane closures, and result in an increase in construction-related traffic within the 2-mile-wide study area.

Although the design for KOP categories is unknown, all projects constructed as part of the *2020 LA River Master Plan* would adhere to applicable regulations involving the transport, use, and disposal of hazardous materials such as those described under Section 3.8.2.2, *Regulatory*. Hazardous materials releases or emissions would be from commonly used materials such as grease, solvents, and paints and would not include acutely hazardous materials. Furthermore, releases would be small and localized and would be contained and cleaned according to the SDS in the appropriate manner. In addition, KOP categories would be required to obtain NPDES coverage under the NPDES Construction General Permit for Stormwater Discharges Associated with General Permit, Order No. 2009-0009-DWQ. The NPDES Construction General Permit would require the development and implementation of a SWPPP that includes BMPs to regulate and prevent contamination of stormwater runoff, including measures to prevent and control hazardous materials releases.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operations impacts for KOP Categories 1 through 6 would vary widely and could result from recreational uses such as parks and trails; flood management such as check dams; water diversions and storage facilities; residential, commercial, light industrial, or affordable housing developments; arts and culture facilities, including museums, galleries, or libraries; or urban agriculture that may include community gardens, compost facilities, or plant nurseries. As such, hazardous materials could be used in a variety of ways; however, it is expected that commonly used hazardous materials such as solvents, paints, and fuels would primarily be used. Therefore, the likelihood of any release involving these materials would be minimal, the amount would be small and localized, and spills that may occur would be contained and cleaned as they occur consistent with applicable regulations under Section 3.8.2.2, *Regulatory*. In some cases, maintenance could involve the use of pesticides and/or herbicides (e.g., agricultural and field and park maintenance). However, as with the Typical Projects, these materials would be used in small amounts, intermittently, and with proper care as dictated by their accompanying SDS.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

The *2020 LA River Master Plan* would involve construction and operations activities to implement 107 projects that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel) and design for these components along with associated operation and maintenance activities have not yet been determined and would depend on numerous factors, including project proponent and availability of funding. As mentioned individually under the Typical Projects and KOPs discussion above, none of the projects to be included under the *2020 LA River Master Plan* are expected to result in a significant risk associated with routine transport, use, and disposal of hazardous materials. Required compliance with applicable regulations and adherence to the requirements of the Construction General Permit would reduce potential impacts.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.8(b): Would the proposed Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Hazardous materials sites with a potential for contaminated onsite soil and/or groundwater exist within the study area in all frames. The following table identifies the type of hazardous materials site found within the study area (by city). A detailed description of each type of hazardous materials site is found in Section 3.8.2, *Setting.* Because hazardous materials sites with a potential for

contaminated onsite soil and/or groundwater exist throughout the project study area, the following analysis applies to all frames.

Table 3.8-1. Hazardous Materials Site Types within the Study Area

	LUST Cleanup Sites	Cleanup Program Sites	Military Cleanup Sites	DTSC Cleanup Sites
City of Los Angeles	✓	✓	✓	✓
Long Beach	✓	✓	✓	✓
Carson	✓	✓	n/a	✓
Compton	✓	✓	n/a	✓
Cudahy	✓	✓	n/a	✓
Downey	✓	✓	n/a	✓
Lynwood	✓	✓	n/a	✓
Paramount	✓	✓	n/a	✓
South Gate	✓	✓	n/a	✓
Bell	✓	✓	n/a	✓
Bell Gardens	✓	✓	n/a	✓
Commerce	✓	✓	n/a	✓
Huntington Park	✓	✓	n/a	✓
Maywood	✓	✓	n/a	✓
Vernon	✓	✓	n/a	✓
Glendale	✓	✓	✓	✓
Burbank	✓	✓	✓	✓
Unincorporated County	✓	✓	n/a	✓

As the Typical Projects can occur anywhere in the project study area, it is possible that they could be constructed within or immediately adjacent to a hazardous materials site. Depending on the contaminant characteristics and extent of contamination, excavation activities conducted during construction could encounter contaminated groundwater and/or contaminated soil. The larger and more complex of the Typical Projects would require more soil disturbance and would present a greater risk of exposure to contaminated media (such as pavilions/cafes, trails). Some elements under the Common Elements Typical Project with smaller footprints—such as access stairs, ramps, benches, hygiene facilities, restrooms, trash and recycling, and drinking fountains—would not require as much disturbance and would present a smaller risk of exposure to potentially contaminated media. Contaminated sites would be remediated/addressed in coordination with and under oversight of the applicable oversight federal, State, and/or local agency (e.g., EPA, SWRCB, DTSC, or local environmental health or fire department). Agencies that provide guidance and oversight on sites with a history of releases can include:

- RWQCB: In case of a perceived threat to surface water or groundwater quality, RWQCB may be contacted.
- DTSC: DTSC may become involved if there is a higher perceived risk to public health or public safety, or if environmental justice concerns are involved.

- EPA: EPA may become involved if a site is determined to be under federal jurisdiction (e.g., federal or military uses, chemical[s] released are subject to the Toxic Substances Control Act, chemical release is at a level that meets or exceeds federal reportable quantities).

The type and extent of the contamination will dictate the appropriate response and remediation for the site and the agencies to be notified. Although these regulatory requirements would be followed, the potential for foreseeable upset and accident conditions involving the release of hazardous materials into the environment from the construction of the Typical Projects could create a significant hazard to the public or the environment.

Additionally, buildings and structures scheduled to be demolished that have lead- or asbestos-containing materials would require proper abatement procedures prior to construction activities to reduce potential impacts. Any structures built prior to 1980 (the use of asbestos in buildings and structures was common prior to 1980) and planned for demolition would require an asbestos and lead-based paint survey (as part of Mitigation Measure HAZ-1).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

To avoid exposure of construction personnel, the public, or the environment to contaminated media and/or hazardous building materials, prior to construction activities associated with any subsequent project involving ground disturbance, the implementing agency will be required to retain a professional hazardous materials specialist specializing in hazardous materials impact assessment to conduct a project-level analysis to verify the presence or absence of hazardous materials conditions (including Cortese List sites) in the vicinity of the construction site and if there is potential for existing hazardous materials conditions to affect construction activities.

This assessment will consist of a search for environment-related information present in publicly accessible databases. The information will be reviewed to determine if the construction footprint or adjacent properties are listed in the aforementioned databases.

If the construction footprint or adjacent properties are listed in the databases, the professional hazardous materials specialist will determine the potential risk to construction workers, the public, or the environment from construction activities (to be documented in a technical memo). The determination of risk would consider, among other factors, regulatory status, the type of project, type of contaminated property, distance and direction to the project, and appropriate measures. If the hazardous materials specialist concludes that the subsequent project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, then no further action would be required.

If a site is considered a risk to construction workers, the public, or the environment, implementing agency will implement measures to reduce risk, including one or more of the following:

- Implement engineering controls and best management practices (BMPs) during construction to minimize human exposure to potentially contaminated soils during construction. Engineering controls and construction BMPs could include, but are not limited to, the following:
    - Contractor employees working on site handling potentially contaminated media will be certified in the Occupational Health and Safety Administration's 40-hour Hazardous Waste Operations and Emergency Response training.
    - Contractors will water or mist soil as it is being excavated and stockpiled or loaded onto transportation trucks.
    - Contractors will place any stockpiled soil in areas shielded from prevailing winds or cover stockpiles with staked and/or anchored sheeting.
- Conduct a soil and/or groundwater sampling program to determine the type and extent of contaminants. The sampling program could include:
    - A scope of work for preparation of a health and safety plan that specifies pre-field activity marking of boring locations and obtaining utility clearance, and field activities, such as identifying appropriate sampling procedures, health and safety measures, chemical testing methods, and quality assurance/quality control procedures
    - Necessary permits for well installation and/or boring advancement
    - A soil sampling and analysis plan in accordance with the scope of work
    - Laboratory analyses conducted by a State-certified laboratory
    - Disposal processes, including transport by a State-certified hazardous material hauler to a State-certified disposal or recycling facility licensed to accept and treat hazardous waste
- Implement a soil management plan. The purpose of a soil management plan is to provide administrative, procedural, and analytical guidance to expedite and clarify decisions and actions if contaminated soils are encountered. Typically, procedures and protocols are included to ensure that contaminated soil is excavated properly and efficiently, and that unacceptable risks are not posed to human health or the environment from contaminated soils. Additionally, the soil management plan would contain procedures for handling, stockpiling, screening, and disposing of the excavated soil. The soil management plan is a site-specific technical plan that could be required depending on other screening activities conducted (listed above) and is not included as part of this EIR.
- If dewatering would be necessary in areas where contaminated groundwater exists, then dewatering procedures could be subject to permit requirements of the National Pollutant Discharge Elimination System (NPDES). Discharges of treated or untreated groundwater generated from dewatering operations or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits are currently regulated under a regional general permit, General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-095, NPDES No. CAG994004)

- Conduct an asbestos and lead-based paint survey for any structures built prior to 1980 (the use of asbestos in buildings and structures was common prior to 1980) and planned for demolition as part of subsequent projects. An asbestos survey would be conducted in accordance with the South Coast Air Quality Management District (Rule 1403), Cal OSHA (CCR, Title 8, Section 1529), and the National Emission Standards for Hazardous Air Pollutants for Asbestos Surveys (40 CFR Part 61, Subpart M). CCR, Title 8, Section 1532.1, "Lead," and Cal OSHA requirements should be followed when handling materials containing lead.

With the implementation of the above measures and coordination with the appropriate oversight agency (as necessary), the potential upset and accident conditions associated with construction activities would be reduced.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

As operations activities associated with the Typical Projects would not differ from frame to frame, the following operational discussion would apply to all frames. Operations associated with these Typical Projects would be those of recreational uses (such as those associated with pedestrian, bike, and multi-use trails) and commercial uses (such as those associated with pavilions, cafes, restrooms, bike racks, and art and performance spaces). Due to the nature of the projects, hazardous materials would not be used on a regular basis. As such, hazardous materials uses would be minimal, primarily for maintenance, and consist of commonly used hazardous materials such as solvents, paints, and fuels for equipment. Any release involving these materials would be small and localized, and spills that may occur would be contained and cleaned as they occur. In some cases, maintenance could involve the use of pesticides and/or herbicides. However, these materials would be used in small amounts, intermittently, and with proper care as dictated by their accompanying SDS. As such, typical hazardous materials use is not expected to result in significant impacts associated with upset and accident conditions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

The specific location and design for KOP Categories 1 through 6 have not yet been determined and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP Categories 1 through 6 would vary depending on the specific design component and its intended function. KOP categories would likely be larger than Typical Projects.

Construction

As with the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, contaminated sites associated with KOP Categories 1 through 6 would be remediated/addressed in coordination with and under oversight of the applicable oversight federal, State, and/or local agency (e.g., EPA, SWRCB, DTSC, or local environmental health or fire department). Although these regulatory requirements would be followed, the potential for foreseeable upset and accident conditions involving the release of hazardous materials into the environment from the construction of KOPs could create a significant hazard to the public or the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operations impacts for KOP Categories 1 through 6 would vary widely and could result from recreational uses such as parks and trails; flood management such as check dams; water diversions and storage facilities; residential, commercial, light industrial, or affordable housing developments; arts and culture facilities, including museums, galleries, or libraries; or urban agriculture that may include community gardens, compost facilities, or plant nurseries. As such, hazardous materials could be used in a variety of ways; however, it is expected that commonly used hazardous materials such as solvents, paints, and fuels would primarily be used. Therefore, the likelihood of any release involving these materials would be minimal, the amount would be small and localized, and spills that may occur would be contained and cleaned as they occur consistent with applicable regulations under Section 3.8.2.2, *Regulatory*. In some cases, maintenance could involve the use of pesticides and/or herbicides (e.g., agricultural and field and park maintenance). However, as with the Typical Projects, these materials would be used in small amounts, intermittently, and with proper care as dictated by their accompanying SDS.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction

As discussed above for the typical projects and KOP Categories 1 through 6, contaminated sites would be remediated/addressed in coordination with and under oversight of the applicable oversight federal, State, and/or local agency (e.g., EPA, SWRCB, DTSC, or local environmental health or fire department). Although these regulatory requirements would be followed, the potential for foreseeable upset and accident conditions involving the release of hazardous materials into the environment from construction under the overall *2020 LA River Master Plan* could create a significant hazard to the public or the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

As mentioned individually under the Typical Projects and KOPs discussion above, operations under the overall *2020 LA River Master Plan* are expected to result in a significant risk associated with potential upset and accident conditions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.8(c): Would the proposed Project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

As described above in Section 3.8.2, *Setting*, there are several schools throughout the project study area, including school sites in every frame. Therefore, the following discussion applies to Typical Projects in all frames. Construction activities associated with the Typical Projects would involve routine handling of hazardous materials such as solvents, paints, oils, and grease and materials that are typical for construction projects. Consequently, there is potential that these materials would be handled within 0.25 mile of a school. As described above, handling of these materials would be compliant with applicable regulations such as those described under Section 3.8.2.2, *Regulatory*. Additionally, these hazardous materials are generally used in small amounts and any potential construction-related hazardous releases or emissions would be from commonly used materials such as grease, solvents, and paints and would not include substances listed in 40 CFR 355 Appendix A, *Extremely Hazardous Substances and Their Threshold Planning Quantities*. Releases would be small and localized and would be contained and cleaned according to the material's SDS in the appropriate manner. Typical Projects requiring greater than 1 acre of soil disturbance would be required to obtain NPDES coverage under Order No. 2009-0009-DWQ (Construction General Permit). The Construction General Permit would require the development and implementation of a SWPPP, which includes BMPs to regulate and prevent releases and contamination of the surrounding environment.

As Typical Projects can occur anywhere in the project study area, it is possible that they could be constructed within or immediately adjacent to a hazardous materials site. Depending on the contaminant characteristics of the hazardous materials site and extent of contamination, soil disturbance activities conducted during construction could encounter contaminated groundwater and/or contaminated soil. Additionally, structures built prior to 1980 to be demolished as part of the Typical Projects could contain hazardous building materials. Consequently, affected media or hazardous building materials could be handled within 0.25 mile of a school.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Mitigation Measure HAZ-1 includes provisions that would minimize the release and emissions of contaminated media (if identified on site) to nearby receptors, including schools. In addition, contaminated sites would be remediated/addressed in coordination with and under oversight of the applicable oversight agency, further minimizing the potential risk of release to the surrounding environment, including schools within 0.25 mile of a Typical Project.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operations associated with these projects would be recreational uses (such as those associated with pedestrian, bike, and multi-use trails) and commercial uses (such as those associated with pavilions, cafes, restrooms, bike racks, art and performance spaces, and maintenance uses). Due to the nature of these projects, hazardous material would not be employed on a regular basis. As such, hazardous materials uses would be minimal, primarily for maintenance, and would consist of commonly used hazardous materials such as solvents, paints, and fuels for equipment. Any release involving these materials would be small and localized, and spills that may occur would be contained and cleaned as they occur. In some cases, maintenance could involve the use of pesticides and/or herbicides. However, these materials would be used in small amounts, intermittently, and with proper care as dictated by their accompanying SDS. As such, potential impacts associated with hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would not likely occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

The specific location and design for KOP Categories 1 through 6 have not yet been determined and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP Categories 1 through 6 would vary depending on the specific design component and its intended function. KOP categories would likely be larger than Typical Projects.

Construction

As with the Typical Projects, there are several schools throughout the project study area. Consequently, there is potential that materials used in construction—such as solvents, paints, oils, and grease and materials that are typical for construction projects—would be handled within 0.25 mile of a school. As described above, handling of these materials would be compliant with applicable regulations such as those described under Section 3.8.2.2, *Regulatory*. Subsequent projects under the KOP categories requiring greater than 1 acre of soil disturbance would be required to obtain NPDES coverage under the NPDES Construction General Permit, Order No. 2009-0009-DWQ. The Construction General Permit would require the development and implementation of a SWPPP, which includes BMPs to regulate and prevent releases and contamination of the surrounding environment. Also, construction activities would adhere to the requirements of the Construction General Permit, including the implementation of best management practices. As the KOPs can occur anywhere in the project study area, it is possible that they could be constructed within or immediately adjacent to a hazardous materials site. Depending on the contaminant characteristics of the hazardous materials site and extent of contamination, soil disturbance activities conducted during construction could encounter contaminated groundwater and/or contaminated soil. Consequently, the affected media potentially could be handled within 0.25 mile of a school.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operations impacts for KOP Categories 1 through 6 would vary widely and could result from recreational uses such as parks and trails; flood management such as check dams; water diversions and storage facilities; residential, commercial, light industrial, or affordable housing development; arts and culture facilities including museums, galleries, or libraries; or urban agriculture that may include community gardens, compost facilities, or plant nurseries. Therefore, the likelihood of any release involving these materials would be minimal, the amount would be small and localized, and spills that may occur would be contained and cleaned as they occur consistent with applicable regulations under Section 3.8.2.2, *Regulatory*. In some cases, maintenance could involve the use of pesticides and/or herbicides (e.g., agricultural and field and park maintenance). As mentioned, schools are located throughout the study area and can potentially be exposed to hazardous materials and contaminated media (from nearby sites with a history of releases) associated with operations under the six KOP categories. However, as with the Typical Projects, these materials would be used in small amounts, intermittently, and with proper care as dictated by their

accompanying SDS. Spills involving these materials would be contained and cleaned as they occur. As such, potential impacts associated with hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction

As discussed above for the Typical projects and KOP Categories 1 through 6, there are several schools throughout the project study area. Consequently, there is potential that materials used in construction—such as solvents, paints, oils, and grease and materials that are typical for construction projects—would be handled within 0.25 mile of a school. As described above, handling of these materials would be compliant with applicable regulations such as those described under Section 3.8.2.2, *Regulatory*. Depending on the contaminant characteristics of the hazardous materials site and extent of contamination, soil disturbance activities conducted during construction could encounter contaminated groundwater and/or contaminated soil. Consequently, the affected media potentially could be handled within 0.25 mile of a school.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operations of the projects included under the overall *2020 LA River Master Plan* would not use hazardous materials on a regular basis. As such, hazardous materials uses would be minimal, primarily for maintenance, and would consist of commonly used hazardous materials such as

solvents, paints, and fuels for equipment. Any release involving these materials would be small and localized, and spills that may occur would be contained and cleaned as they occur. As such, potential impacts associated with hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would not likely occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.8(d): Would the proposed Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

As mentioned under Impact 3.8(b), hazardous materials sites, including LUST sites (which meet Cortese List requirements[4]), exist within the project study area in all cities and frames; therefore, the following analysis applies to all frames. As the Typical Projects can occur anywhere in the project study area, it is possible that they could be constructed within or immediately adjacent to a site that is on the Cortese List, Government Code Section 65962.5. If this the case, it is possible that excavation activities conducted during construction could encounter contaminated groundwater and/or contaminated soil. As described under Impact 3.8(b), the larger and more complex of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would require more media disturbance and would present a greater risk of exposure to contaminated media (e.g., pavilions, cafes, and art and performance spaces). Although the smaller footprint projects (e.g., access stairs, ramps, benches, hygiene facilities, restrooms, trash and recycling, drinking fountains) would not require as much media disturbance and would present a smaller risk of exposure to contaminated media, the potential for any of the Typical Projects to be located on such sites exists.

[4] The following resources provide information regarding facilities meeting "Cortese List" requirements:

- List of *Hazardous Waste and Substances* sites from DTSC's EnviroStor database
- List of *Leaking Underground Storage Tank Sites* from SWRCB's GeoTracker database
- List of *solid waste disposal sites* identified by SWRCB with waste constituents above hazardous waste levels
- List of "active" *Cease and Desist Orders* and *Cleanup and Abatement Orders* from SWRCB
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

As operations activities associated with the Typical Projects would not differ from frame to frame, the following operational discussion would apply to all frames. Operations associated with these projects would be those of recreational uses (such as those associated with pedestrian, bike, and multi-use trails) and commercial uses (such as those associated with pavilions, cafes, restrooms, bike racks, and art and performance spaces). Due to the nature of these projects, hazardous materials use would not occur on a regular basis. As such, hazardous materials uses would be minimal, primarily for maintenance, and consist of commonly used hazardous materials such as solvents, paints, and fuels for equipment. Any release involving these materials would be small and localized. Spills that may occur would be contained and cleaned as they occur and would not contribute to environmental conditions associated with Cortese List sites. In addition, contaminated media associated with Cortese List sites would be addressed during the construction phase of the Typical Projects. Therefore, operations activities associated with the Typical Projects would not contribute to environmental conditions associated with Cortese List sites or cause impacts related to affected media associated with the aforementioned sites.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOPs discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOPs only.

KOP Categories 1 through 6

The specific location and design for KOP Categories 1 through 6 have not yet been determined and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP Categories 1 through 6 would vary depending on the specific design component and its intended function. KOP categories would likely be larger than Typical Projects.

Construction

As with the Common Elements Typical Projects, hazardous materials sites, including LUST sites (which meet Cortese List requirements), exist within the project study area in all cities and frames. Because sites meeting the Cortese List requirements exist throughout the project study area, the following analysis applies to all frames. As KOP categories can occur anywhere in the project study area, it is possible that they could be constructed within or immediately adjacent to a site that is on the Cortese List, Government Code Section 65962.5. If this the case, it is possible that excavation activities conducted during construction could encounter contaminated groundwater and/or contaminated soil, and the potential for any of the KOPs to be located on such sites exists.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operations impacts for KOP Categories 1 through 6 would vary widely and could result from recreational uses such as parks and trails; flood management such as check dams; water diversions and storage facilities; residential, commercial, light industrial, or affordable housing development; arts and culture facilities, including museums, galleries, or libraries; or urban agriculture that may include community gardens, compost facilities, or plant nurseries. Therefore, the likelihood of any release involving these materials would be minimal, the amount would be small and localized, and spills that may occur would be contained and cleaned as they occur consistent with applicable regulations under Section 3.8.2.2, *Regulatory*. In some cases, maintenance could involve the use of pesticides and/or herbicides (e.g., agricultural and field and park maintenance). However, as with the Typical Projects, these materials would be used in small amounts, intermittently, and with proper care as dictated by their accompanying SDS. Spills involving these materials would be contained and cleaned as they occur. As such, potential spills involving these materials would be contained and cleaned as they occur and would not contribute to environmental conditions associated with Cortese List sites. In addition, contaminated media associated with Cortese List sites

would be addressed during the construction phase of the KOPs. Therefore, operations activities associated with KOPs would not contribute to environmental conditions associated with Cortese List sites or cause impacts related to affected media associated with the aforementioned sites.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction

As discussed above for the typical projects and KOP Categories 1 through 6, hazardous materials sites, including LUST sites (which meet Cortese List requirements), exist within the project study area in all cities and frames. Because sites meeting the Cortese List requirements exist throughout the project study area, the following analysis applies to all frames. It is possible that potential excavation activities conducted during construction could encounter contaminated groundwater and/or contaminated soil, and the potential for projects under the overall *2020 LA River Master Plan* to be located on such sites exists.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure HAZ-1: Conduct Project-Level Hazardous Materials Sites Assessment for Construction of Subsequent Projects Involving Soil Disturbance and Implement Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County

Operation

As mentioned individually under the Typical Projects and KOPs discussion above, operations under the overall *2020 LA River Master Plan* are not expected to result in a significant risk associated with being constructed on or near a Cortese List site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.8(e): Would the proposed Project be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

The nearest airports to the project study area are the Long Beach Airport (approximately 2.25 miles from the LA River and 1.25 miles from the eastern boundary of the project study area), the Compton/Woodley Airport (approximately 1.8 miles from the western boundary of the project study area and 2.8 miles from the LA River), and the Hollywood Burbank Airport (approximately 2.3 miles from the northern boundary of the project study area and 3.3 miles from the LA River). LAX is 9 miles away from the project study area.

According to the *Los Angeles County Airport Land Use Plan* (Los Angeles County 2004), neither the LA River nor the project study area are within any Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the aforementioned airports.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Operations

The study area is not within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the airports listed.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOPs discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOPs only.

KOP Categories 1 through 6

Construction

Projects associated with KOPs would not be within any Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the airports listed. Therefore, implementation of six KOP categories would not result in a safety hazard or excessive noise for people residing or working in the project study area.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Operations

The study area is not within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the airports listed.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As mentioned individually under the Typical Projects and KOPs discussion above, none of the projects would be within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas

associated with any of the local airports such as Long Beach, Compton/Woodley, or Hollywood Burbank Airports. No impacts would result from overall implementation of the *2020 LA River Master Plan*.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Impact 3.8(f): Would the proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction activity could occur near emergency service facilities (e.g., fire stations and hospitals) and near roadways used by emergency service providers. As mentioned in Section 3.16, *Transportation*, river access points will be incorporated as part of the *2020 LA River Master Plan.* Although locations are currently unknown, access points will be required to be designed according to criteria of the County (as appropriate)—including the *Trails Manual* adopted in 2011—and, where applicable, of the local agency in which they are located. Among the requirements for river access points is that they must be well-lit and provide clear lines of sight. Alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with County approval or the relevant local agency. Furthermore, to ensure safety along the river during both regular use and in periodic flood events, *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) require that the entirety of the 51 miles of the LA River maintain emergency access for first responders and emergency personnel and vehicles through the use of service roads. Therefore, implementation of the *2020 LA River Master Plan* would remediate or (in cases where existing conditions along the river do not provide the level of access required by the *2020 LA River Master Plan*) improve existing substandard conditions and would therefore contribute to overall emergency access along the entire river corridor.

Construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would occur in the existing LA River right-of-way, which does not include any characteristics (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation in the vicinity. If lane closures are required, they would be on a temporary basis. All large construction vehicles entering and exiting the site would be guided by the use of personnel using signs and flags to direct traffic. In addition, construction activities would comply with any applicable general plan, hazard mitigation plan,

response plan, EOP, and fire department or police department emergency response requirements, such as those described in Section 3.8.2, *Setting*, and Section 3.8.2.2, *Regulatory*, by providing adequate emergency access, minimizing temporary impacts on local evacuation routes, and not permanently affecting major arterials surrounding project sites during construction and operations of all projects.

Compliance with such existing standard industry practices such as traffic control and signage; adherence to County and local agency criteria (as necessary), Design Guidelines, and rules and regulations pertaining to emergency response in Section 3.8.2, *Setting*, and Section 3.8.2.2, *Regulatory*; and implementation of the aforementioned Design Guidelines would provide adequate emergency access.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operations of the Typical Projects would attract up to 500 daily visitors under the Common Elements Typical Project and 1,000 daily users for the Multi-Use Trails and Access Gateways Typical Project. This would increase vehicular and pedestrian traffic to the area and could potentially reduce emergency access and response time. However, as mentioned under *Construction* above, *2020 LA River Master Plan* projects would all adhere to County and local agency criteria (as necessary), Design Guidelines, and rules and regulations pertaining to emergency response, such as those described in Section 3.8.2, *Setting*, and Section 3.8.2.2, *Regulatory*, by providing adequate emergency access and not permanently affecting major arterials surrounding project sites during operations. Moreover, the Typical Projects would implement the Design Guidelines that require permanent access for first responders and emergency personnel and vehicles and would not include any characteristics (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOPs discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOPs only.

KOP Categories 1 through 6

Construction

Construction of the six KOP categories could occur anywhere in the study area and therefore could occur near emergency service facilities and along roadways used by emergency service providers. As for the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, river access points will be incorporated as part of the six KOP categories. Alteration to existing or design of new service roads providing access for maintenance and emergency vehicles would meet with County approval or the relevant local agency. The Design Guidelines require that the LA River maintain emergency access for first responders and emergency personnel and vehicles through the use of service roads. Implementation of the *2020 LA River Master Plan* would remediate or improve existing substandard conditions and would therefore contribute to overall emergency access along the entire river corridor. Construction of KOPs would not include any characteristics that would physically impair or otherwise interfere with emergency response or evacuation in the vicinity. All large construction vehicles entering and exiting the site would be guided by the use of personnel using signs and flags to direct traffic compliance with such existing standard industry practices such as traffic control and signage; adherence to County and local agency criteria (as necessary), the Design Guidelines, and rules and regulations pertaining to emergency response in Section 3.8.2, *Setting*, and Section 3.8.2.2, *Regulatory*, would provide adequate emergency access.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operations impacts for KOP Categories 1 through 6 would vary widely and could result from recreational uses such as parks and trails; flood management such as check dams; water diversions and storage facilities; residential, commercial, light industrial, or affordable housing development; arts and culture facilities, including museums, galleries, or libraries; or urban agriculture that may include community gardens, compost facilities, or plant nurseries. These would increase vehicular and pedestrian traffic to the area and could potentially reduce emergency access and response time. However, subsequent projects under all KOP categories would adhere to rules and regulations pertaining to emergency response, such as those described in Section 3.8.2, *Setting*, and Section 3.8.2.2, *Regulatory*, to provide adequate emergency access, including during project operations.

Moreover, the KOP categories would implement Design Guidelines requiring permanent access for first responders and emergency personnel and vehicles and do not include any characteristics that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As mentioned individually under the Typical Projects and KOPs discussion above, and therefore relevant for the 107 subsequent projects under the *2020 LA River Master Plan*, none of the subsequent projects are expected to hinder or impair an adopted emergency response or evacuation plan or route. Compliance with such existing standard industry practices such as traffic control and signage; adherence to County and local agency criteria (as necessary) and rules and regulations pertaining to emergency response in Section 3.8.2, *Setting*, and Section 3.8.2.2, *Regulatory*, would provide adequate emergency access. Moreover, the Typical Projects would implement the Design Guidelines that require permanent access for first responders and emergency personnel and vehicles and would not include any characteristics (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity. Therefore, overall implementation of the *2020 LA River Master Plan* would result in less-than-significant impacts.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.8(g): Would the proposed Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

As not all frames contain high fire hazard areas, the following analysis is presented as Frames 1 through 4 and Frames 5 through 9.

Construction

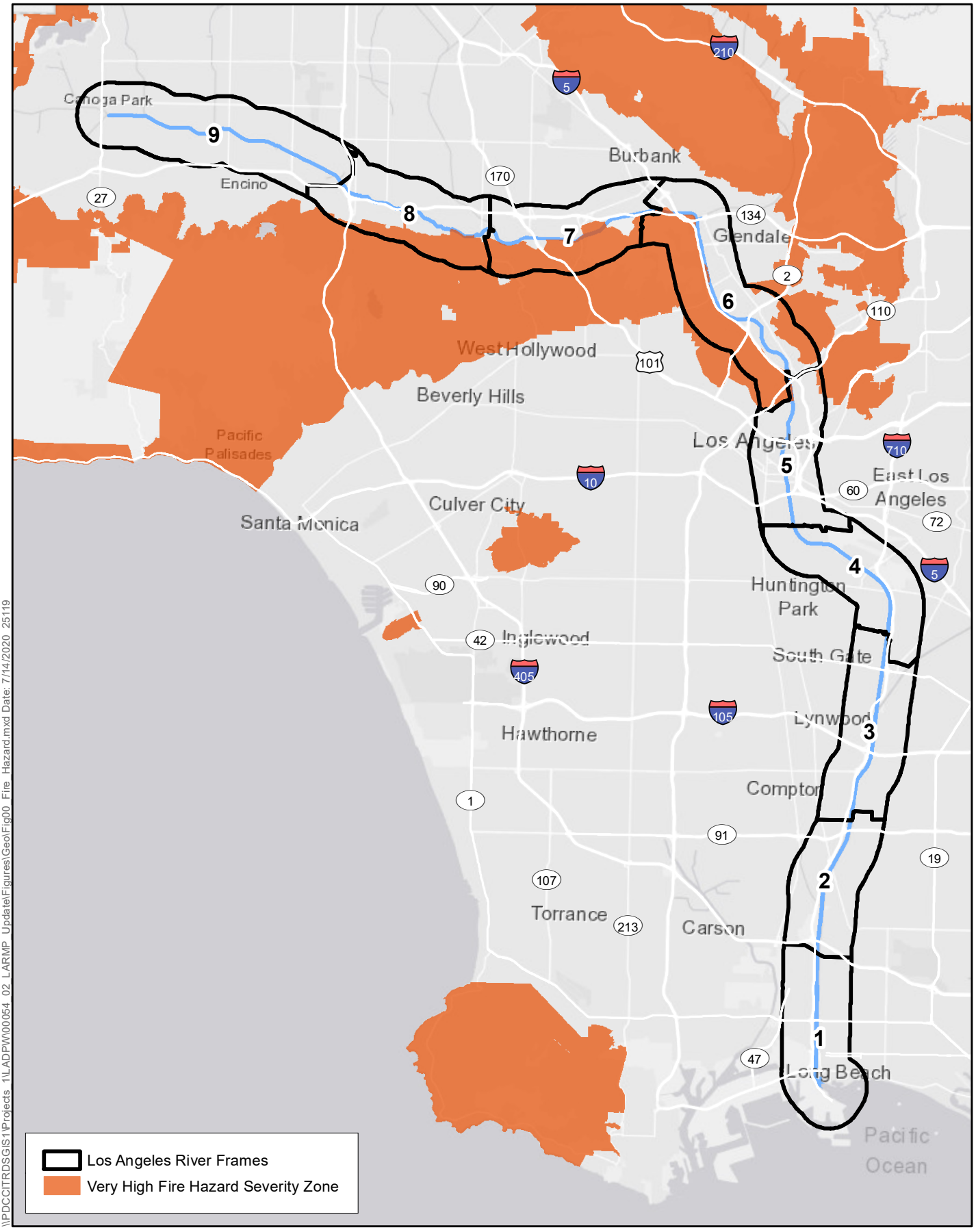
Frames 1 through Frame 4

According to CAL FIRE's Fire and Resource Assessment Program's Very High Fire Hazard Severity Zones in LRA Los Angeles County, Frames 1 through 4 do not include any very high fire hazard severity zones (CAL FIRE 2011). Within these frames, the LA River and project study area are in densely developed County areas, with no wildland areas nearby. Therefore, it is expected that construction of the Typical Projects would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

Frames 5 through Frame 9

Portions to the north of Frame 5 are within a Very High Fire Hazard Severity Zone (Figure 3.8-10). These include areas near Dodger Stadium and some of Frame 5 in the northeastern Los Angeles area. High fire hazard areas along Frames 6 through 9 include areas along Los Angeles north of Interstate 5 and Interstate 110, and areas just north of West Hollywood, south of Burbank, and west and south of the City of Glendale. When conducted at sites within a Very High Fire Hazard Severity Zone, construction activities would involve equipment that may exacerbate wildfire risk. Heat or sparks from construction equipment or vehicles, as well as the use of flammable materials, have the potential to ignite adjacent vegetation. Construction activities could introduce new potential ignition sources in the form of building materials (e.g., wood), vegetation for landscaping, and other materials for construction that are considered flammable.

As stated in Section 3.19, *Wildfire*, proposed construction would be required to comply with applicable construction standards that ensure implementation of fire prevention features. This includes complying with the regulations set forth in the California Fire Code (CFC) and OSHA Safety and Health Regulations for Construction during both project planning/design and construction. Chapter 33, *Fire Safety during Construction and Demolition*, Section 3308 of the CFC requires the preparation of a "pre-fire plan." OSHA Regulations Part 1926 Subpart F, Fire Protection and Prevention, requires the development of a fire protection program through all phases of construction and demolition work, and addresses requirements for appropriate firefighting equipment, water sources, sprinkler systems, and alarm systems. Moreover, all new structures as part of the *2020 LA River Master Plan* must comply with the California Building Code and CFC. The California Building Code establishes fire safety requirements, such as fire resistance standards for fire doors, building materials, and particular types of construction. The CFC includes safety measures to be followed during construction and demolition activities, such as the proper storage procedures for combustible materials, and the proper refueling protocol.



\\PDCCITRDSGIS1\Projects 1\LADPW\00054 02 LARMP UpdateFigures\GeoFig00 Fire Hazard.mxd Date: 7/14/2020 25119

Source: CAL FIRE; Los Angeles County; ESRI StreetMap
Map Prepared: 7/14/2020

N 0 1 2 4
Miles

Figure 3.8-10
Fire Hazard Zones

Construction of the Typical Projects in these areas would be subject to applicable requirements mentioned above. Furthermore, for projects proposed in or adjacent to areas designated as Very High Fire Hazard Severity Zones, prior to construction, the implementing agency will prepare a Construction Fire Protection Plan.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.19, *Wildfire*.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Frame 1 through Frame 4

Frames 1 through 4 are not within a CAL FIRE Very High Fire Hazard Severity Zone. Within these frames, the LA River study area is in densely developed County areas, with no wildland areas nearby. Operations activities associated with the Typical Projects (in Frames 1 through 4) would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

Frame 5 through Frame 9

Subsequent projects within high fire hazard zones in Frames 5 through 9 would be subject to applicable city and County building codes. In addition, subsequent projects could be implemented consistent with the Design Guidelines, which address larger projects or those that interface with a wildfire area by recommending wildfire breaks during design. Furthermore, for Typical Projects that are proposed in areas designated as Very High Fire Hazard Severity Zones, the implementing agency will prepare a Fire Protection Plan for the project prior to commencing operation of the facility. Impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.19, *Wildfire*.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOPs discussed below. Therefore, for potential impacts of Common Elements Typical Projects, see above. The impact discussion below focuses on specific KOPs only.

KOP Categories 1 through 6

Construction

The specific location and design for KOP 1 through 6 categories have not yet been determined and would depend on numerous factors, including project proponent and availability of funding.

The six KOP categories include a variety of construction that could occur anywhere in the study area. Therefore, subsequent projects under the KOP categories could be located in Very High Fire Hazard Severity Zones (in Frames 5 through 9). Construction of subsequent projects under the six KOP categories in these areas would be subject to applicable city and County building codes and applicable construction standards. Similar to Typical Projects, proposed construction would be required to comply with applicable construction standards that ensure implementation of fire prevention features. This includes complying with the regulations set forth in the CFC and OSHA Safety and Health Regulations for Construction during both project planning/design and construction. Additionally, projects implemented under the *2020 LA River Master Plan* could be constructed using Design Guidelines (as applicable), which discuss wildfire management and the implementation of a construction fire protection plan.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.19, *Wildfire*.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Subsequent projects under the six KOP categories within high fire hazard zones would be subject to applicable city or County building codes. In addition, they could be implemented consistent with the Design Guidelines, which address larger projects or those that interface with a wildfire area by recommending wildfire breaks during design. However, impacts would be potentially significant if located in or near areas designated as Very High Fire Hazard Severity Zones.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.19, *Wildfire*.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As mentioned individually under the Typical Projects and KOPs discussion above, none of the projects to be included under the *2020 LA River Master Plan* are expected to result in a significant risk of exposure to wildfires. Projects in high fire hazard areas would follow all applicable fire response and prevention requirements and applicable construction standards. Proposed construction under the *2020 LA River Master Plan* would be required to comply with applicable construction standards that ensure implementation of fire prevention features, including compliance with the regulations set forth in the CFC and OSHA Safety and Health Regulations for Construction during both project planning/design and construction. However, impacts would be potentially significant if located in or near areas designated as Very High Fire Hazard Severity Zones.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described in Section 3.19, *Wildfire*.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts with regard to hazards and hazardous materials is the County, as hazards impacts are generally localized and this context would still account for hazards and the use of hazardous materials in the greater County region. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact related to hazards and hazardous materials, if, in combination with other projects within the greater Los Angeles region, it would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment; be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Cumulative Condition

In general, cumulative impacts related to hazards and hazardous materials are most often associated with commercial or industrial land uses, compared with residential uses. Implementation of projects and plans that do not substantially increase the potential for industrial activity are not considered to generate cumulatively significant impacts within the County (City of Los Angeles 1995). Continued growth and development in the Southern California region, including the implementation of transportation improvements, and the anticipated increased mobility from implementation of the 2020–2045 RTP/SCS may result in greater exposure of local populations to various hazards and may create a significant hazard to the public or the environment as a result of increased hazardous materials transport. Any future development would be required to comply with applicable federal, State, and local regulations related to hazardous materials. Required compliance with these regulations would minimize contribution of cumulative impacts related to the hazardous materials sites, and impacts would not be cumulatively significant (SCAG 2020).

Contribution of the Project to Cumulative Impacts

There is no cumulative condition with respect to hazardous materials; therefore, with implementation of Mitigation Measure HAZ-1, Mitigation Measure WF-2, and Mitigation Measure WF-3, the proposed Project would not make a cumulatively considerable contribution to hazards and hazardous materials impacts.

Section 3.9
Hydrology and Water Quality

3.9.1 Introduction

This section describes the geographic and regulatory setting for hydrology and water quality, discusses impacts that would result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.9.2 Setting

3.9.2.1 Geographic

Regional Setting

Surface Waters

As shown on Figure 2-1, the LA River Watershed encompasses 834 square miles. Approximately 60 percent of the watershed is developed, with a variety of land uses within the watershed, and approximately 324 square miles of the watershed (roughly 40 percent) is covered by forest or open space. Headwaters of the LA River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains (Los Angeles Regional Water Board 2018). Hydrologic inputs to the LA River include wet-weather runoff originating in the mountains and flatlands, and dry-weather inputs from incidental dry-weather urban runoff, groundwater upwelling in the soft-bottom reaches, and effluent discharge from the three water reclamation plants in the watershed (Geosyntec and Olin 2018). Tributary channels convey runoff to the main LA River channel, with flows regulated by large-volume flood management facilities in the mountains and foothills, such as Big Tujunga, Devil's Gate, Eaton Wash, Pacoima, and Santa Anita Dams, and dams in the flatlands, such as Hansen, Sepulveda, and Whittier Narrows. Spreading grounds, such as the Branford, Buena Vista, Dominguez Gap, Eaton Wash, Eaton Basin, Hansen, Lopez, Pacoima, Peck Basin, Rio Hondo, Santa Anita, Sawpit, and Tujunga Spreading

Grounds, are designed to infiltrate water diverted from the channels into the underlying groundwater aquifers.

Major tributaries to the LA River in the San Fernando Valley are Bell Creek, Browns Canyon Wash, Aliso Canyon Wash, Caballero Creek, Encino Creek, Pacoima Wash and Tujunga Wash (both drain portions of the Angeles National Forest in the San Gabriel Mountains), and Burbank Western Channel and Verdugo Wash (both drain the Verdugo Mountains). Most of the river is lined with concrete due to major flood events that occurred in the first half of the 20th century. However, there are sections of the river with a soft bottom, including in the San Fernando Valley at the Sepulveda Flood Control Basin and the section of the river running through the Glendale "Narrows." At the eastern end of the San Fernando Valley, the river orientation turns south around the Hollywood Hills at Griffith Park. The river in this stretch has concrete-lined or rip-rap sides. In the river's stretch from the Burbank Western outlet to about 2,000 feet upstream of the Arroyo Seco outlet, there is a high-water table with a rocky, unlined bottom, allowing natural springs to seep into the river (Los Angeles Regional Water Board 2018).

Continuing south toward Long Beach, the LA River is contained in a concrete-lined channel. Major tributaries in this stretch of the river are Arroyo Seco (which drains the western areas of the San Gabriel Valley, and portions of the Angeles National Forest and San Gabriel Mountains above them, and Highland Park), Rio Hondo (which drains the central areas of the San Gabriel Valley and the Angeles National Forest and San Gabriel Mountains above them), and Compton Creek. Most of the water in the Rio Hondo is used for groundwater recharge during low to moderate storms and dry-weather seasons. However, the Rio Hondo hydraulically connects the LA River to the San Gabriel River through the Whittier Narrows Reservoir. During larger flood events, flows from the San Gabriel River are often directed into the LA River (Los Angeles Regional Water Board 2018) by United States Army Corps of Engineers (USACE) operations.

At Long Beach, the LA River tidal estuary begins and contains approximately 3 miles of the lower LA River before joining the Queensway Bay. The channel in this reach has a soft bottom with concrete and/or rip-rap-lined sides. The LA River Watershed also includes a number of lakes such as Belvedere Park, Hollenbeck Park, Lincoln Park, and Echo Park Lakes as well as Lake Calabasas (Los Angeles Regional Water Board 2018).

In addition to the major tributaries listed above, storm drains directly outfall to the LA River. Most stormwater outfalls are relatively small (less than 4 to 5 feet in diameter) and are local municipal drains, California Department of Transportation (Caltrans) drains, or private drains, with a small portion of USACE and Los Angeles County Flood Control District (LACFCD) outfalls.

Groundwater

The project study area is within or overlaps three main groundwater basins: the West Coast Basin within the Coastal Plain of Los Angeles (West Coast Basin), Central Basin within the Coastal Plain of Los Angeles (Central Basin), and San Fernando Valley Basin. All are designated as very low-priority groundwater basins based on the Sustainable Groundwater Management Act (SGMA) basin prioritization (DWR 2019). Sources of water supply in Los Angeles County include groundwater.

The West Coast Basin covers 142 square miles. Recharge of the basin is mainly attributed to the injection of water at the West Coast Basin Barrier Project and Dominguez Gap Barrier Project, with limited underflow from the Central Basin through and over the Newport-Inglewood fault zone. Seawater intrusion occurs in some aquifers that are exposed to the ocean offshore, but is mainly

controlled by the operation of the West Coast Basin Barrier Project and Dominguez Gap Barrier Project by Public Works. Small amounts of groundwater recharge occur from infiltration of surface inflow from the LA and San Gabriel Rivers into the uppermost aquifers, as well as surface infiltration of irrigation and industrial waters, and other applied surface waters. Generally, key groundwater monitoring well levels in the in the West Coast Basin are stable, and trending upward (WRD 2020). Annual overdraft occurs regularly as groundwater extractions typically exceed natural groundwater replenishment. Water quality concerns are related to high total dissolved solids along the Pacific Ocean coast due to seawater intrusion. Several groundwater treatment facilities operate to reduce salinity of groundwater in the basin. To prevent seawater intrusion, a seawater barrier was constructed. A seawater barrier is a series of injection wells between the ocean and the groundwater aquifer. These wells inject water along the barrier to ensure that the water level near the ocean stays high enough to keep the seawater from seeping into the aquifer. To prevent seawater intrusion, purchased and predominantly recycled water has been used for the groundwater injection program (DWR 2004a, 2019). LACFCD owns, operates, and maintains the West Coast Basin Seawater Barrier and the Dominguez Gap Barrier (West Basin MWD 2020).

The Central Basin covers 277 square miles. The Central Basin is divided into forebay and pressure areas: the Los Angeles forebay, Montebello forebay, and Central Basin pressure area. Groundwater recharge includes infiltration of rainfall, runoff, and applied water, as well as the injection of water at the Alamitos Barrier Project. The Montebello forebay is the most important area of recharge in the basin and includes artificial recharge, while development restricts percolation into the Los Angeles forebay area. The groundwater table is declining. Saltwater intrusion is mainly controlled by the operation of the Alamitos Barrier Project by Public Works (DWR 2004b, 2019).

The San Fernando Valley Basin covers 226 square miles. Several geologic structures disturb the flow of groundwater through the basin. Recharge includes infiltration of rainfall and runoff, particularly in the eastern portion of the basin, as well as spreading of imported water and runoff in the Pacoima, Tujunga, Lopez, Branford, and Hansen Spreading Grounds. Previously, groundwater levels in the basin were relatively stable. However, during recent years groundwater levels have undergone a general decline due to decrease in natural recharge caused by increased urbanization and runoff leaving the basin, a decrease in stormwater infiltration and artificial recharge, and continued groundwater extractions. Groundwater quality is impaired with volatile organic compounds such as trichloroethylene, perchloroethylene, petroleum compounds, chloroform, nitrate, sulfate, and heavy metals. Trichloroethylene, perchloroethylene, and nitrate contamination occurs in the eastern part of the basin and elevated sulfate concentration occurs in the western part of the basin (DWR 2004c, 2019).

Water Quality

The *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) specifies beneficial uses that apply to waterbodies with potential to be affected by the Project as shown in Table 3.9-1 (Los Angeles Regional Water Board 2014). The Clean Water Act (CWA) Section 303(d) List of Water Quality–Limited Segments Requiring Total Maximum Daily Loads (TMDLs) (303(d)-list) listed impairments for the LA River are shown in Table 3.9-2 and are based on the State Water Resources Control Board's (SWRCB) *2014/2016 California Integrated Report*. For purposes of this discussion, the 51 miles of the LA River are classified into six hydrological "reaches" by the SWRCB based on the location of tributary inputs to the mainstem of the LA River and to define where water quality impairments are within the LA River system.

Table 3.9-1. Beneficial Uses of Waterbodies with Potential to Be Affected by the Project

Waterbody	Designated Beneficial Uses
LA River Estuary (ends at Willow St.)	IND, NAV, COMM, EST, MAR, RARE, MIRG, SPWN, SHELL, WET, REC1, REC2
LA River Reach 1 (Estuary to Carson St.)	MUNp*, INDp, PROCp, GWR, WARM, MAR, WILD, RARE, MIGRp, SPWNp, SHELLp; REC1^{s}; REC2 ^{av}
LA River Reach 2 (Carson St. to Figueroa St.)	MUNp*, INDp, GWR, WARM, WILD^{p}, REC1^{s}, REC2 ^{av}
LA River Reach 3 (Figueroa St. to Riverside Dr.)	MUNp*, INDp, GWR, WARM, WILD, WET, REC1, REC2 ^{av}
LA River Reach 4 (Riverside Dr. to Sepulveda Dam)	MUNp*, INDp, GWR, WARM, WILD, WET, REC1, REC2 ^{av}
LA River Reach 5 (Sepulveda Dam to Balboa Blvd.)	MUNp*, INDp, GWR, WARM, WILD, WET, REC1, REC2 ^{av}
LA River Reach 6 (above Balboa Blvd.)	MUNp*, INDp, GWR, WARM, WILD, WET, REC1, REC2 ^{av}

Source: Los Angeles Regional Water Board 2014

Key:

COMM: Commercial and Sport Fishing
IND: Industrial Service Supply
MIGR: Migration of Aquatic Organisms
NAV: Navigation
SHELL: Shellfish Harvesting
WET: Wetland Habitat
WILD: Wildlife Habitat
EST: Estuarine Habitat
MIGR: Fish Migration
MAR: Marine Habitat
MUN: Municipal and Domestic Supply
RARE: Rare, Threatened, or Endangered Species
SPWN: Spawning, Reproduction, and/or Early Development
REC1: Water Contact Recreation
REC2: Non-contact Water Recreation

* Designated under SWRCB Resolution No. 88-63 and Resolution No. 89-03. Some designations may be considered for exemption at a later date.

p: Potential beneficial use

s: Access prohibited by Public Works

av: The High Flow Suspension applies to water contact recreational activities associated with the swimmable goal as expressed in the CWA and regulated under the REC-1 and REC-2 uses, and the associated bacteriological objectives. Water quality objectives set to protect other recreational uses associated with the fishable goal as expressed in the CWA and regulated under the REC-1 use and other REC-2 uses (e.g., uses involving the aesthetic aspects of water) shall remain in effect at all times for waters where the (av) footnote appears.

Table 3.9-2. Water Quality Impairments within the Project Alignment

Waterbody	303(d) Listed Impairments	Source	USEPA TMDL Report Completion
LA River Estuary (Queensway Bay)	Chlordane	Unknown	03/23/2012
	DDT (sediment)	Unknown	03/23/2012
	PCBs (sediment)	Unknown	Est. 2019
	Toxicity	Unknown	Est. 2019
	Trash	Nonpoint Source, Surface Runoff, Urban Runoff/ Storm Sewers	07/24/2008
Los Angeles/Long Beach Inner Harbor	Benthic Community Effects		
	Benzo(a)pyrene (3,4-Benzopyrene -7-d)	Unknown	03/23/2012

Waterbody	303(d) Listed Impairments	Source	USEPA TMDL Report Completion
	Chrysene (C1-C4)	Unknown	03/23/2012
	Copper	Unknown	03/23/2012
	DDT	Unknown	03/23/2012
	PCBs	Unknown	03/23/2012
	Toxicity	Unknown	03/23/2012
	Zinc	Unknown	03/23/2012
LA River Reach 1 (Estuary to Carson St.)	Ammonia	Nonpoint Source, Point Source	03/18/2004
	Cadmium	Unknown	12/22/2005
	Dissolved Copper	Nonpoint Source, Point Source	12/22/2005
	Cyanide	Unknown	Est. 2019
	Indicator Bacteria	Unknown	03/23/2003
	Lead	Nonpoint Source, Point Source	12/22/2005
	Nutrients (Algae)	Nonpoint Source, Point Source	03/18/2004
	pH	Nonpoint Source, Point Source	01/01/2003
	Trash	Nonpoint Source, Surface Runoff, Urban Runoff/Storm Sewers	07/24/2008
	Dissolved Zinc	Nonpoint Source, Point Source	12/22/2005
LA River Reach 2 (Carson St. to Figueroa St.)	Ammonia	Nonpoint Source, Point Source	03/18/2004
	Copper	Unknown	12/22/2005
	Indicator Bacteria	Unknown	03/23/2012
	Lead	Nonpoint Source, Point Source	12/22/2005
	Nutrients (Algae)	Nonpoint Source, Point Source	03/18/2004
	Oil	Natural Sources	Est. 2019
	Trash	Nonpoint Source, Surface Runoff, Urban Runoff/Storm Sewers	07/24/2008
LA River Reach 3 (Figueroa St. to Riverside Dr.)	Ammonia	Nonpoint Source, Point Source	03/18/2004
	Copper	Unknown	10/29/2008
	Indicator Bacteria	Unknown	03/23/2012
	Nutrients (Algae)	Nonpoint Source, Point Source	03/18/2004
	Toxicity	Unknown	Est. 2027

Waterbody	303(d) Listed Impairments	Source	USEPA TMDL Report Completion
	Trash	Nonpoint Source, Surface Runoff, Urban Runoff/Storm Sewers	07/24/2008
LA River Reach 4 (Riverside Dr. to Sepulveda Dam)	Indicator Bacteria	Unknown	Est. 2019
	Nutrients (Algae)	Nonpoint Source, Point Source	03/18/2004
	Toxicity	Unknown	Est. 2027
	Trash	Nonpoint Source, Surface Runoff, Urban Runoff/Storm Sewers	07/24/2008
LA River Reach 5 (within Sepulveda Basin)	Ammonia	Unknown	03/18/2004
	Benthic Community Effects	Unknown	Est. 2025
	Copper	Unknown	12/22/2005
	Lead	Unknown	12/22/2005
	Nutrients (Algae)	Nonpoint Source, Point Source	03/18/2004
	Oil	Unknown	Est. 2019
	Toxicity	Unknown	Est. 2027
	Trash	Nonpoint Source, Surface Runoff, Urban Runoff/Storm Sewers	07/24/2008
LA River Reach 6 (Above Sepulveda Flood Control Basin)	Copper	Unknown	10/29/2008
	Indicator Bacteria	Unknown	03/23/2012
	Selenium	Unknown	12/22/2005
	Toxicity	Unknown	Est. 2027

Source: SWRCB 2018
Key:
Est. = estimated completion date
DDT = dichlorodiphenyltrichloroethane; PCBs = polychlorinated biphenyls

The LA River is subject to five TMDLs that collectively regulate discharges of 13 pollutants. Water quality modeling was conducted to prioritize areas with significant water quality concerns in the watershed. One Enhanced Watershed Management Program (EWMP), the Upper LA River Watershed EWMP, and two Watershed Management Programs (WMPs), the LA River Upper Reach 2 and Lower LA River WMPs, were developed under the 2012 Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit to facilitate watershed-wide implementation and strategies for TMDL compliance (Geosyntec et al. 2020a).

Segments of the LA River and its tributaries are included on the 303(d) list due to copper, cadmium, lead, zinc, and selenium. The LA River Metals TMDL became effective in 2008, and addresses reaches and tributaries of the LA River. Three wastewater treatment plants and the MS4 in the watershed have been identified in the TMDL as the primary source of metal pollutants. The TMDL allows permittees until 2028 to meet final allocations (SWRCB 2016).

Reaches of the LA River and its tributaries are also designated as impaired for nitrogen compounds (ammonia, nitrate, and nitrite) and related effects including algae, pH, odor, and scum. In 2003, the Los Angeles Regional Water Quality Control Board (Regional Water Board) adopted Resolution R03-009, amending the Basin Plan to include a TMDL for Nitrogen Compounds and Related Effects in the LA River. An amendment to the Basin Plan and the nutrient TMDL to incorporate site-specific ammonia objectives became effective in 2014. The Los Angeles Regional Water Board also amended the Basin Plan to incorporate a TMDL for Indicator Bacteria in the LA River Watershed and adopted Resolution No. R10-007. The LA River Bacteria TMDL was approved by the United States Environmental Protection Agency (USEPA) on March 23, 2012.

The LA River is designated as impaired for trash. Impaired waterbodies addressed by the Los Angeles Trash TMDL include the LA River, LA River Estuary, Tujunga Wash, Burbank Western Channel, Verdugo Wash, Arroyo Seco, Compton Creek, and Rio Hondo. Urban stormwater runoff through storm drains is the primary source of trash in the watershed. The LA River Trash TMDL was originally adopted by the Los Angeles Regional Water Board in September 2001 and approved by USEPA in August 2002 (SWRCB 2015). The Los Angeles Regional Water Board approved the revised TMDL for trash in the LA River Watershed in November 2015.

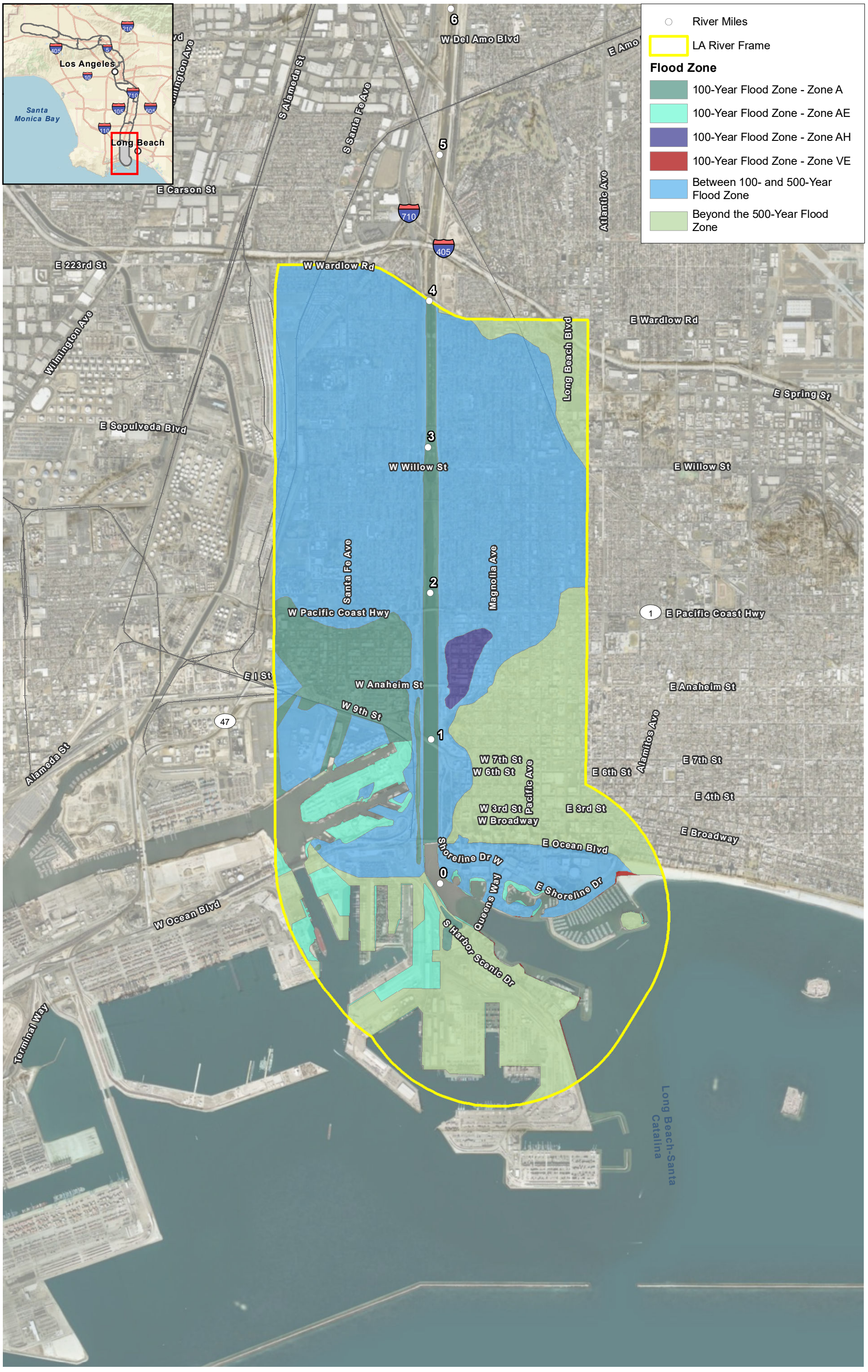
Flooding

Flooding has occurred within the LA River Watershed, even prior to extensive development. The steep mountains surrounding the LA River create a tendency for flash flooding. Following catastrophic flood events in the 1930s, development and expansion of flood management infrastructure was implemented, including channelizing 51 miles of the LA River. The width of the channel generally increases in the downstream direction to accommodate the increasing flow rates as runoff accumulates and/or as the channel slope decreases. The LA River drops almost 800 feet in elevation over its 51-mile course. To increase the channel capacity in the lower 12 miles of the river and following the 1980 flood event, channel improvements in the late 1990s to early 2000s on the lower LA River were implemented.

There are several flood management basins within the LA River Watershed, although together the Sepulveda and Hansen flood management dams contribute a substantial role, collectively providing more than 51,000 acre-feet of active flood management storage, and have critical roles in flood risk management for the river. The Sepulveda Basin is a large in-line flood management basin providing over 18,000 acre-feet of active flood storage used to reduce peak flows in the Upper LA River. The Hansen Flood Control Basin is 1 mile downstream from the confluence of Big Tujunga Creek and Little Tujunga Creek Wash. LACFCD operates multiple dams including Big Tujunga, Pacoima, and Devil's Gate Dams. Pacoima Dam and Big Tujunga Dam are approximately 4 miles north and 11 miles east of the Hansen Flood Control Basin, respectively. Devil's Gate Dam is operated for flood risk management and although it is dry most of the year, water captured in the Devil's Gate reservoir ultimately flows downstream into the LA River. Levees along the Glendale Narrows and the Lower LA River below the Rio Hondo confluence provide additional flood risk reduction. Although efforts are generally successful in managing flood risk, problematic reaches along the river remain and the potential for flood risks continues. Problematic reaches include the Glendale Narrows reach, with deficiencies worsened by the heavy vegetation that has established itself in the soft bottom of the channel, which inhibits flows and increases flood risks. Flooding is related to urbanization and the associated increase in impervious areas in the watershed. However, increased imperviousness is generally associated with increased runoff for smaller, frequent storm results, not the 1 percent storm event (100-year) (Geosyntec and Olin 2018; Geosyntec et al. 2020a, 2020b).

The 2-mile-wide project study area is predominantly outside of the Federal Emergency Management Agency (FEMA) 1 percent storm event (100-year) floodplain. However, the LA River channel and tributaries to the channel are within the FEMA special flood hazard area (SFHA) in the 1 percent storm event (100-year) floodplain. Areas adjacent to the channel are moderate flood hazard areas between the limits of the FEMA 100- and 500-year floodplain (Zone X [shaded]), areas protected from a 1 percent storm event (100-year) flood by levees,[1] or areas of minimal flood hazard beyond the 0.2 percent storm event (500-year) floodplain (Zone X [unshaded]), depending on variations in the surrounding topography, as shown on Figures 3.9-1 through Figure 3.9-9. Generally, the areas adjacent to the channel in the lower portion of river (Frame 1 through Frame 4, between river miles 0 and 16) within Zone X (shaded), are areas of moderate flood hazard. The floodplain terrain is predominantly flat with a 0.2 percent annual chance of a flood. The middle portion of the LA River is within FEMA Zone X (unshaded), areas of minimal flood hazard above the 0.2 percent storm event (500-year) flood level. Portions of areas adjacent to the channel in the Glendale Narrows reach (Frame 5 and Frame 6, between river miles 22 and 33) are within the FEMA 1 percent storm event (100-year) floodplain. Generally the upper portion of the river is beyond the 0.2 percent storm event (500-year) floodplain, although portions of the main river channel (Frame 7, between river miles 32 and 35) are within the FEMA 1 percent storm event (100-year) floodplain, and between river miles 42 and 50 (Frame 8 and Frame 9) the main river channel contains the 1 percent storm event (100-year) flood. In addition, areas near the coast are at risk of inundation due to tsunami and sea level rise. Table 3.9-3 includes descriptions of the various flood hazard zones established by FEMA and their associated flood hazards. A number of the flood hazard zones delineated by FEMA on flood insurance rate maps (FIRMs) are in the project area, as shown on Figures 3.9-1 through Figure 3.9-9 (FEMA 2017).

[1] The areas protected from a 1 percent storm event (100-year) flood by levees are in the cities of the coastal plain: Bell, Bell Gardens, Carson, Compton, Cudahy, Downey, Long Beach, Lynwood, Maywood, Paramount, Rancho Dominguez, and South Gate.



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Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-1: Frame 1 - Estuary
FEMA Flood Zones within the Project Area

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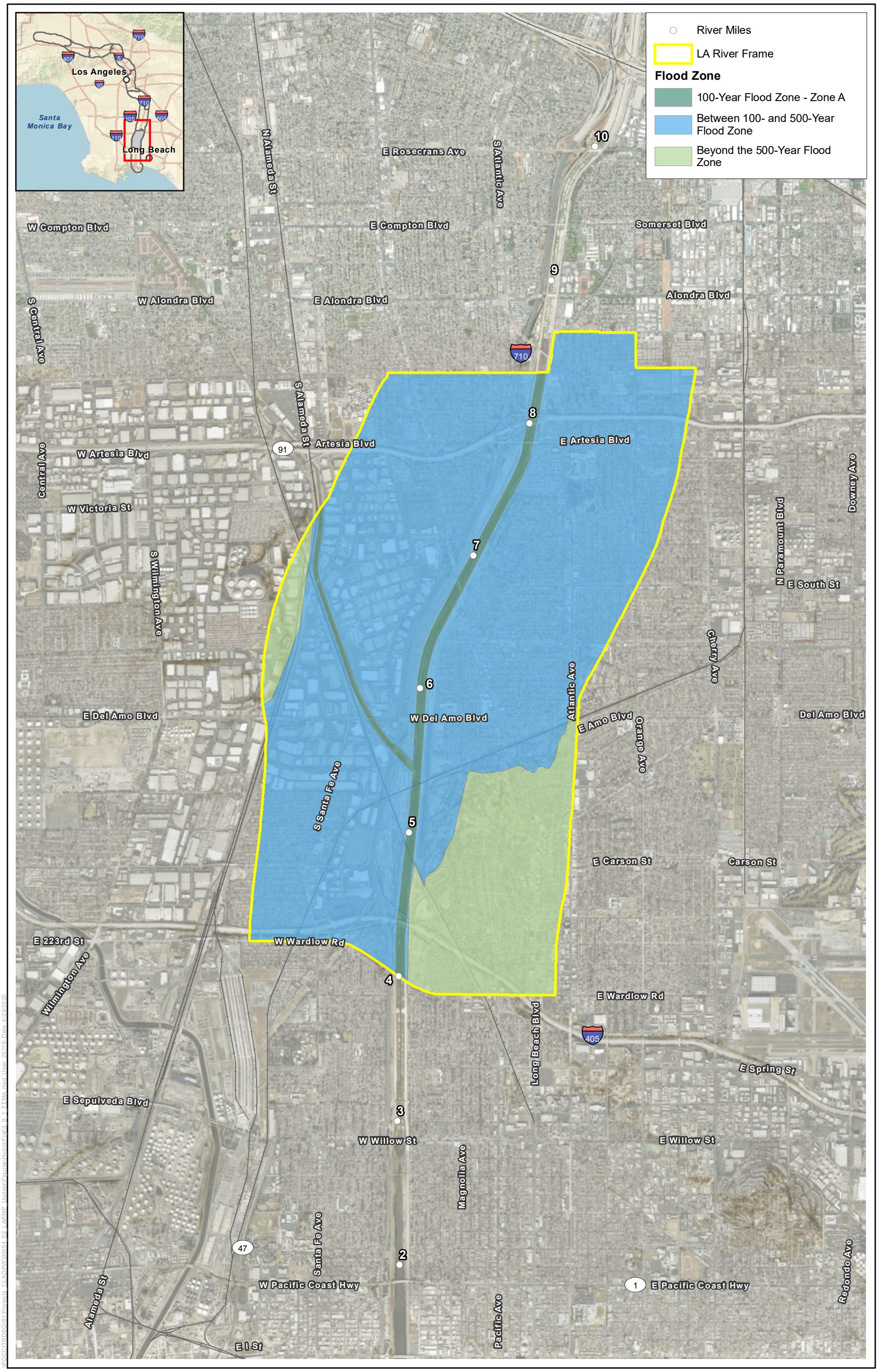

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Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-2: Frame 2 - South Plain
FEMA Flood Zones within the Project Area

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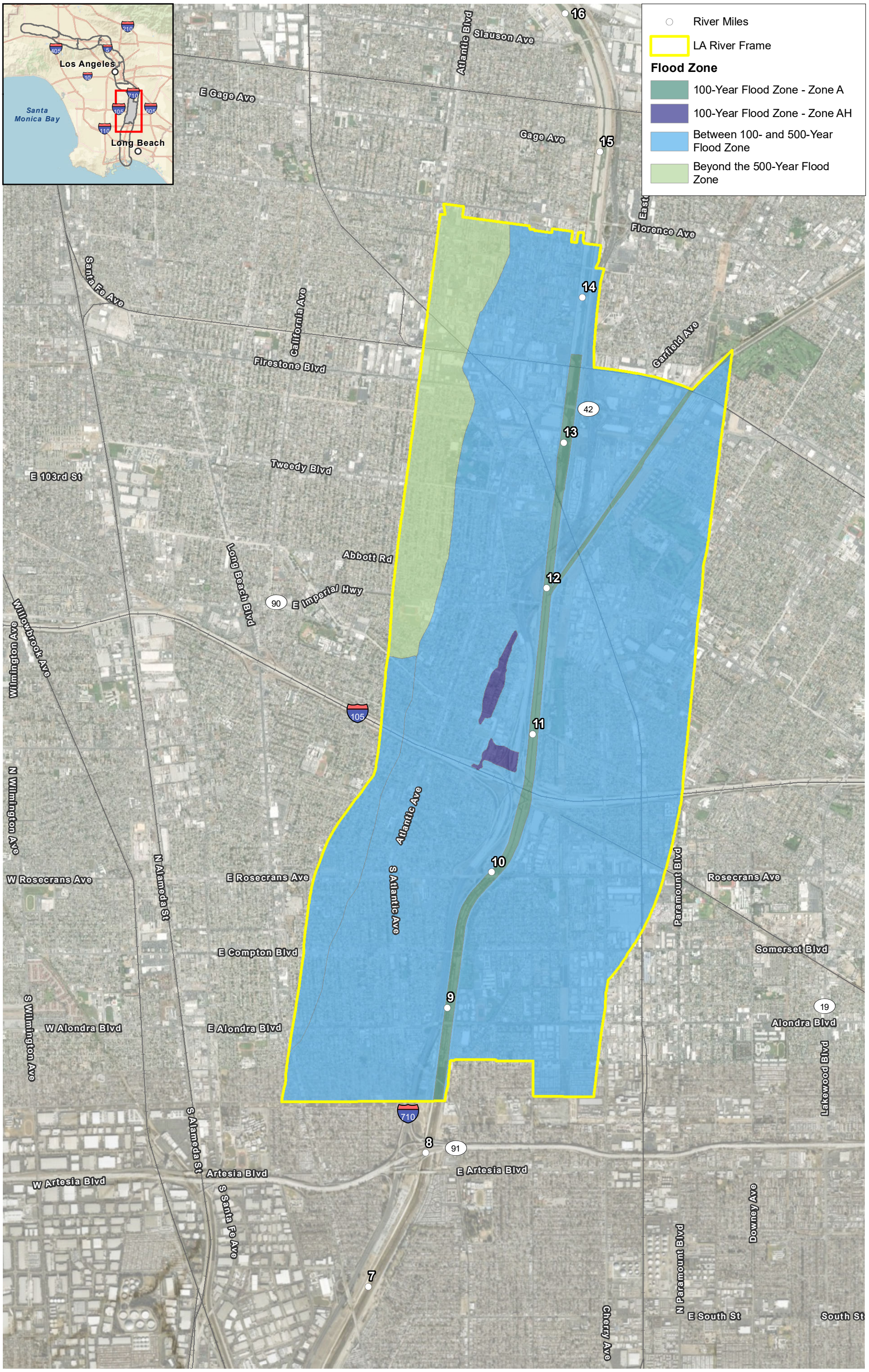

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Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-3: Frame 3 - Central Plain
FEMA Flood Zones within the Project Area

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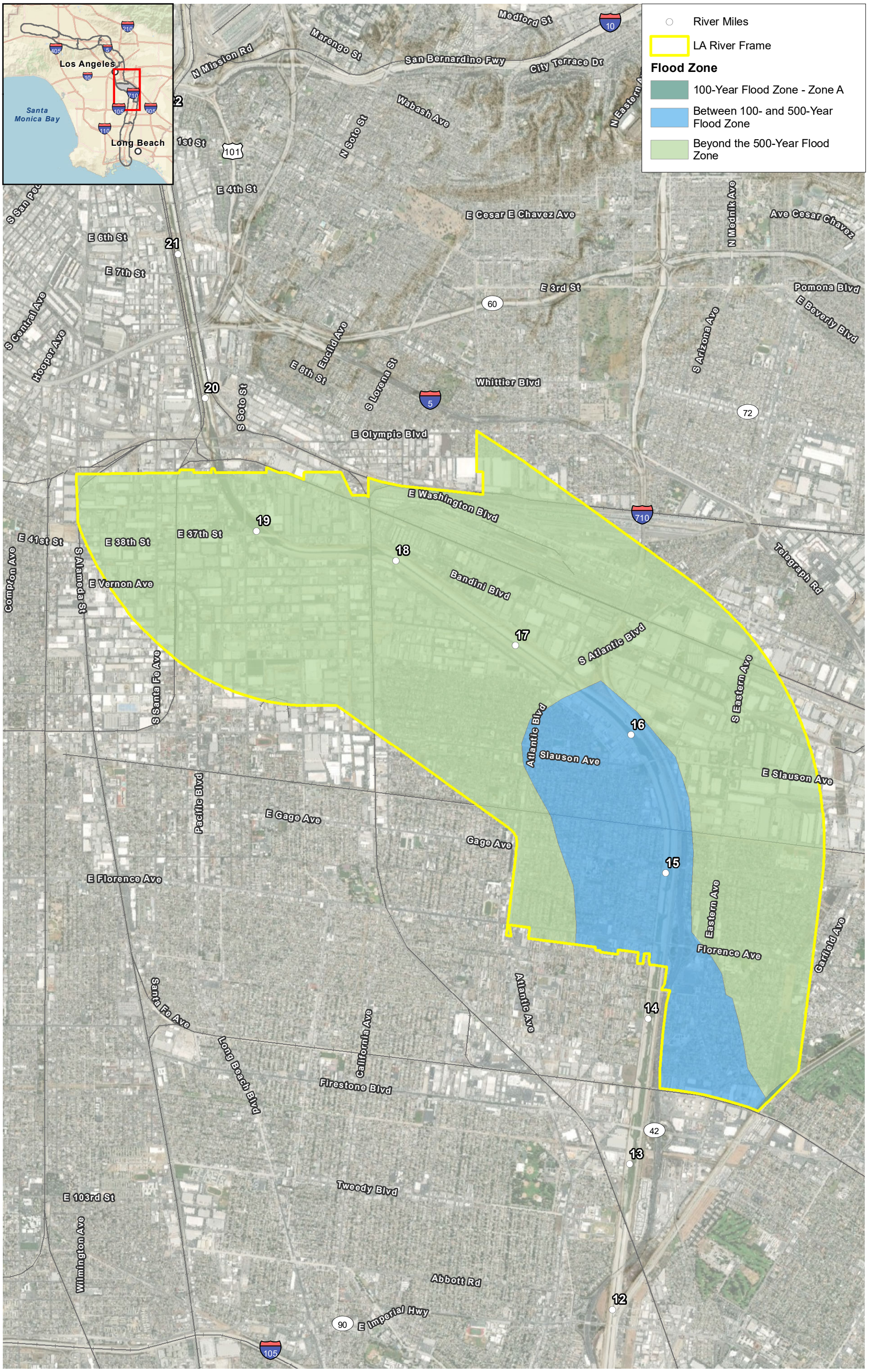

Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-4: Frame 4 - North Plain
FEMA Flood Zones within the Project Area

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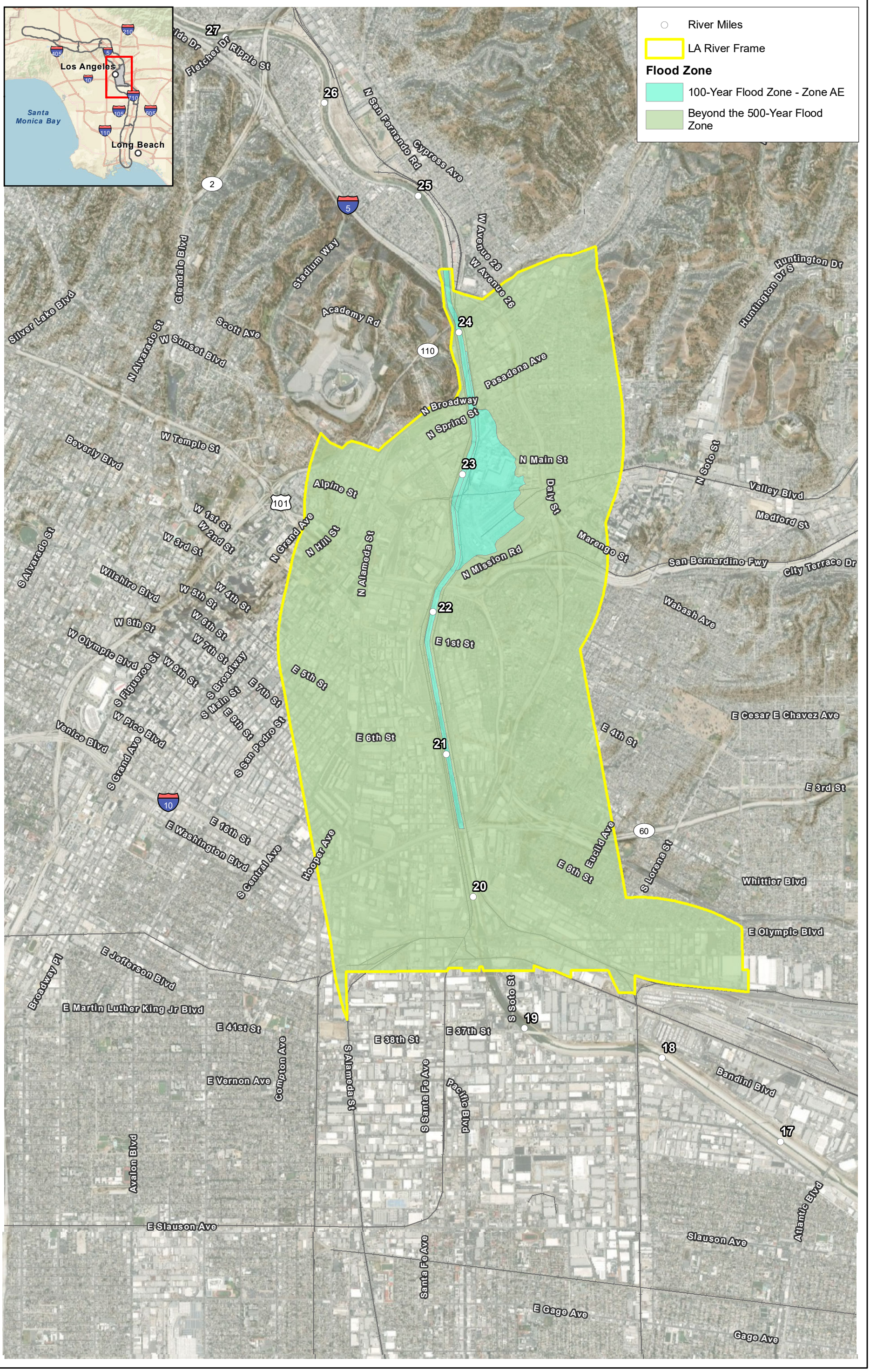

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Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-5: Frame 5 - Heights
FEMA Flood Zones within the Project Area

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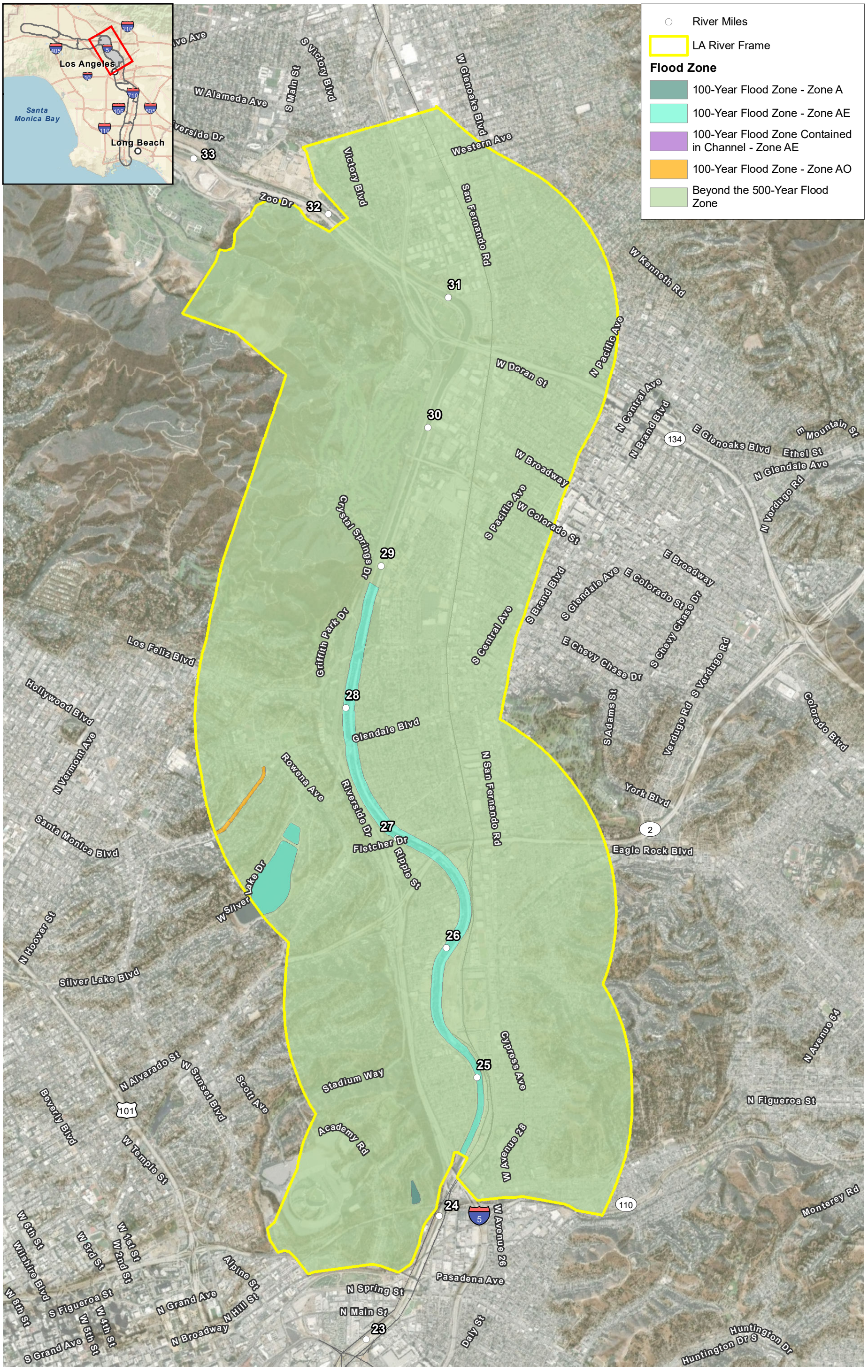
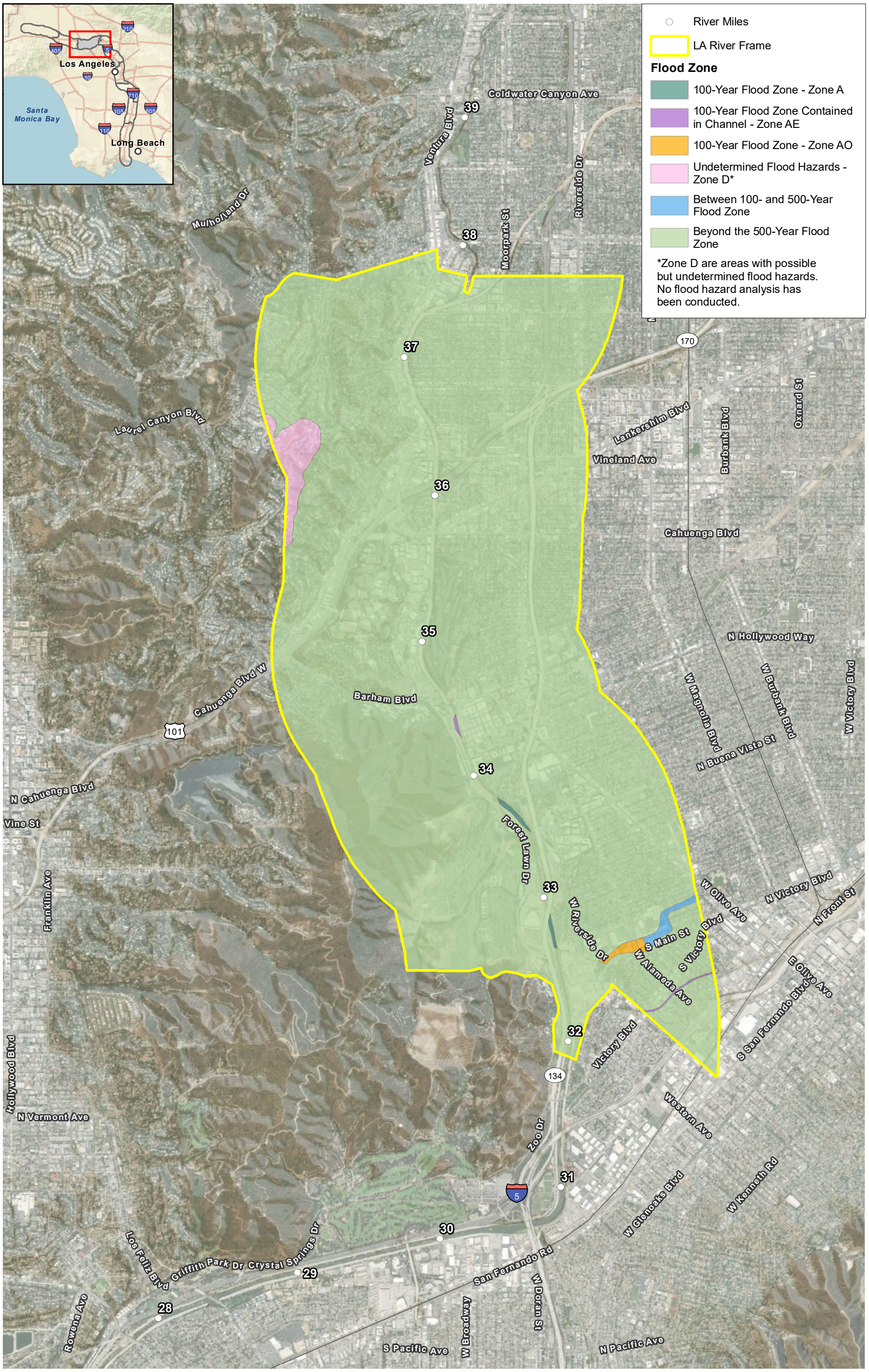


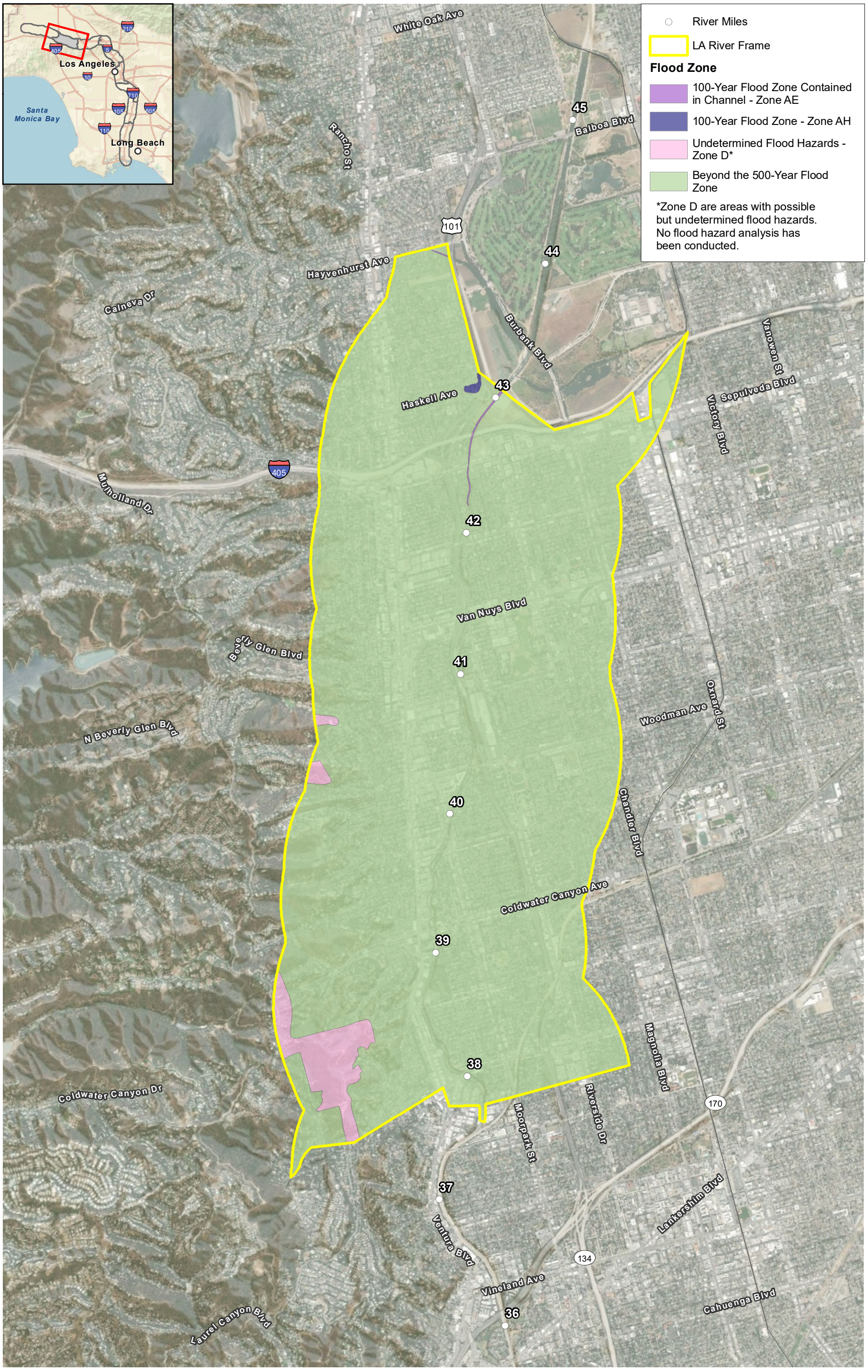
Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-6: Frame 6 - Narrows
FEMA Flood Zones within the Project Area



Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-7: Frame 7 - East Valley
FEMA Flood Zones within the Project Area



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Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-8: Frame 8 - Mid Valley
FEMA Flood Zones within the Project Area

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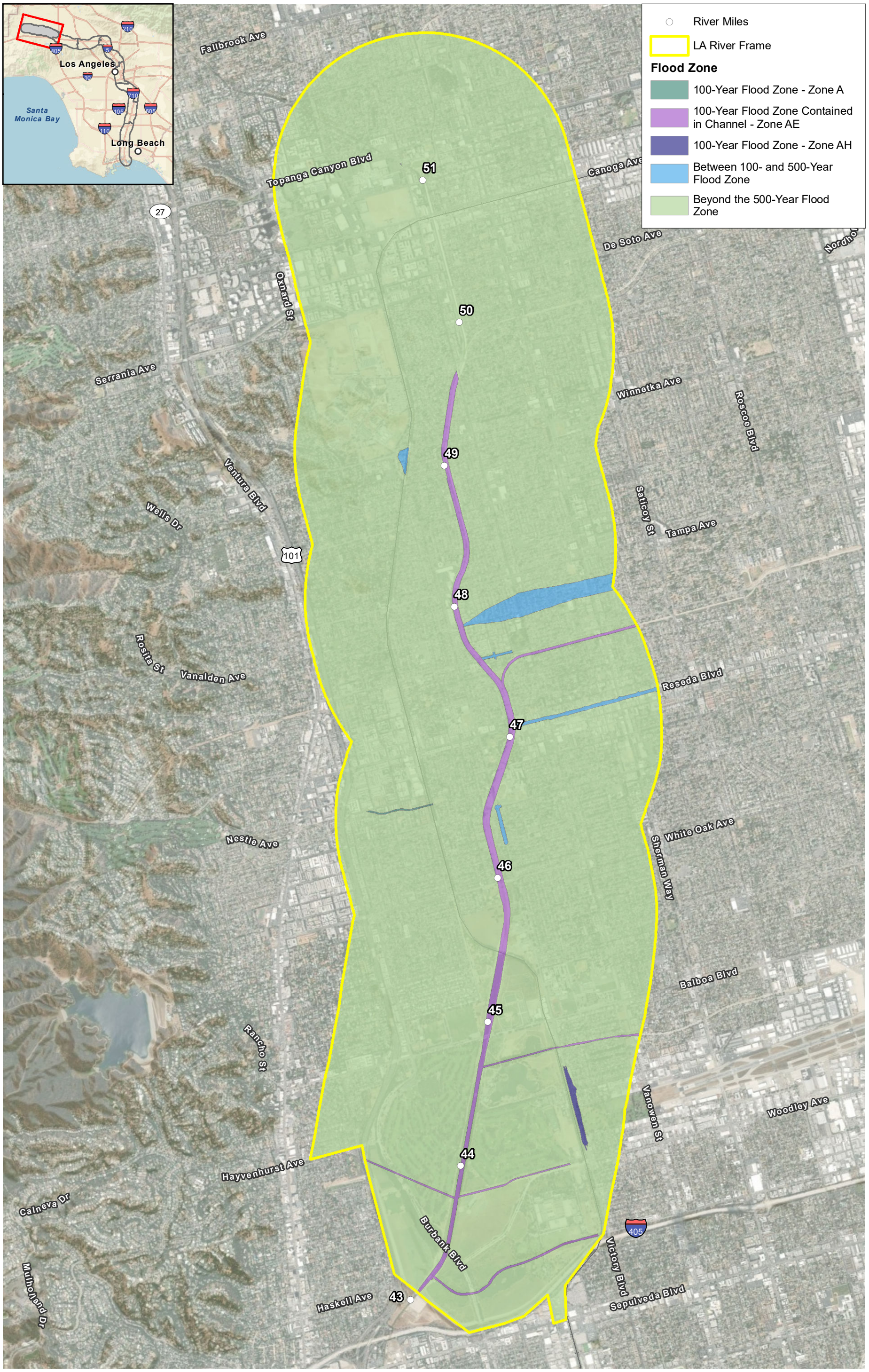

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Source: FEMA; County of Los Angeles; ESRI

Figure 3.9-9: Frame 9 - West Valley
FEMA Flood Zones within the Project Area

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Table 3.9-3. Federal Emergency Management Agency Flood Hazard Zones

Zone	Flood Hazard
High Risk Areas	
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
VE	Areas along the coast with a 1% annual chance of flooding event with additional hazards due to storm-induced velocity wave action. Base flood elevations derived from detailed hydraulic analyses are shown.
Moderate- to Low-Risk Areas	
X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from the 100-year flood, or shallow flooding areas with average depths of less than 1 foot or drainage areas less than 1 square mile.
X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.
Undetermined Risk Areas	
D	Areas with possible but undetermined flood risks. No analysis of flood hazards has been performed in these zones.

Project Study Area Setting

As described in Chapter 2, *Project Description,* the project study area is divided into series of nine distinct geographical sections, or planning frames, related to jurisdictional, hydraulic, and ecological zones. The setting for hydrology and water quality is based on sub-watershed boundaries; therefore, the frames are grouped into three areas, with some overlap between the frames.

Frames 1 through 3

Frames 1 through 3 include the following cities: Long Beach, Los Angeles, Carson, Compton, Downey, Lynwood, and Paramount, and unincorporated County areas. Frame 1 through Frame 3 (at the City of Lynwood) are within the Compton Creek-LA River sub-watershed within the larger LA River Watershed. The Compton Creek-LA River sub-watershed encompasses approximately 79 square miles. The channel within Frame 1 through Frame 3 includes concrete walls forming a trapezoidal channel and levees. The first 3 miles of the channel are a tidally influenced estuary with an earthen (soft) bottom, 585 feet wide across the top of the channel, and the remaining section is 400 feet

across with a concrete-lined channel. With the exception of the initial half river mile, a levee is present on both the west and east sides of the river. The confluence of Compton Creek with the LA River is at river mile 5.5.

The Project overlies portions of the West Coast Basin (Frame 1; river miles 0 through 5.5) and the Central Basin (Frame 2 through Frame 5; river miles 5.5 through 23.5), described above in Section 3.9.2.1, *Geographic*. The California Department of Water Resources previously designated the Central Basin as a high-priority basin based on SGMA basin prioritization. However, the entire Central Basin is currently operated, and has operated for decades, within its sustainable groundwater yield. The Water Replenishment District of Southern California submitted an Alternative Analysis for the Basin, which is currently designated as a very low-priority basin (DWR 2016). Eighty-three percent of the Central Basin was adjudicated, known as Management Area A (Frame 2 through Frame 5). The remainder of the basin is unadjudicated and is not currently pumped for water supply. It consists of two relatively small regions. The area to the north-northwest, which comprises 16 percent of the land area overlying the subbasin, is known as Management Area B (northern half of Frame 5). The final 1 percent, known as Management Area C, does not overlie the Project. Water supply from groundwater sources is greatest in the lowest reaches of the LA River, throughout Frame 1 and Frame 3 and most notably at the City of South Gate (Frame 3), with 80 to 100 percent of the community relying on groundwater supply. Groundwater recharge in the basins (within Frame 1 through Frame 3) is through natural and artificial recharge of foreign water through spreading and injection. However, need of imported water may increase groundwater pumping, leading to increased recharge demand. Based on geophysical properties that allow groundwater recharge through spreading or injection, Frame 1 through Frame 3 contain areas with the lowest potential for groundwater recharge (Geosyntec et al. 2020b).

Waterbodies on the 303(d) list of impaired waterbodies in Frame 1 through Frame 3 include LA River Estuary, Los Angeles/Long Beach Inner Harbor, LA River Reach 1, and LA River Reach 2 (see Table 3.9-2). Compton Creek is also on the 303(d) list for benthic community effects, copper, indicator bacteria, lead, pH, trash and zinc. Although the first 4 river miles have no lead TMDL targets, the northern portion of Frames 1 through 5 has the most stringent dry-weather lead TMDL targets in the river.

Due to the proximity to the coast, the lower 2 to 3 miles of the river are subject to flood risks from tsunami inundation and sea level rise. As shown on Figures 3.9-1 through 3.9-3 (Frames 1 through 3), the lower section of the LA River channel, as well as some areas outside the channel within 2 miles of the coast, are within the 1 percent storm event (100-year) flood zone. Remaining areas adjacent to the river are outside of the FEMA SFHA, within FEMA Zone X (unshaded), areas of minimal flood hazard above the 500-year flood level or protected from a 1 percent storm event (100-year) flood by levees. The flat terrain results in a large floodplain area, including water from the San Gabriel River to the east. The estimated level of flood risk to the areas along the LA River has been determined based on the probability that the channel capacity will be exceeded in a single year. Downstream of the Rio Hondo confluence, estimated level of flood risk is 0.75 percent (i.e., a 0.75 percent chance that the channel capacity will be exceeded in any given year) (Geosyntec et al. 2020a).

Frames 3 through 5

Frames 3 through 5 include the following cities: Cudahy, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, Maywood, Vernon, and Los Angeles. Frames 3 through 5 are within the Chavez

Ravine-LA River sub-watershed within the larger LA River Watershed. The Chavez Ravine-LA River sub-watershed encompasses approximately 62 square miles. The confluence of Rio Hondo and Arroyo Seco with the LA River delineates the sub-watershed's southern and northern boundaries along the LA River, respectively. Between the Rio Hondo and Arroyo Seco, the channel is generally a concrete-lined trapezoidal channel, with the exception of a small rectangular section north of the City of Vernon. Between Rio Hondo and the rectangular (box) channel, the channel is between levees; however, no levees are present north of the rectangular channel in the City of Vernon. The channel width decreases from 415 feet (Frames 3 and 4) to 285 feet at the rectangular channel in the City of Vernon to 225 feet from the rectangular channel to Arroyo Seco, where a transitional channel between trapezoidal and rectangular is present (Geosyntec et al. 2020a).

Frames 3 through 5 are within a portion of the Central Basin, described above in Section 3.9.2.1, *Geographic*. As noted above, water supply from groundwater sources is greatest in the lowest reaches of the LA River, notably at the Cities of Vernon and Bell Gardens (Frame 4), with 80 to 100 percent and 40 to 60 percent of their water sourced from groundwater supply, respectively. Based on geophysical properties that allow groundwater recharge through spreading or injection, the southern portion of Frame 4 is least conducive to groundwater recharge. However, near the City of Vernon in Frame 4, surface areas are most conducive to groundwater recharge. Moving upstream, the area's groundwater recharge potential alternates between most, somewhat, and least conducive (Geosyntec et al. 2020b). As noted above, a portion of Frame 1 through 5 has the most stringent dry-weather lead TMDL targets in the river. Frames 3 through 5 include the LA River Reach 2, which is 303(d) listed as impaired (see Table 3.9-2).

The project areas within Frames 3 through 5 are predominantly outside of any FEMA SFHA (Figures 3.9-3 through 3.9-5).The project areas in Frame 3 and Frame 4 (to river mile 16.5) are areas of moderate flood hazard between the limits of the 1 percent storm event (100-year) and 500-year floods (FEMA Zone X [shaded]). The project areas in Frame 4 (north of river mile 16.5) and Frame 5 (to river mile 22.5) are areas of minimal flood hazards above the 500-year flood level (FEMA Zone X [unshaded]). South of Vernon, the LA River channel is bordered by levees, providing flood protection from a 1 percent storm event (100-year) flood. Small areas north of Interstate 105 and below Interstate 5 and Interstate 110 near downtown Los Angeles (river mile 23), including the river channel between river miles 20 and 29, are within the FEMA 1 percent storm event (100-year) floodplain. A concrete-lined transitional channel, with a concrete channel to the south and an earthen lined channel to the north, is below Interstate 5 and Interstate 110. Transitions between trapezoidal and rectangular cross-sections are designed to minimize hydraulic impacts using standard hydraulic design transitions. Between the Arroyo Seco (river mile 24) and Rio Hondo confluences (river mile 12), the estimated level of flood risk is mostly less than 1 percent, although just downstream from Arroyo Seco and in the City of Vernon (river mile 18) the estimated flood risk level is slightly greater than 2 percent (50-year flood) (Geosyntec et al. 2020a).

Frames 6 through 9

Frames 6 through 9 include the following cities: Los Angeles, Glendale, and Burbank, and unincorporated County areas. Frame 6 is within the Scholl Canyon-LA River sub-watershed and Frame 7 through 9 are within the Tujunga Wash-LA River sub-watershed. The Scholl Canyon-LA River and Tujunga Wash-LA River sub-watersheds encompass 25 square miles and 156 square miles, respectively, both within the larger LA River Watershed. The channel width decreases from 305 feet (river mile 25) to 55 feet (river mile 42), where the Sepulveda Dam (river mile 43) and the Sepulveda Basin (river miles 43 to 45), an earthen-bottom channel, are located. In this reach, the

channel varies from concrete- to earthen-lined and includes transition, trapezoidal, and rectangular channels. Upstream of the Sepulveda Basin, the basin decreases again from 200 feet (river mile 46) to 125 feet (river mile 51), within a concrete-lined trapezoidal channel. Tributaries to the LA River include Verdugo Wash (river mile 30), Burbank Western Channel (river mile 32), Tujunga Wash (river mile 37), and Aliso Canyon Wash (river mile 47).

Frames 6 through 9 are within the San Fernando Valley Basin, described above in Section 3.9.2.2, *Geographic*. Generally, up to 20 percent of water supplied within Frames 6 through 9 is from groundwater sources, with greater groundwater demands in Glendale (Frame 6; 20 to 40 percent) and north of Burbank (Frame 7; 40 to 60 percent). The areas around Glendale and Burbank (Frame 6 and Frame 7, respectively) are most conducive to groundwater recharge, with some alternating areas that are least conducive to recharge. Frame 8 and Frame 9 have moderate conditions favorable for groundwater recharge, with some areas with the least favorable groundwater recharge potential (Geosyntec et al. 2020b).

Frame 6 includes the LA River Reach 3, Frame 7 and Frame 8 include the LA River Reach 4, and Frame 9 includes the LA River Reach 5 and LA River Reach 6. Water in Frame 6 through Frame 9 has the highest levels of ammonia throughout the LA River. Frame 7 and Frame 8 have the most stringent dry-weather selenium TMDL targets in the river. Specific water quality impairments are provided in Table 3.9-2 for each LA River Reach.

The LA River channel up to river mile 29, and between river miles 42 and 49 as well as Silver Lake Reservoir, are within the 1 percent flood zone. As previously noted, the upper portion of the river is generally beyond the 0.2 percent storm event (500-year) floodplain, although portions of the main river channel (Frame 7, between river miles 32 and 35) are within the FEMA 1 percent storm event (100-year) floodplain. The FEMA 1 percent flood event (100-year) floodplain is expected in low-lying areas within the project area between river miles 44 and 50 and between river miles 32 and 38. Topography of the Elysian Valley confines the FEMA 1 percent storm event (100-year) floodplain along the Narrows (river mile 33 to 22) within a narrow corridor near the river.

From the Tujunga Wash confluence (river mile 38) to the Glendale Narrows (river mile 33), the estimated flood risk is generally the 2 percent storm event (50-year) or less. Heavy vegetation that has established itself in the soft bottom of the channel in the Narrows reach (river miles 33 to 22) exacerbates known capacity deficiencies. Despite the presence of levees along portions of this reach, the estimated level of flood risk is greater than the 2 percent event (50-year), with some regions having even higher flood risk levels. From Sepulveda Basin to the Tujunga Wash confluence, the channel generally has flood risk levels of 1 percent or less. However, a short segment upstream of the Tujunga confluence has an estimated flood risk level of 10 percent (10-year) or higher. This may be caused by additional inflows. In addition, the channel width is only 55 feet, compared with 200 feet in the soft-bottom reaches of the Sepulveda Control Basin, indicating the ability of Sepulveda Dam in reducing peak flows in the river. The channel upstream of Sepulveda Basin (river miles 51 to 46) mostly has flood risk levels between 2 percent and 1 percent, with a few locations having an estimated flood risk greater than 2 percent, likely due to local constrictions from bridges. The channel through the Glendale Narrows region (river miles 31 to 24) has a soft bottom, where upwelling groundwater limited the ability to fully concrete the channel. If not maintained, the soft-bottom reaches can become heavily vegetated, which results in decreased flood conveyance capacity (Geosyntec and Olin 2018).

3.9.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of hydrology and water quality in this PEIR.

Federal

Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It is based on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. The CWA requires states to adopt water quality standards for receiving waters. Water quality standards designate beneficial uses for receiving waters and include the criteria required to support such uses. Water quality criteria are either narrative statements related to the quality of the water that support a particular use or maximum concentration levels for pollutants. As part of the CWA, when monitoring data indicate that a concentration level for a pollutant has exceeded applicable water quality criteria, the receiving water is classified as impaired and placed on the 303(d) list. A TMDL is then developed for the pollutant(s) that caused the impairment. The purpose of the TMDL is to limit the pollutant loads discharged into the receiving water from all sources (i.e., stormwater runoff, wastewater, agriculture).

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct an activity that may result in a discharge of a pollutant to waters of the United States (U.S.) obtain a Water Quality Certification. A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the U.S. Under the CWA, the Regional Water Board must issue or waive a Section 401 Water Quality Certification for a project to be permitted under CWA Section 404. The discharge of dredged or fill material into waters of the U.S is subject to permitting specified under Title IV (Permits and Licenses) of the CWA and, specifically, Section 404 (Discharges of Dredged or Fill Material) of the CWA. Section 404 of the CWA regulates the placement of fill materials into the waters of the U.S. Section 404 permits are administered by USACE. In addition, the 1972 amendments to the federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources (Section 402).

River and Harbors Appropriation Act (Section 10)

Section 10 of the Rivers and Harbors Appropriation Act of 1899 prohibits work that affects the course, location, conditions, or capacity of navigable waters of the U.S. without a permit from USACE. *Navigable waters* under this act are "subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (Title 33 Code of Federal Regulations Section 3294). Section 10 of the Rivers and Harbors Appropriation Act requires permits for all structures (such as rip-rap) and activities (such as dredging or pile driving).

Rivers and Harbors Appropriation Act (Section 14)

Authorized in Section 14 of the River and Harbors Appropriation Act, Section 408 (33 U.S. Code 408) provides that the Secretary of the Army may, on recommendation of the Chief of Engineers, grant

permission for the alteration of a public work so long as that alteration is not injurious to the public interest and will not impair the usefulness of the work. Alterations or alter refers to any action by any entity other than USACE that builds upon, changes, improves, moves, occupies, or otherwise affects the usefulness, or the structural or ecological integrity, of a USACE project. Alterations also include actions approved as "encroachments" pursuant to 33 Code of Federal Regulations 208.10.

National Flood Insurance Program

In response to the increasing cost of disaster relief, Congress passed the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains. A FIRM is an official FEMA-prepared map of a community used to delineate both the SFHAs and the flood-risk premium zones applicable to the community. All of the cities along the LA River (except for Cudahy and Huntington Park) and unincorporated County areas are communities participating in the NFIP.

In exchange for providing community residents access to federally backed flood insurance and federal flood disaster assistance, building officials must regulate development in 1 percent storm event (100-year) floodplains in accordance with the NFIP's requirements for flood resiliency and changes to its FIRMs. The proponent of any project with the potential of increasing the Base Flood Elevation (BFE) in a 1 percent storm event (100-year) floodplain (a.k.a. SFHA) must apply for and receive from FEMA a Conditional Letter of Map Revision (CLOMR) prior to construction. The CLOMR application will require hydraulic analyses of the existing and proposed project conditions. Within 6 months of project construction completion, the proponent must apply to FEMA for a final Letter of Map Revision (LOMR). The LOMR application will also require hydraulic analyses. CLOMRs and LOMRs will have to be coordinated with the NFIP Administrator of the community in which the project is located. Structures will have to meet the NFIP's flood resiliency requirements such as elevation of buildings' floors and equipment, flood venting of buildings, anchoring, and breakaway fencing.

Federal Antidegradation Policy

The Federal Antidegradation Policy requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods must, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

National Pollutant Discharge Elimination System

The NPDES was established per 1972 amendments to the Federal Water Pollution Control Act to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a section devoted to stormwater permitting (Section 402(p)), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The California SWRCB issues both general and individual NPDES permits for water quality protection under this program. CWA Section 402 regulates the discharges to surface waters through

the NPDES program, administered by USEPA. USEPA has granted the State of California (SWRCB and Regional Water Boards) primacy in administering and enforcing the provisions of CWA and NPDES.

State

Porter–Cologne Water Quality Control Act of 1969

The Porter–Cologne Water Quality Control Act (Porter–Cologne) and related California Water Code sections established the SWRCB and divided the state into nine regional basins, each with a Regional Water Board. The SWRCB is the primary state agency with responsibility for protecting the quality of the state's surface water and groundwater.

Porter-Cologne authorizes the SWRCB to draft policies regarding water quality in accordance with CWA Section 303. In addition, Porter-Cologne authorizes the SWRCB to issue waste discharge requirements (WDRs) for projects that would discharge waste to state waters. Porter–Cologne requires the SWRCB or the Regional Water Board to adopt water quality control plans, otherwise referred to as basin plans, for the protection of water quality.

A basin plan must:

- Identify beneficial uses for the waterbodies to be protected.
- Establish water quality objectives for the reasonable protection of the beneficial uses.
- Establish an implementation program for achieving the water quality objectives.

Basin plans also provide the technical basis for determining WDRs, taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every 3 years (also known as the triennial review) in accordance with Article 3 of Porter–Cologne and CWA Section 303(c).

Lake and Streambed Alteration Program

The California Department of Fish and Wildlife regulates water resources under Sections 1600 et seq. of the California Fish and Game Code. The California Department of Fish and Wildlife has the authority to grant Streambed Alteration Agreements under Section 1602, which states:

> An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

California Department of Fish and Wildlife jurisdiction includes ephemeral, intermittent, and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated, or to the limit of the adjacent riparian habitat contiguous to the watercourse if the stream or lake is vegetated.

Projects that require a Streambed Alteration Agreement may also require a permit from USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

California Coastal Act

The California Coastal Act, Article 4. Marine Environment, Section 30231, regulates biological productivity and water quality. Section 30221 states:

> The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB in 1968. Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the State, not just surface waters. The policy states that whenever the existing quality of a waterbody is better than the quality established in individual basin plans, such high quality will be maintained and discharges to that waterbody will not unreasonably affect present or anticipated beneficial use of such water resource.

California Toxics Rule

In 2000, the California Environmental Protection Agency (CalEPA) promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the state. CalEPA promulgated this rule based on its determination that the numeric criteria are necessary in the state to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries that are designated statewide as having beneficial uses.

National Pollutant Discharge Elimination System

For compliance with the CWA within California, the SWRCB and Regional Water Boards are responsible for assessing water quality monitoring data for surface waters every 2 years to determine if they contain pollutants that exceed the levels established in water quality standards. The SWRCB administers water rights, water pollution control, and water quality functions throughout the state, while the Regional Water Boards conduct planning, permitting, and enforcement activities. The proposed Project is within the jurisdiction of the Los Angeles Regional Water Board.

The SWRCB and Regional Water Boards implement, monitor, and enforce NPDES permitting requirements within their jurisdictions. In general, the NPDES Program controls water pollution by regulating point sources that discharge pollutants to municipalities' waters of the U.S. As with WDRs, the SWRCB and Regional Water Boards can issue individual NPDES permits to cover individual discharges or general permits (state or regional) to cover a category of discharges.

Waste Discharge Requirements – Discharge to Waters of the State

Dredged or fill discharges to waters deemed by USACE to be outside of federal jurisdiction may be subject to regulation under the SWRCB Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). These projects involve excavation or fill activities affecting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the State and projects involving dredging activities less than 50 cubic yards of non-jurisdictional waters of the State.

Water Quality Certifications and Wetlands Program

The 401 Water Quality Certification and Wetlands Program is protecting all waters of the U.S., but is responsible for wetlands, riparian areas, and headwaters, which are not systematically protected by other programs. This program encourages basin-level analysis and protection, because some functions of wetlands, riparian areas, and headwater streams are expressed at basin or landscape level. The Regional Water Board administers 401 Water Quality Certifications.

NPDES Construction General Permit

Pursuant to CWA Section 402(p), and as related to the goals of Porter–Cologne, the SWRCB has issued a statewide NPDES General Permit for Construction Activities (Construction General Permit) for Stormwater Discharges Associated with Construction Activity (Order No. 2009-009-DWQ, NPDES No. CAS000002, as amended by Order 2010-014-DWQ and 2012-06-DWQ), adopted September 2, 2009. Every construction project that disturbs 1 or more acres of land surface, construction activities that are less than 1 acre of land surface disturbance that are part of a larger common plan of development, or sale that disturbs more than 1 acre of land surface requires coverage under the Construction General Permit. Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least 1 acre of total land area. Projects that will disturb more than 1 acre of land during construction are required to file a Notice of Intent (NOI) with the SWRCB to be covered under the Construction General Permit for discharges of stormwater associated with construction activity. The project proponent must develop measures that are consistent with the Construction General Permit. Furthermore, a Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered under the Construction General Permit. The SWPPP describes the best management practices (BMPs) the discharger will use to protect stormwater runoff and reduce potential impacts on surface water quality through the construction period.

The SWPPP must contain the following:

- A visual monitoring program
- A chemical monitoring program for nonvisible pollutants (to be implemented if a BMP failure occurs)
- A sediment monitoring plan if the site discharges directly to a waterbody on the 303(d) list for sediment

Construction activities that disturb 1 acre of land or more are required to obtain coverage under the Construction General Permit.

Caltrans NPDES MS4 Permit

Caltrans holds a General NPDES Permit that covers statewide Caltrans municipal stormwater discharges. To streamline the Caltrans NPDES permitting process, the SWRCB issued a state water permit on July 15, 1999, that regulated all discharges from Caltrans MS4s. The new Caltrans stormwater permit was re-issued and became effective July 1, 2013.

The SWRCB has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. Caltrans holds a General NPDES Permit that covers primarily municipal stormwater discharges (as amended by 2014-0006-EXEC, 2014-0077-DWQ, 2015-0036-EXEC, and 2017-0026-EXEC [NPDES No. CAS000003] NPDES Statewide Storm Water Permit WDRs for Caltrans MS4 Permit, effective July 1, 2013). Caltrans MS4 Permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the Regional Water Board issues NPDES permits for 5 years, and permit requirements remain active until a new permit is adopted. The permit regulates the following discharges:

- Stormwater discharges from all Caltrans-owned MS4s
- Stormwater discharges from Caltrans vehicle maintenance, equipment cleaning operations facilities, and any other non-industrial facilities with activities that have the potential of generating pollutants
- Certain categories of non-stormwater discharges. Caltrans shall check with the appropriate Regional Water Board to determine if a specific non-stormwater discharge requires coverage under a separate NPDES permit

This permit does not regulate discharges from Caltrans' construction activities, including dewatering effluent discharges from construction projects. Instead, Caltrans is required to obtain coverage by the Construction General Permit and develop a project SWPPP. Caltrans provides a SWPPP template, stormwater guidance documents, and other construction stormwater resources on the Caltrans Stormwater and Water Pollution Control webpage. Any discharges from a site occurring after completion of construction are fully subject to the requirements of this order.

Nonpoint Source Pollution Control

To control nonpoint source (NPS) pollution, SWRCB adopted the *Plan for California's Nonpoint Source Pollution Control Program* (NPS Program Plan). The SWRCB's *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* explains how the NPS Program Plan would be implemented and enforced, fulfilling the requirements of California Water Code Section 13369 (a)(2)(B). The policy explains how Porter-Cologne mandates and authorities, delegated to the SWRCB and Regional Water Boards, will be used to implement and enforce the NPS Program Plan. The policy also provides a bridge between the NPS Program Plan and the SWRCB Water Quality Enforcement Policy.

2010 California Green Building Standards Code (CALGreen)

CALGreen is a statewide mandatory green building code all cities in California were required to adopt by January 1, 2011. CALGreen requires new standards in materials reuse, locally sourced materials, water/energy efficiency, and indoor air quality. To meet CALGreen requirements, the Los Angeles County Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31), which is designed to improve public health, safety, and general welfare by

enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact, or positive environmental impact, and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality

Regional

Water Quality Control Plan, Los Angeles Region

Porter–Cologne authorizes the Regional Water Boards to adopt, review, and revise policies for all waters of the State (including surface water and groundwater) and directs them to develop regional basin plans. The relevant regional basin plan is the *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Section 13170 of the California Water Code also authorizes the SWRCB to adopt basin plans on its own initiative. Regional Water Boards are required, by law, to develop, adopt, and implement a basin plan for the entire region. Water quality standards are set forth in the regional Basin Plan. According to Section 13050 of the California Water Code, basin plans consist of designation or establishment of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives for the waters within a specified area. Because beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the basin plans are regulatory references for meeting the state and federal requirements for water quality control.

Los Angeles County Municipal Stormwater NPDES Permit CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for MS4s. Phase I MS4 Permit regulations cover medium-sized municipalities (between 100,000 and 250,000 people) and large municipalities (more than 250,000 people).

On November 8, 2012, the Los Angeles Regional Water Board adopted Order No. R4-2012-175 (NPDES Permit No. CAS004001), Waste Discharge Requirements for MS4 Discharges Within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4 (County MS4 Permit). The County MS4 Permit became effective December 28, 2012. Order No. R4-2012-175 is the fourth iteration of the stormwater permit for MS4s in Los Angeles County, which includes LACFCD, County, and 84 incorporated cities (including the City of Los Angeles) within the County watersheds, excluding the City of Long Beach. This permit requires runoff issues to be addressed during major phases of urban development (planning, construction, and operation) to reduce the discharge of pollutants from stormwater to the maximum extent practicable, effectively prohibit non-stormwater discharges, and protect the beneficial uses of receiving waters. The County MS4 Permit requires implementation of a Stormwater Quality Management Plan (SQMP), discussed below.

The County MS4 Permit includes TMDL provisions designed to ensure that Los Angeles County achieves waste load allocations and meets other requirements of TMDLs covering receiving waters affected by the County's MS4 discharges. The County MS4 Permit also contains provisions that allow the permit to be modified, revoked, reissued, or terminated under certain circumstances. For example, provisions may be incorporated as a result of future amendments to the Basin Plan, such as a new or revised water quality objective or the adoption or reconsideration of a TMDL, including program implementation.

The County MS4 Permit allows permittees the flexibility to develop Watershed Management Programs (WMPs) or Enhanced Watershed Programs (EWMPs) to implement the requirements of the permit on a watershed scale through customized strategies, control measures, and BMPs. An EWMP provides guidance for municipalities throughout Los Angeles County to simultaneously comply with federal and state water quality mandates; improve the quality of rivers, creeks, and beaches; and address current and future regional water supply challenges. EWMPs identify current and future multi-benefit projects that will capture, treat, and use or infiltrate as much stormwater as possible.

Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties

Discharges of treated or untreated groundwater generated from permanent or temporary dewatering operations or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits are currently regulated under a regional general permit, General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2018-0125, NPDES No. CAG994004).

Construction dewatering wastes (except stormwater) are regulated as low-threat discharges to surface waters. An NOI and report of waste discharge must be submitted to the Los Angeles Regional Water Board to comply with this general permit. Based on the depth to groundwater, it is not anticipated that the proposed Project would require groundwater dewatering during construction or be subject to the requirements of this general permit. In the event that groundwater is encountered during construction, it would be covered under the NPDES Construction General Permit.

Stormwater Quality Management Plan

Implementation of an SQMP, as required by the County MS4 Permit, includes the use of BMPs to reduce the amount of pollutants in stormwater and dry-weather runoff. The SQMP is broken up into seven separate programs: Public Information and Participation, Industrial/Commercial Facilities, Development Planning, Development Construction, Public Agency Activities, Illicit Connection/Illicit Discharge, and Countywide Monitoring. SQMP programs have been established to create a comprehensive program that will ensure water quality protection for the future.

Los Angeles County Low Impact Development Standards Manual

Public Works prepared the Low Impact Development (LID) Standards Manual (Public Works 2014) to comply with the requirements of the 2012 MS4 Permit and supersede the County Standard Urban Stormwater Mitigation Plan. The LID Standards Manual provides guidance for the implementation of

stormwater quality control measures in new development and redevelopment projects in unincorporated County areas with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. Unlike traditional stormwater management, which collects and conveys stormwater runoff through storm drains, pipes, or other conveyances to a centralized stormwater facility, LID uses site design and stormwater management to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.

The LID standards (Chapter 12.84; Ord. 2013-0044 § 1, 2013: Ord. 2008- 0063 § 1) include mimicking undeveloped stormwater runoff rates and volumes in any storm event up to and including the Capital Flood; preventing pollutants of concern from leaving the development site in stormwater as the result of storms, up to and including a Water Quality Design Storm Event; and minimizing hydromodification impacts on natural drainage systems. Applicable projects include but are not limited to new development involving 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area; new restaurants with 5,000 square feet or more of surface area; redevelopment projects that result in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on a site that has been previously developed; or development of a previously undeveloped site.

Los Angeles County Hydrology Manual

The Los Angeles County Hydrology Manual establishes Public Works' hydrologic design procedures and serves as a reference and training guide. The hydrologic techniques in the manual apply to the design of local storm drains, retention and detention basins, pump stations, and major channel projects. The techniques also apply to storm drain deficiency and flood hazard evaluations. Low-flow hydrology methods related to water quality standards are also discussed. Standards provided in the manual govern all hydrology calculations done under Public Works' jurisdiction.

The Public Works Hydrology Manual requires that a storm drain conveyance system be designed for a 10-year storm event, and that the combined capacity of a storm drain and street flow system accommodate flow from a 25-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 2 percent (50-year) storm event.

Los Angeles County Hydraulics Design Manual

LACFCD's Hydraulic Design Manual provides criteria for hydraulic design, design requirements for maintenance and access, and water surface calculations for closed conduits and open channels, as well as criteria for catch basins, levees, and other hydraulic infrastructure features within Los Angeles County.

Los Angeles County General Plan

The *Los Angeles County General Plan* (Los Angeles County 2015) identified goals and policies from the Conservation and Natural Resources and Safety Elements related to hydrology, water quality, groundwater, and flood hazards, which are described below.

Goal C/NR 5: Protected and useable local surface water resources.

- **Policy C/NR 5.1:** Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.

- **Policy C/NR 5.2:** Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
- **Policy C/NR 5.3:** Actively engage with stakeholders in the formulation and implementation of surface water preservation and restoration plans, including plans to improve impaired surface water bodies by retrofitting tributary watersheds with LID types of BMPs.
- **Policy C/NR 5.4:** Actively engage in implementing all approved Enhanced Watershed Management Programs/Watershed Management Programs and Coordinated Integrated Monitoring Programs/Integrated Monitoring Programs or other County-involved TMDL implementation and monitoring plans.
- **Policy C/NR 5.5:** Manage the placement and use of septic systems in order to protect nearby surface water bodies.
- **Policy C/NR 5.6**: Minimize point and non-point source water pollution.
- **Policy C/NR 5.7:** Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other—particularly—tributary street and greenway interface points with channelized waterways

Goal C/NR 6: Protected and usable local groundwater resources.

- **Policy C/NR 6.1:** Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
- **Policy C/NR 6.**2: Protect natural groundwater recharge areas and regional spreading grounds.
- **Policy C/NR 6.3:** Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at regional, neighborhood, infrastructure, and parcel-level scales.
- **Policy C/NR 6.4:** Manage the placement and use of septic systems in order to protect high groundwater.
- **Policy C/NR 6.5:** Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils.

Goal C/NR 7: Protected and healthy watersheds.

- **Policy C/NR 7.1:** Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.
- **Policy C/NR 7.2:** Support the preservation, restoration and strategic acquisition of available land for open space to preserve watershed uplands, natural streams, drainage paths, wetlands, and rivers, which are necessary for the healthy function of watersheds.
- **Policy C/NR 7.3:** Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans, ecosystem restoration projects, and other related natural resource conservation aims, and support the implementation of existing efforts, including Watershed Management Programs and Enhanced Watershed Management Programs.
- **Policy C/NR 7.4:** Promote the development of multi-use regional facilities for stormwater quality improvement, groundwater recharge, detention/attenuation, flood management, retaining non-stormwater runoff, and other compatible uses.

Goal S 2: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.

- **Policy S 2.1:** Discourage development in the County's Flood Hazard Zones.
- **Policy S 2.2:** Discourage development from locating downslope from aqueducts.
- **Policy S 2.3:** Consider climate change adaptation strategies in flood and inundation hazard planning.

- **Policy S 2.4:** Ensure that developments located within the County's Flood Hazard Zones are sited and designed to avoid isolation from essential services and facilities in the event of flooding.
- **Policy S 2.5:** Ensure that the mitigation of flood related property damage and loss limits impacts to biological and other resources.
- **Policy S 2.6:** Work cooperatively with public agencies with responsibility for flood protection, and with stakeholders in planning for flood and inundation hazards.
- **Policy S 2.7:** Locate essential public facilities, such as hospitals and fire stations, outside of Flood Hazard Zones, where feasible.

Los Angeles County Codes

Los Angeles County Codes include ordinances and practices that regulate hydrology, water quality, and groundwater:

- **Title 11:** Regulations and provisions related to health and safety including water and sewers, groundwater, impaired water bodies, and water wells
- **Title 20:** Regulations related to utilities including the regional clean water program, stormwater, and urban runoff
- **Title 26:** Building codes and regulations related to flood hazards, grading including stormwater control measures, drainage and terracing, slope planting and erosion control, NPDES compliance, and SWPPP requirements
- **Title 30:** Provide minimum standards to preserve the public safety, health, and welfare by regulating the design, construction, installation, quality of materials, use, occupancy, location, and maintenance of all buildings, structures, grading, and certain equipment.

City

Frame 1

City of Long Beach

City of Long Beach Municipal Stormwater NPDES Permit

The Los Angeles Regional Water Board adopted Order No. R4-2014-0024 (NPDES Permit No. CAS004003, as amended by R4-2014-0024-A01), Waste Discharge Requirements for MS4 Discharges from the City of Long Beach (Long Beach MS4 Permit), becoming effective March 28, 2014. The Long Beach MS4 Permit includes TMDL provisions designed to ensure that the City of Long Beach achieves waste load allocations and meets other requirements of TMDLs covering receiving waters affected by the City of Long Beach's MS4 discharges. Among the TMDL provisions in the Long Beach MS4 Permit are provisions relating to the LA River Watershed Trash TMDL, including applicable water quality-based effluent limitations for trash; measures to achieve compliance with the effluent limitations for trash; and monitoring and reporting requirements related to the effluent limitations for trash. On September 8, 2016, the Los Angeles Regional Water Board amended the Long Beach MS4 Permit to incorporate modifications consistent with the revised LA River Watershed Trash TMDL. The order expired March 28, 2019; however, a new order has not been adopted, so the City of Long Beach may continue to implement the requirements of this order until a new one is adopted.

Long Beach Stormwater Management Program

The objectives of the Long Beach Stormwater Management Program are to effectively prohibit non-stormwater discharges and to reduce the discharge of pollutants to the maximum extent practicable such that these discharges will not adversely affect the beneficial uses of receiving waters. The City of Long Beach's ultimate objective is to comply with the federal CWA and Porter-Cologne.

City of Long Beach General Plan

The *Long Beach General Plan Program* identified goals and policies from the Conservation, Open Space and Recreation, and Public Safety Elements related to hydrology, water quality, and flood hazards (City of Long Beach 1973, 1975, 2002).

Water Resource Management Goal 1: To assure adequate quantity and quality of water to meet the present and future domestic, agricultural and industrial needs of the City.

Water Resource Management Goal 2: To enforce existing ordinances and develop new ordinances and promote continuing research directed toward achieving the required stringent water quality standards which regulate wastewater effluent discharge to ocean waters, bays and estuaries, fresh waters and groundwater.

Water Resource Management Goal 3: To assure that the waters of San Pedro and Alamitos Bays and Colorado Lagoon are maintained at the highest quality feasible in order to enhance their recreational, and commercial utilization.

Water Resource Management Goal 4: To enforce existing controls and ordinances regulating waste discharge from vessels.

Open Space and Recreation Goal: Provide for and maintain sufficient open space for adequate protection of lives and property against natural and man-made safety hazards.

- **Policy:** Maintain open space buffers adequate to keep property and lives save from natural and man-made disasters within the City including unstable soil areas, known active fault zones, low-lying flood prone lands, airport flight paths, and areas of physical and noise contamination

Public Safety Development Goal 5: Use physical planning as a means of achieving greater degrees of protection from safety hazards.

Public Safety Development Goal 8. Encourage development that would be most in harmony with nature and thus less vulnerable to natural disasters.

City of Los Angeles

City of Los Angeles General Plan

The City of Los Angeles identified objectives and policies in the Conservation and Safety Elements related to water resources, water quality, and flood hazards (City of Los Angeles 1996, 2001).

Objective: protect the coastline and watershed from erosion and inappropriate sedimentation that may or has resulted from human actions.

- **Policy 1:** support legislation and efforts to secure and retain federal funding for Pacific coast beach protection and renourishment programs.
- **Policy 2:** continue to prevent or reduce erosion that will damage the watershed or beaches or will result in harmful sedimentation that might damage beaches or natural areas.

Objective: protect and enhance the diversity and sustainability of the natural ecologies of the Santa Monica and San Pedro bays, including the bay fishery populations.

- **Policy 1:** continue to reduce pollutant discharge into the bays from both natural and human sources.
- **Policy 2:** continue to support legislation and to seek funding and legislation intended for bay and coastal protection, enhancement and habitat restoration.
- **Policy 3:** continue to support and/or participate in programs to clean bay sediments and/or mitigate potentially harmful effects of contaminants in the sediments and waters of the bays.

Safety Goal 1: A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.

- **Safety Policy 1.1.1 Coordination:** Coordinate information gathering, program formulation and program implementation between City agencies, other jurisdictions and appropriate public and private entities to achieve the maximum mutual benefit with the greatest efficiency of funds and staff.
- **Safety Policy 1.1.4 Health/environmental protection**: Protect the public and workers from the release of hazardous materials and protect City water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and public from potential health and safety hazards associated with program implementation.
- **Safety Policy 1.1.5 Risk reduction**: Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training.
- **Safety Policy 1.1.6 State and federal regulations:** Assure compliance with applicable state and federal planning and development regulations, e.g., Alquist-Priolo Earthquake Fault Zoning Act, State Mapping Act and Cobey-Alquist Flood Plain Management Act.

City of Los Angeles Stormwater Program

The Watershed Protection Division of the City of Los Angeles Department of Public Works, Bureau of Sanitation, is responsible for stormwater pollution control throughout the city in compliance with the County MS4 Permit. The Watershed Protection Division administers the City of Los Angeles's stormwater program, which has two major components: pollution abatement and flood management. The Watershed Protection Division publishes a two-part handbook that provides guidance to developers for compliance with the County MS4 Permit through the incorporation of water quality management into development planning. The City of Los Angeles's LID Best Management Practices Handbook, Part A: Construction Activities (3rd edition, September 2004) reiterates the policies contained within the Construction General Permit, provides specific minimum BMPs for all construction activities, and requires the preparation of a SWPPP and the filing of an NOI to comply with the Construction General Permit requirements with the Los Angeles Regional Water Board. The LID Best Management Practices Handbook provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities complies with the developing planning program regulations of the City of Los Angeles's stormwater program. The City of Los Angeles is working collaboratively to develop EWMPs related to the project area.

City of Los Angeles Manuals and Standards

Per the City of Los Angeles Special Order No. 007-1299 of December 3, 1999, the City of Los Angeles has adopted Public Works' Hydrology Manual as its basis of design for storm drainage facilities. Drainage and flood management structures and improvements within the City of Los Angeles are subject to review and approval by the City of Los Angeles Department of Public Works, Bureau of Engineering, and Department of Building and Safety. As required by the City of Los Angeles's

Department of Public Works, all public storm facilities must be designed in conformity with the standards set forth by Los Angeles County. The City of Los Angeles Department of Public Works reviews and approves storm drain plans prior to construction. Other City of Los Angeles manuals relevant to the Project include the Storm Drain Design Manual, Standards Plans, and Stormwater Pollution Abatement Handbooks and Publications.

Stormwater Ordinance Los Angeles Municipal Code 64.70

In 1998, the City of Los Angeles passed a stormwater ordinance (Los Angeles Municipal Code 64.70), which prohibits the entry of illicit discharges into the municipal storm drain system and gives the City of Los Angeles local legal authority to enforce the NPDES permit and take corrective actions with serious offenders. Any commercial, industrial, or construction business found discharging waste or wastewater into the storm drain system may be subject to legal penalties. In 2011, the City of Los Angeles passed an LID ordinance that amends Los Angeles Municipal Code 64.70 and requires development and redevelopment projects to mitigate runoff in a manner that captures rainwater at its source utilizing natural BMPs such as rain barrels, permeable pavement, storage tanks, and infiltration swales.

Frame 2

Unincorporated County Areas

Applicable regulations are described above.

City of Long Beach

Applicable regulations are described above.

City of Carson

City of Carson General Plan

The *Carson General Plan* identifies goals and policies in the Open Space and Conservation and Safety Elements related to water resources, drainage, and flood hazards (City of Carson 2004).

Goal OSC-2: Protection and conservation of Carson's water resources.

- **Policy OSC-2.1** Maintain and improve water quality.
- **Policy OSC-2.2** Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.
- **Policy OSC-2.2** Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Goal SAF-2: Strive to minimize injury and loss of life, damage to public and private property and infrastructure, and economic and social disruption caused by flood hazards.

- **Policy SAF-2.1** Continue to maintain and improve levels of storm drainage service.
- **Policy SAF-2.2** Continue to work with the appropriate local, State and Federal agencies (i.e., Los Angeles County Department of Public Works, Caltrans, Federal Emergency Management Agency, etc.) to reduce the potential for flood damage in the City of Carson.
- **Policy SAF-2.3** Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with Los Angeles County Department of Public Works and other cities in the South Bay region to ensure that facilities are adequate to accommodate storm waters.

- **Policy SAF-2.4** As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses.
- **Policy SAF-2.5** Periodically review and recommend appropriate changes to the Los Angeles County Department of Public Works for the Storm Drainage Master Plan for Los Angeles County

City of Carson Individual Watershed Management Program

The City of Carson is a permittee of the County MS4 Permit. To address MS4 Permit requirements, the City of Carson prepared an Individual Watershed Management Program (I-WMP) to meet TMDL and non-water quality standards (referred to collectively as "WQSs"). The I-WMP allows the City of Carson to determine to what extent its existing stormwater quality management program is meeting TMDLs and non-TMDL WQSs, based on outfall monitoring against ambient WQSs.

The City of Carson is also participating in a Coordinated Integrated Monitoring Plan (CIMP). The CIMP addresses all of the monitoring requirements specified in the County MS4 Permit's Monitoring and Reporting Program element. The purpose of the CIMP is to: (1) characterize watersheds/sub-watersheds relative to WQSs; (2) determine to what extent MS4 permittees are meeting or not meeting WQSs; and (3) achieve monitoring cost savings through collective participation with other permittees sharing common watershed location.

City of Compton

City of Compton Individual Watershed Management Program

The City of Compton is in the process of developing an I-WMP and is participating in a CIMP. As the City of Compton does not have an approved Integrated Monitoring Plan, the City of Compton is therefore immediately subject to the baseline monitoring and reporting requirements of the County MS4 Permit, Attachment E. Pursuant to Attachment E of the County MS4 Permit, baseline monitoring requirements include receiving water monitoring during wet and dry weather, stormwater outfall based monitoring, non-stormwater outfall based screening and monitoring, new development/re-development effectiveness tracking, and regional studies. The City of Compton is also responsible for complying with the annual reporting requirements, pursuant to Attachment E, Part XVIII of the County MS4 Permit.

City of Compton General Plan

The *Draft Compton General Plan 2030* (City of Compton 2011) identified goals and policies from the Conservation, Open Space, and Recreation and Public Safety Elements related to hydrology, stormwater, and flood hazards

Conservation, Open Space, and Recreation Goal 1: Conserve and protect water resources.

- **Conservation, Open Space, and Recreation Policy 1.1:** The City of Compton will protect groundwater resources from depletion and contamination.
- **Conservation, Open Space, and Recreation Goal 2:** Preserve and rehabilitate the Compton Creek Open Space.
- **Conservation, Open Space, and Recreation Policy 2.1:** The City of Compton will support the efforts of the LA River and San Gabriel Rivers Watershed Council in the goals and objectives of the Compton Creek Watershed Management Plan.

Public Safety Goal 2: Protect residents, workers, and visitors from flood hazards.

- **Public Safety Policy 2.1:** The City of Compton will work with the Los Angeles County Department of Public Works to identify and construct needed local and regional storm drain improvements to prevent flooding problems in Compton.
- **Public Safety Policy 2.2:** The City of Compton will require local drainage-related improvements as part of new development approvals.

City of Long Beach

Applicable regulations for the City of Long Beach are described above in Frame 1.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory setting.

Frame 3

City of Compton

Applicable regulations for the City of Compton are described above in Frame 2.

City of Cudahy

City of Cudahy General Plan

The *Cudahy 2040 General Plan* identifies goals and policies from the Open Space and Conservation and Safety Elements related to hydrology, water quality, and flood hazards (City of Cudahy 2018).

Goal OSCE-1: A sustainable urban environment protects valuable natural resources (water, air, and soil) and limits waste production

- **Policy OSCE-1.7**: Integrate stormwater treatment best practices—including bioswales, pervious pavement—wherever possible, especially in landscaping and parking lot design.
- **Policy OSCE-1.8:** Incorporate Low Impact Development (LID) approaches into the design and upgrades of public infrastructure.
- **Policy OSCE-1.9:** Reduce impermeable surface coverage citywide.

Goal OSCE-4: Safe and efficient infrastructure systems (sewer, water, storm drain) that are maintained to sustainably grow with the community.

- **Policy OSCE-4.1**: Coordinate with the owning/operating sewer, water, and storm drain agencies to ensure adequate maintenance and regulatory compliance.
- **Policy OSCE-4.2**: Ensure new projects comply with the Los Angeles County MS4 permit.
- **Policy OSCE-4.3**: Encourage use of onsite Best Management Practices (BMPs) or biofiltration to treat storm water for project sites where infiltration is infeasible.

Goal SE-4: A prepared and resilient Cudahy

- **Policy SE-4.1**: Ensure and maintain the structural and operational integrity of essential public facilities during earthquakes and flooding.
- **Policy SE-4.3:** Prioritize improvements to Cudahy's storm water management systems (storm drain improvements, reduction of impervious surfaces, etc.) to better serve areas prone to intermittent flooding.
- **Policy SE-4.4:** Require improvements to be made to utility transmission and distribution systems including electrical, gas, water, wastewater, and storm drainage, thus accommodating

new growth and ensuring that maintenance is performed on these systems in a manner that provides safety, reliability, and environmental compatibility.

City of Downey

City of Downey General Plan

The *Downey Vision 2025 General Plan* identifies goals and policies from the Conservation and Safety Elements related to water quality, stormwater, and flood hazards (City of Downey 2005).

Goal 4.2: Prevent the contamination of groundwater.

- **Policy 4.2.1:** Monitor and improve groundwater quality.
- **Goal 4.3:** Reduce the contamination level at beaches and oceans.
- **Policy 4.3.1:** Reduce the contaminant level of stormwater and urban runoff generated within Downey.

Goal 5.6: Minimize potential adverse impacts from flooding.

- **Policy 5.6.1**: Protect life and property from flooding hazards.
- **Policy 5.6.2**: Minimize the potential for flooding due to stormwater generation.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* identifies goals and policies from the Environmental Resources, Community Development, and Public Health and Safety Elements related to water resources and stormwater (City of Lynwood 2003).

Goal WR-1: Protect surface and subsurface water resources in the water basin that are impacted by actions within the City.

- **Policy WR-1.1 Ensure Clean Water**: The City shall ensure that development and redevelopment projects do not degrade surface waters and groundwater basin.

Goal SO-1: Ensure the protection of soils from erosion by wind and water.

- **Policy SO-1.1 Soil Erosion from Grading:** The City shall control grading of land to minimize the impact of soil erosion from wind and water.

Goal SD-1: Provide for the planning and funding mechanism to conduct, expand, and maintain storm drain facilities needed to protect existing and future development.

- **Policy SD-1.1: Adequate Facilities**. The City shall provide storm drain facilities with sufficient capacity to protect the public and property from stormwater damage.
- **Policy SD-1.2: Facilities Funding**. The City shall assure that adequate funding is available to improve existing and construct new storm drain facilities.
- **Policy SD-1.3: Facilities Management**. The City shall manage flood control facilities in accordance with local state and federal guidelines.

Goal HM-1: Protect the public health, safety, and welfare through the planning and implementation measures for the siting, reporting, and transportation of hazardous materials in or through the City of Lynwood.

- **Policy HM-1.5**: Contamination Prevention, Protect soils and surface and groundwater from contamination.

City of Paramount

City of Paramount General Plan

The *Paramount General Plan* identifies goals and policies from the Resource Management and Public Facilities Elements related to water resources and water quality (City of Paramount 2007).

- **Resource Management Element Policy 10**: The City Paramount will continue to evaluate the feasibility of the expanded joint-use of the open space lands used for flood control and utility easements.
- **Resource Management Element Policy 21**: The City of Paramount will continue to cooperate with the other agencies that are charged with improving air and water quality in the region.
- **Public Facilities Element Policy 1**: The City of Paramount will work to maintain good water quality.
- **Public Facilities Element Policy 4**: The City of Paramount will protect, conserve, and enhance water resources through implementation of the Water Master Plan.
- **Public Facilities Element Policy 9**: The City of Paramount will work to eliminate problems of ponding on local streets.

City of South Gate

City of South Gate General Plan

South Gate General Plan 2035 identifies goals and policies from the Green City and Public Facilities Elements related to water quality, flood hazards, and stormwater (City of South Gate 2009).

Goal GC 3: Enhanced utilization of the LA River and the Rio Hondo Channel as open space.

- **Policy 3.1.5:** New development that may result in increased water pollution to the LA River or the Rio Hondo Channel will be required to mitigate the potential sources of pollution, especially pollution from stormwater runoff.

Goal GC 4: The prevention of hazards from flooding

- **Policy 4.1.1:** The City of South Gate Natural Hazard Mitigation Plan, including all background materials, goals, policies, objectives and implementation measures will be incorporated into this General Plan.
- **Policy 4.1.2:** New development in South Gate should not exacerbate potential flooding hazards.
- **Policy 4.1.3:** The City will provide continued support for the Los Angeles County Drainage Project (LACDP), which reduces the flood risk in a significant portion of the City.
- **Policy 4.1.4:** The City will coordinate with the flood-control activities of the Los Angeles County Department of Public Works.
- **Policy 4.1.5:** The City will work with the Emergency Services Division of the Los Angeles County Division of the Army Corps of Engineers to develop better flood warning systems.
- **Policy 4.1.6:** The Public Works Department will continue to identify and enforce NPDES provisions within the City.

Goal GC 5: The protection of local and global natural resources

- **Policy 5.3.1:** Large parking lots as part of new development or major renovations should be well landscaped with trees and other greenery and designed to hold and filter stormwater runoff, reduce heat island effects and create a comfortable pedestrian environment.

Goal GC 6: A robust green building program

- **Policy 6.1.6:** When feasible or required by law, new development should utilize Low Impact Design (LID) features, including infiltration of stormwater, but LID should not interfere with the City's goals of infill development and appropriate densities as defined in the Community Design Element.

Goal PF 7: To collect, store and dispose of stormwater in a way that is safe, sanitary, and environmentally acceptable

- **Policy P.7.1.1:** Stormwater infrastructure will be maintained in good condition.
- **Policy P.7.1.2:** The City should provide sufficient funds to maintain necessary stormwater infrastructure.
- **Policy 7.1.3:** The City's stormwater infrastructure will comply with the National Pollutant Discharge Elimination System (NPDES) Act and all other legal and environmental requirements.
- **Policy 7.2.1:** The City will comply with the Best Management Practices contained in the Los Angeles County Standard Urban Stormwater Mitigation Plan (SUSMP).
- **Policy 7.2.2:** The City will seek to reduce the amount of stormwater that leaves the City, and will seek to improve the quality of stormwater that does leave the City.
- **Policy 7.2.3:** Where feasible, new development projects should handle all stormwater on site. Exceptions may be made where the design of such on-site stormwater facilities will have a negative impact on the urban quality of the development.
- **Policy 7.2.4:** A watershed management approach should be used in addressing, planning and managing stormwater issues.
- **Policy 7.2.5**: Existing property owners will be encouraged to reduce stormwater runoff by modifying their properties and reducing impermeable surfaces.
- **Policy 7.2.6:** Parking lots should be paved with permeable materials, whenever possible.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 4

City of Bell

City of Bell General Plan

The *City of Bell 2030 General Plan* identifies policy in the Resource Management Element related to water quality. In addition, the City of Bell implements programs related to stormwater management and flood hazards to ensure the City of Bell's policies are realized (City of Bell 2018).

Issue: To promote the conservation and preservation of important natural resources, including air and water.

- **Resource Management Element Policy 19:** The City of Bell shall continue to cooperate with the other agencies that are charged with improving air and water quality in the region. The City shall cooperate with the SCAQMD and water districts in undertaking any studies of air and water quality.

City of Bell Gardens

The *City of Bell Gardens General Plan 2010* identifies policy in the Conservation Element related to water quality. In addition, the City of Bell Gardens implements programs related to stormwater management and flood hazards to support the general plan policies (City of Bell Gardens 1995).

- **Conservation Element Policy 3:** The City of Bell Gardens shall protect the quality of water in the underground water basin by optimizing open space

City of Commerce

City of Commerce General Plan

The *City of Commerce 2020 General Plan* identifies policies in the Resource Management and Health and Safety Elements related to hydrology and water quality. In addition, the City of Commerce implements programs related to stormwater pollution prevention to support the general plan policies (City of Commerce 2008).

- **Resource Management Policy 1.2:** The city of Commerce will cooperate, to the degree necessary, with federal, state, and county agencies, and surrounding cities, in the maintenance and improvement in the quality of local groundwater.
- **Resource Management Policy 5.1:** The city of Commerce will do its part in the conservation and protection of air, water, energy, and land in the Southern California region.
- **Safety Policy 3.3:** The city of Commerce will continue to request local water purveyors to provide the city with periodic reports concerning water quality.
- **Safety Policy 4.2:** The city of Commerce will work with other agencies to reduce the potential flood hazard in the city.
- **Community Development Policy 7.3:** The city of Commerce will take a proactive role in meeting with regional planning agencies to ensure that the local community's voice is heard in the planning public facilities.

City of Huntington Park

City of Huntington Park General Plan

The *City of Huntington Park 2030 General Plan* identifies policies in the Research Management and Health and Safety Elements related to water resources, drainage, and flooding (City of Huntington Park (City of Huntington Park 2017).

Issue: Conserve & Protect Water Resources

- **Resource Management Element Policy 5:** The City of Huntington Park shall protect groundwater resources from depletion and pollution

Issue: Flooding

- **Health & Safety Element Policy 5:** The City of Huntington Park shall work with the Los Angeles County Department of Public Works to identify and construct needed local and regional storm drain improvements to relieve local flooding problems in Huntington Park.
- **Health & Safety Element Policy 6:** The City of Huntington Park shall support the Army Corps of Engineers to expand the capacity of the Rio Hondo and LA River channels.
- **Health & Safety Element Policy 7:** The City of Huntington Park shall prepare and maintain a master drainage plan.
- **Health & Safety Element Policy 8:** The City of Huntington Park shall require local drainage-related improvements to be implemented as part of new development approvals.

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan* identifies goals and policies in the Conservation Element related to water quality. In addition, the Safety Element identifies man-made and natural hazards that may affect the City of Maywood (City of Maywood 2008).

Conservation Element Goal 3: Provide for the proper management of natural resources both in the city and region are so that they may be protected for the benefit of present and future residents.

- **Policy 3.1:** Develop and enforce local criteria of air and water quality so that the city may reduce its share of these regional problems.

City of Vernon

City of Vernon General Plan

The *City of Vernon General Plan* identifies goals and policies in the Resources, Circulation and Infrastructure, and Safety Elements related to water resources, stormwater, and flood hazards (City of Vernon 2007).

Resource Element Goal R-1 Conserve and protect the region's water and energy resources.

- **Resource Element Policy R-1.3:** Seek and pursue the most practicable and cost-effective means of implementing National Pollutant Discharge Elimination Systems requirements.

Goal CI-5 Maintain the storm drainage system to assure the protection of lives and property in Vernon.

- **Policy CI-5.1:** Periodically evaluate the size and condition of the storm drainage system to determine its ability to handle expected storm runoff.
- **Policy CI-5.2:** Evaluate the impact of all new developments and expansion of existing facilities on storm runoff, and require that the cost of upgrading existing drainage facilities to handle the additional runoff is paid for by the development which generates the need to improve a facility.
- **Policy CI-5.3:** Monitor the use and storage of hazardous materials to prevent accidental discharge into the storm drainage system.
- **Policy CI-5.4:** Allow new development projects to creatively implement NPDES standards and requirements.

Safety Element Goal S-1: Minimize the risk to public health, safety, and welfare associated with the presence of natural and human-caused hazards.

- **Safety Element Policy S-1.1:** Periodically update and maintain the Multi-hazard Functional Plan in an effort to identify potential contingencies and emergency conditions and define the necessary response by public safety and other personnel.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 5

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 6

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

City of Glendale

City of Glendale General Plan

The City of Glendale General Plan identifies goals and policies in the Open Space and Conservation, Community Facilities, and Safety Elements related to hydrology, water quality, drainage facilities, and flood hazards (City of Glendale 1975, 1993, 2003).

Open Space and Conservation Element Goal 2: Protect vital or sensitive open space areas including ridgelines, canyons, streams, geologic formations, watersheds and historic, cultural, aesthetic and ecologically significant areas from the negative impacts of development and urbanization.

Open Space and Conservation Element Goal 6: Preserve and protect valuable water and mineral resources

Open Space and Conservation Element Goal 10: Integrate safety concerns into the management of natural resources including recognition of geologic hazards and flood, fire and seismic risks.

Open Space and Conservation Element Goal 12: Continue to conserve water resources and provide for the protection and improvement of water quality.

- **Open Space and Conservation Policy 5:** Proper management of environmental resources, especially natural resources, can assist in reducing hazards to the life and property of the City's residents and should be considered in project planning.

Community Facilities Goals: Provide for a logical, urban design statement as a means of harmonizing community facilities with other land uses; Formulate independent and inter-jurisdictional programs which establish a maximum utilization of all community facilities; Enhance the current level and quality of community facilities and services, and improve the accessibility to them.

- **Utilities Policies:** Maintain the high standard of utility services; Monitor future needs for the increase in utility services; Utilize all relevant, technological advancements to provide for the improved quality and quantity of energy at the lowest possible cost within the constraints of environmental considerations.

Safety Element Goal 3: Reduce the loss of life, injury, private property damage, infrastructure damage, economic losses, and social dislocation and other impacts resulting from flooding hazards.

- **Safety Element Policy 3-1:** The City shall investigate the potential for future flooding in the area and will encourage the adoption of flood-control measures in low-lying areas of alluvial fans, along major channels, and downgradient of large reservoirs and water tanks.

Frame 7

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

City of Burbank

Burbank General Plan

The *Burbank2035 General Plan* identifies goals and policies in the Open Space and Conservation and Safety Elements related to water resources, drainage, and flood hazards (City of Burbank 2013).

Open Space and Conservation Element Goal 1 Resource Management: The public is involved in preserving open space, conserving resources, and improving the natural environment.

- **Policy 1.3:** Coordinate the City's open space program with regional parks, open space, and conservation plans.

Open Space and Conservation Element Goal 9 Water Resources: Adequate sources of high-quality water provide for various uses within Burbank.

- **Policy 9.5:** Require on-site drainage improvements using native vegetation to capture and clean stormwater runoff.

Safety Element Goal 6 Flood Safety: Potential risks—such as injury, loss of life and property, and economic and social disruption—caused by flood and inundation are minimized.

- **Policy 6.1:** Inform applicants of flood risks and development requirements within the 100-year, 200-year, or 500-year floodplains or in other high-risk inundation areas. Recommend hazard mitigation where possible.
- **Policy 6.2:** Continue to participate in the National Flood Insurance Program to ensure that flood insurance will be available to individuals in the community. Publicize the availability of flood insurance to Burbank residents and business owners.
- **Policy 6.3:** Continue to maintain and upgrade the City-operated flood control system to ensure the system is capable of protecting existing and planned development.
- **Policy 6.4:** Consult with Los Angeles County and other agencies to maintain and improve capacity of local and regional flood control systems.
- **Policy 6.5:** Enforce regulations prohibiting the draining of rainwater into the sewer system.
- **Policy 6.6:** Prepare and update a stormwater master plan to ensure proper maintenance and improvements to storm drainage facilities.
- **Policy 6.7:** Employ strategies and design features to reduce the area of impervious surface in new development projects

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 8

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 9

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

3.9.3 Impact Analysis

3.9.3.1 Methods

This analysis qualitatively evaluates the construction and operations impacts of the proposed Project on hydrology and water quality based on literature review of conditions within and adjacent to the project area. The impacts were assessed on a programmatic level based on the relevant regulatory framework.

All project elements were analyzed by comparing baseline conditions, as described in Section 3.9.2, *Setting*, to conditions during construction and/or operations of the Project. The analysis focuses on issues related to surface hydrology, groundwater supply, surface water and groundwater quality, and flood hazards. The key construction-related impacts were identified and evaluated qualitatively based on the physical characteristics of the Project and the magnitude, intensity, location, and duration of activities.

- **Surface Water Hydrology.** The surface water hydrology impact analysis considered changes in waterbodies, impervious surfaces, and drainage patterns. Information on the change in impervious surface, runoff quantities, and drainage patterns was provided by the *2020 LA River Master Plan*, Appendix Volume II Draft Technical Backup Document, and Flood Risk Management, Water Quality, and Water Supply Progress Memo. The analysis of changes of the LA River channel involved a comparison of existing on-site hydrological conditions and new/modified conditions proposed as part of the Project.

- **Groundwater Hydrology.** Potential impacts on groundwater supply were analyzed using information from publicly available publications and site-specific technical reports, including the *2020 LA River Master Plan* Appendix Volume II Draft Technical Backup Document. The potential for project actions, including construction dewatering, impacts of the Project on groundwater, and potential effects on water level drawdown, was evaluated.

- **Surface Water and Groundwater Quality.** Impacts of the Project on surface water and groundwater quality were analyzed using information on potential existing sources of pollution generated by activities such as trails and access gateways, building maintenance, pesticide use, trash, and material storage. These impacts were then compared to potential project-related sources of pollution during construction, such as sediments and other construction materials, and during operation, such as trail use, building maintenance, pesticide use, trash, and storage of hazardous materials.

- **Flood Hazards.** The impact analysis for flood risk was conducted using FEMA mapping to determine the existing flood zone and information from the Flood Risk Management, Water Quality, and Water Supply Progress Memo regarding changes in the drainage system and layout that may affect flood risk.

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories, and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and

operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.9.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.9(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

3.9(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.

3.9(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

- Result in substantial erosion or siltation on or off site.
- Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Impede or redirect flood flows.

3.9(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

3.9(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.9.3.3 Impacts and Mitigation Measures

Impact 3.9(a): Would the proposed Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Typical Projects

Common Elements

Construction

The Common Elements Typical Project locations could occur anywhere off-channel (between top of levee and fenceline) along the LA River; therefore, the potential for the proposed Project to violate

water quality standards or otherwise substantially degrade water quality could occur throughout the project study area. As a result, construction impacts for the Common Elements Typical Project for Frame 1 through Frame 9 would be similar and are discussed together.

Project construction activities such as demolition/material removal, grading, stockpiling of spoil materials, and other construction-related earth-disturbing activities could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport to adjacent properties, roadways, or watercourses via storm drains. Sediment transport to local drainage facilities such as drainage inlets, culverts, and storm drains could result in reduced storm flow capacity, causing localized ponding or flooding during storm events. Construction activities could also generate dust, settlement, litter, oil, and other pollutants that could temporarily contaminate water runoff from a construction site.

Common Elements Typical Project construction activities must comply with the NPDES Construction General Permit. All construction activities must also comply with the County MS4 Permit and its associated provisions and, if applicable, the appropriate local MS4 permit, stormwater management requirements, and general plan and ordinances for the local jurisdiction, which contain standards to ensure that water quality is not degraded. As part of the Construction General Permit, standard erosion control measures and BMPs would be identified in a SWPPP and would be implemented during construction to reduce sedimentation of waterways and loss of topsoil.

Compliance with grading permits and the NPDES Construction General Permit would require use of BMPs to restrict soil erosion and sedimentation and restrict non-stormwater discharges from the construction site as well as release of hazardous materials. As a performance standard, selected construction BMPs would represent the best available technology that is economically achievable and best conventional pollutant control technology to reduce pollutants.

Other potential water quality degradation issues could include chemical spills, such as fuels from construction equipment, into storm drains or groundwater aquifers if proper minimization actions are not implemented. However, BMPs, as required by Los Angeles County grading permits and the NPDES Construction General Permit, would be implemented to reduce pollutants in stormwater and other NPS runoff. Measures range from source control such as straw wattles, mulch, and managing vehicle and equipment cleaning, fueling, and maintenance, to treatment of polluted runoff. BMPs can include watering active construction areas to control dust generation during earthmoving activities; using water sweepers to sweep streets and haul routes; and installing erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, and sandbag dykes) to prevent silt runoff to public roadways, storm drains, or waterways. As appropriate, disturbed soil would be revegetated as soon as possible with the appropriate selection and schedule of plants.

Erosion-control measures for disturbed surfaces would be required by the NPDES Construction General Permit during the rainy season, which generally occurs between October and April. In addition to complying with the Construction General Permit, construction activities would be required to comply with local stormwater quality and grading, erosion, and sediment control ordinances. These requirements involve development and implementation of erosion and sediment control plans (ESCPs) specific to the construction site to minimize water quality impacts.

In the event that dewatering for an individual project site is required, the SWPPP would include a dewatering plan, which would establish measures to prevent and minimize sediment and contaminant releases into groundwater during excavation. Dewatering activities would be required

to comply with the NPDES Construction General Permit, Los Angeles Regional Water Board WDRs for discharges of groundwater (Order No. R4-2018-0125), and local dewatering requirements to prevent potential water quality impacts on surface waters or ensure proper treatment measures are implemented prior to discharge. In the event of dewatering during construction activities or before dewatering to surface water via a storm drain, the contractor would obtain coverage under the NPDES Construction General Permit from the Los Angeles Regional Water Board. Coverage under the NPDES Construction General Permit typically includes dewatering activities as authorized non-stormwater discharges, provided that dischargers prove the quality of water to be adequate and not likely to affect beneficial uses. All requirements of dewatering would be met to ensure water quality is not affected.

Construction would be required to comply with the Long Beach MS4 Permit (for work within Frame 1) and the County MS4 Permit requirements and their associated provisions, local jurisdictions' stormwater management programs, and the NPDES Construction General Permit. Furthermore, a stormwater control plan may be required for each activity. Compliance with these requirements would ensure that construction activities under the Common Elements Typical Project do not result in a violation of water quality standards or WDRs, or otherwise result in water quality degradation.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Water quality in urban developments is influenced by processes and activities that take place within the watershed. The quality of the stormwater runoff from the Project and surrounding development is typical of urban watersheds where water quality is affected primarily by discharges from both point and nonpoint sources. Point and nonpoint sources include outfalls, winter storms, overland flow, exposed soil, roofs, parking lots, and streets. Water quality throughout the vicinity of the project area is directly affected by stormwater runoff that contains fertilizers, pesticides, automobile and traffic pollutants (e.g., oil, grease, metals), sediment with associated pollutants from soil erosion, trash, and other pollutants. Pollutants accumulate on impervious areas and are mobilized during precipitation events. "First flush" storm events, during which pollutants that have accumulated are concentrated with little dilution by the initial storm event of the season, have the largest impact on water quality in receiving waters. However, water quality degradation is temporary, and limited to wet-weather runoff.

Although a subset of projects could decrease impervious surfaces, implementation of the Common Elements Typical Project may also result in an increase in impervious surfaces at specific locations, which could cause increased runoff rates and volumes and associated pollutants such as automobile and pesticide use. Increased stormwater runoff would also increase the potential for erosion and sedimentation. Increased pollutant loading to surface waters as well as degraded groundwater quality also could occur. However, project operations would comply with the County MS4 Permit

and its associated provisions, the Public Works LID Standards Manual, and local stormwater management programs, as required.

The *2020 LA River Master Plan* includes structural and non-structural BMPs that would be implemented to capture, convey, and control pollutant discharge, and infiltrate stormwater during a rain event. The *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) include a variety of recommended stormwater BMPs and related site improvements included in the Common Elements Typical Project that would be required to manage drainage and stormwater. Stormwater BMPs as included under the Common Elements Typical Project and described in the Design Guidelines may include rain gardens, vegetated swales/bioswales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters. BMP methods would be decided by the implementing agency and implemented depending on the available space, intended use, and soil suitability for infiltration at the project site. Ideal rain garden locations would be identified and implemented where there is more space to implement the Project and graded to increase the capture and retention of runoff while maintaining the growth of native plantings. Swales would be installed along paved trails or other linear projects to convey water at a slower rate than that of traditional pipes. Infiltration strips and trenches are ideal for smaller spaces or areas adjacent to structures, such as narrow rights-of-way.

BMPs would be designed to work with the overall stormwater approach for the project site. Furthermore, BMPs would be properly sized with respect to tributary drainage areas they are treating. Recommended best practices, including pre-treatment BMPs to remove solids, sediments, trash, and debris, may be added or required. BMP design would comply with the Public Works LID Standards Manual.

Surface areas would be designed to direct runoff toward stormwater BMPs, landscaped areas, or other water collection and treatment areas, as required by grading and drainage plans and permit approvals. Furthermore, where neighborhood streets drain directly into the river, new projects would create bioswales or treatment basins to collect stormwater runoff. The use of recommended stormwater BMPs such as rain gardens, swales, and infiltration strips and trenches to retain stormwater and allow infiltration would be considered in project design. Implementation of stormwater treatment areas, landscape features, and open space areas would allow water to percolate into the ground, thereby treating stormwater runoff through biological uptake, and reducing the discharge of pollution to the storm drain system. Any potential contaminants would be filtered, minimizing adverse effects on groundwater quality. The Design Guidelines also encourage the use of permeable paving, filtration and percolation of stormwater, and on-site water retention or detention to reduce or eliminate water pollution and reduce runoff. Planting strategies along setbacks, buffers, levees, and floodwalls would also provide opportunities for stormwater treatment before it enters the river. In addition, river pavilions would incorporate water and environmental best practices including on-site water retention, detention, and filtration, as well as green roofs and pervious paving, which provide water quality benefits.

With implementation of stormwater BMPs and compliance with NPDES Construction General Permit post-construction stormwater standards, the County MS4 Permit, and other local water quality requirements, degradation of surface water and groundwater quality from operations of the Common Elements Typical Project would be minimized. The Public Works LID Standards Manual provides guidance for the implementation of stormwater quality control measures and the recommended design methodology to manage stormwater in Los Angeles County. Implementation

of stormwater BMPs such as rain gardens, vegetated swales, infiltration strips, and stormwater planters, as well as planting buffers and permeable materials, would reduce stormwater runoff flows and associated pollutants and treat stormwater runoff. In addition, the NPDES Construction General Permit emphasizes runoff reduction through on-site stormwater reuse, interception, evapotranspiration, and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation/enhancement, interceptor trees). Post-construction measures must also meet requirements of the NPDES Construction General Permit post-construction stormwater standards and the County's runoff rates and volumes for permanent post-construction stormwater BMPs for water quality protection. Furthermore, the Common Elements Typical Project would be designed to manage flows and associated polluted runoff leaving project sites to levels required by the County Hydrology Manual. It would be designed and maintained in accordance with County, city, and Los Angeles Regional Water Board water quality requirements, such as the County MS4 Permit, and general plan policies. Therefore, operation of the Common Elements Typical Project would not violate any water quality standards or degrade water quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Construction impacts related to violating water quality standards or WDRs, or otherwise substantially degrading surface or groundwater quality would be similar to the those described above under the Common Elements Typical Project. Locations of Typical Projects for Multi-Use Trails and Access Gateways could occur anywhere along the LA River; therefore, violations of water quality standards or otherwise substantially degrading water quality could occur throughout the proposed project area. As a result, construction and operation impacts for the Multi-Use Trails and Access Gateways Typical Project in Frame 1 through Frame 9 would be similar and are discussed together.

Construction activities including earth-disturbing activities could result in short-term water quality impacts associated with soil erosion and sediment transport. Construction activities could also generate dust, litter, oil, and other pollutants that could temporarily contaminate runoff. However, construction activities must comply with the NPDES Construction General Permit, County MS4 Permit, local MS4 permits and their associated provisions, stormwater management requirements, general plans, and ordinances for the jurisdiction where the future Multi-Use Trails and Access Gateways Typical Project may be located. Standard erosion control measures and BMPs would be identified in a SWPPP and implemented during construction. Construction activities would also be required to comply with local stormwater quality and grading, erosion, and sediment control ordinances. These requirements involve implementation of ESCPs and compliance with grading

permits at the construction site. BMPs would also restrict non-stormwater discharges and release of hazardous materials from the construction site, and reduce pollutants in stormwater and other NPS runoff. Measures range from source control to treatment of polluted runoff. Disturbed soil would be revegetated as soon as possible, as necessary. Dewatering activities would comply with NPDES, Los Angeles Regional Water Board, County MS4 Permit, and local dewatering requirements to prevent and minimize contaminant releases into groundwater during excavation and prevent potential surface water quality impacts.

Compliance with the County MS4 Permit, NPDES Construction General Permit, and local stormwater requirements would ensure that construction activities under the Multi-Use Trails and Access Gateways Typical Project do not result in a violation of water quality standards or WDRs, or otherwise result in water quality degradation.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant No mitigation is required.

Operations

Similar to the Common Elements Typical Project, the Multi-Use Trails and Access Gateways Typical Project could result in an increase in impervious surfaces at specific locations, which could cause increased runoff rates and volumes, increased pollutant loading, and increased potential for erosion and sedimentation. However, operation of the Multi-Use Trails and Access Gateways Typical Project would comply with the County MS4 permit, the County LID Ordinance and Public Works LID Standards Manual, relevant general plan policies, and local stormwater management programs, as required. Additional stormwater BMPs could be implemented for multi-use trails to manage and treat stormwater runoff, as required by local MS4 requirements and the *2020 LA River Master Plan*. The Design Guidelines include a variety of recommended stormwater BMPs such as rain gardens, vegetated swales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters. BMP methods would be implemented depending on the available space and soil suitability for infiltration at the project site. Swales would be installed along paved trails or other linear projects to convey water slowly. Infiltration strips and trenches are ideal for smaller spaces such as narrow rights-of-way. Tree well filters also work effectively with linear landscapes such as trails. New trails, particularly those that are paved with impervious materials, would slope to drain away from the river channel toward a bioswale or other BMP areas. Larger gateways may include vegetation buffers and other vegetated areas, providing treatment of stormwater before it enters the river. Implementation of stormwater BMPs, habitat corridors, and other vegetated areas would allow water to percolate into the ground, filtering potential contaminants, reducing the discharge of pollution, and minimizing adverse effects on groundwater quality. The Design Guidelines also encourage the use of permeable paving, filtration and percolation of stormwater, and on-site water retention or detention to mitigate or eliminate water pollution and reduce runoff.

Through compliance with the NPDES Construction General Permit, County MS4 Permit, and other local water quality requirements and consideration and encouragement of the recommended stormwater BMPs included in the Design Guidelines, impacts on surface water and groundwater quality would be minimized. Therefore, the Multi-Use Trails and Access Gateways Typical Project would not violate any water quality standards or degrade water quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

The specific location (in-channel or off-channel), configuration, and design for KOP Categories 1 through 6 have not been determined and would depend on numerous factors including community needs, flow and channel capacity needs and requirements, flow rates and volumes, project proponent decisions, and availability of funding. Considering KOP Category 1 includes a variety of construction activities ranging from trail modifications to development of facilities, habitat corridors, and channel access ramps anywhere in the project study area, construction of KOP Category 1 could result in potentially significant impacts associated with temporary water quality impacts. Off-channel construction activities could result in short-term water quality impacts associated with soil erosion and sediment transport; generate dust, litter, oil, or chemical spills; or release other pollutants that could temporarily contaminate runoff or runoff into storm drains or groundwater aquifers. In-channel impacts could differ from off-channel construction impacts. In-water work, within the channel, could result in suspended sediments in the water column that can lower levels of dissolved oxygen, increase salinity, increase concentrations of suspended solids, and possibly release chemicals present in sediments into the water. The degree of turbidity resulting from the suspended sediments would vary substantially with the amount and duration of the construction activity. However, impacts would be temporary and generally confined to within a few hundred yards of the activity. After initial resuspension of sediment, dispersion would occur, and background levels would be restored within a short time frame. Normal circulation and tidal effects in the estuary would generally disperse and dilute the water that was temporarily affected by construction activities.

Compliance with the Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit and their associated provisions, NPDES Construction General Permit, local stormwater management and water quality requirements, general plans, and ordinances would ensure that water quality impacts from construction activities are minimized. Furthermore, any in-channel work within Frame 1 where the channel is tidally influenced would be subject to requirements of a Section 10 Rivers and Harbors Appropriation Act permit and remaining channel areas would require Section 401 and Section 404 permits. These permits would specify BMPs and require preparation and implementation of plans for the protection of water quality (e.g., a Debris Management Plan; a Spill Prevention, Control, and Countermeasure Plan; equipment fueling requirements to require proper fuel transfer procedures; equipment maintenance requirements to minimize fuel leaks and spills; a Materials Management Disposal Plan; mooring requirements to capture construction debris; measures to avoid cement, concrete, and saw water from entering the LA River channel; and measures to ensure proper disposal of construction material). Standard erosion and stormwater control measures and BMPs, as identified in a SWPPP, would be implemented. BMPs would also restrict non-stormwater discharges and release of hazardous materials from the construction site, and reduce pollutants in stormwater and other NPS runoff.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 in Chapter 2, *Project Description*, under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Category 1

Increases in impervious surfaces associated with KOP Category 1 could result in increased runoff rates and volumes, increased pollutant loading, and increased potential for erosion and sedimentation. The magnitude of impacts is related to the area of increased impervious areas.

However, stormwater BMPs as outlined in the Design Guidelines may be implemented to manage and treat stormwater runoff, as required by the Long Beach MS4 Permit and the County MS4 Permit. BMPs such as swales, infiltration strips and trenches, and tree wells are particularly effective along linear projects such as trails. New impervious trails would slope to drain away from the river channel toward BMP areas. KOP Category 1 includes the addition of vegetated buffers, habitat corridors, rain gardens, and other BMPs, which would also improve water quality through infiltration and treatment. Bacteria and nutrient pollution from trail usage including equestrian trails and facilities would comply with NPS regulations. With compliance with the County MS4

Permit and its associated provisions, general plan policies, and other local water quality requirements, impacts on surface water and groundwater quality from the operation of KOP Category 1 would be minimized.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

As described in Section 2.5.1, in Chapter 2, *Project Description*, KOP Category 2 could provide a range of flood management functions, utilizing design components such as check dams and deployable barriers, levees, and armored channels/vertical walls; removing/adding concrete or bridge pier modifications; and installing channel texturing/grooving/smoothing and access ramps.

Design components under KOP Category 2 would provide water quality benefits. Channel modifications may include terracing the banks that can serve as small planting trays, wildlife ramps, and wetland terraces, allowing for infiltration and filtering of potential contaminants. Other channel modifications with water quality benefits include storm drain daylighting and changing the material of the channel (soft bottom/concrete removal), which improve infiltration and treatment potential. Sediment removal would remove excess sediment from the channel that would otherwise restrict the free flow of water or decrease the natural filtration of harmful chemicals. Other design components include armored channels, hardened bottom or sides of a channel, embankments, levees that would reduce scour and erosion, and check dams, which manage flows and reduce velocity and erosion and aerate water, thereby improving water quality. Channel modifications could also include daylighting. Daylighting involves the replacement of underground drainage pipes with a channel that is above ground. Daylighting is combined with planting to create a habitat or water quality benefit. A daylit storm drain allows for infiltration and/or treatment of runoff in vegetated infiltration zones before runoff is conveyed into the LA River. Operation of KOP Category 2 is not expected to result in an increase in water quality impairments such that water quality standards would be violated.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Design components of KOP Category 3 include multiuse bridges and cantilevers. These features would include impervious surfaces and result in increased runoff rates and volumes, increased pollutant loading, and increased potential for erosion and sedimentation.

However, platforms would increase park space and contain a range of habitats, including riparian and upland conditions. A range of habitats could provide water quality benefits including stormwater treatment and retention through biological uptake, contaminant filtration, and reduction of the discharge of pollution to the storm drain system. Platforms would utilize planting soil mix, a drainage layer, and waterproofing for vegetated areas. The replacement of underground drainage pipes with a vegetated channel for storm drain daylighting would also provide water quality benefits. In addition, recommended stormwater BMPs as identified in the Design Guidelines would manage stormwater quality. Improving water quality through storm drain daylighting could also be included. Operation of KOP Category 3 is not expected to result in an increase in water quality impairments such that water quality standards would be violated.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Diversions include elements such as pumps, diversion pipes, tunnels, channels, underground galleries, side channels, overflow weirs, storm drain interceptors, and wetlands. Diversions would remove wet- or dry-weather flows from the river to increase overall system capacity during larger storm events and provide opportunities for treatment. Diversions also provide ancillary water supply and water quality benefits by enabling storage of water in the diversion for subsequent treatment and use during and after smaller storms. Underground galleries are large subsurface tanks that hold water, or allow it to seep into the ground, while still allowing for passive land uses on top. Storm drain interceptors capture water for possible other uses, such as treatment and/or use prior to allowing the water to discharge into the channel. Wetlands divert water out of the LA River channel and improve water quality in habitat areas. Operation of KOP Category 4 would be beneficial to water quality and would not result in an increase in water quality impairments such that water quality standards would be violated.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 5

Reclaiming the floodplain can create space for the river where the hydrologic relationship between a river and its floodplain can be reconnected. Reconnecting the floodplain or transitioning adjacent rights-of-way or public lands into floodable areas would include incorporation of wetlands, naturalized banks, braided channels, fields, surface storage, and side channels into subsequent project features. Implementation of these landscape features and open space areas would allow water to infiltrate, treating stormwater runoff, filtering contaminants, and reducing the discharge of pollution to the storm drain system. The design components under KOP Category 5 would not result in an increase in water quality impairments such that water quality standards would be violated and in fact would contribute to improved flood management and water quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

As described in Chapter 2, *Project Description*, KOP Category 6 could provide a range of functions including urban agriculture, composting, natural treatment systems, wetlands, recreation fields, surface and subsurface storage, injection wells, water treatment facilities, recycled water pipe connections (herein referred to as purple pipe connections), dry wells, spreading grounds, and storm drain daylighting. Off-channel land assets combined with in-channel and right-of-way improvements can further ensure projects are multi-benefit, addressing multiple needs including improving water quality. Nutrient pollution from urban agriculture and composting would be required to comply with NPS regulations. A natural treatment system involves planted and organic materials to filter water by absorbing harmful chemicals and nutrients, providing water quality benefits. Purple pipe connections would allow for treated water to be pumped into and used within a local recycled water network or in a local recycled water network for use at a project site. Spreading grounds allow surface water runoff to percolate slowly into the ground and help to control and improve water quality. Spreading grounds, injection wells, and dry wells allow access to subsurface aquifers and can affect groundwater quality. However, existing regulations would require design features under KOP Category 6 to address water quality such that there would be no adverse impacts. Therefore, operation of KOP Category 6 is not expected to result in an increase in water quality impairments such that water quality standards would be violated.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

One of the primary goals and objectives of the *2020 LA River Master Plan* is to promote healthy, safe, clean water. Construction activities could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport, generation of pollutants, or accidental spills that could temporarily contaminate runoff, surface water, or groundwater. However, BMPs, as required in a SWPPP, would be required during construction to reduce erosion and restrict non-stormwater discharges from the construction site and control release of hazardous materials.

The majority of the 107 projects (77 percent) are expected to be extra-small and small projects in size (up to 3 acres/1 mile), with negligible changes in impervious surface areas, compared to existing conditions. Therefore, runoff rates and volumes would be similar to those under existing conditions and would continue to infiltrate into the ground, filtering potential contaminants and minimizing the discharge of pollution and adverse effects on groundwater quality. In addition, medium, large, and extra-large projects would include multi-benefit design components in the *2020 LA River Master Plan*, along with recommendations such as water treatment facilities, natural treatment systems, storm drain daylighting, sediment removal, vegetated buffers, and wetlands. These multi-benefit design components also provide water quality benefits. In addition, recommended stormwater BMPs as described in the Design Guidelines would be implemented such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches. Stormwater BMPs would capture, convey, and control pollutant discharge. Implementation of stormwater treatment areas, landscape features, and open space areas would allow water to percolate into the ground, thereby treating stormwater runoff through biological uptake and reducing the discharge of pollution to the storm drain system. Furthermore, all projects would comply with the NPDES Construction General Permit, County MS4 Permit, and other local water quality requirements and stormwater ordinances. The Public Works LID Standards Manual provides guidance for the implementation of stormwater quality control measures and the recommended design methodology to manage stormwater in Los Angeles County. Therefore, implementation of the overall *2020 LA River Master Plan* would not violate any water quality standards or degrade water quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.9(b): Would the proposed Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Typical Projects

Common Elements

Construction

For the Common Elements Typical Project, maximum excavation depths would be approximately 7 feet below ground surface (bgs). In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Natural groundwater recharge throughout the project area occurs primarily from infiltration of rainfall and applied water recharge. New impervious areas can reduce infiltration capacities so that more precipitation runs off into storm drains or nearby surface waters instead of infiltrating and recharging the underlying aquifer. However, the Common Elements Typical Project would not substantially interfere with groundwater recharge because it would not increase groundwater demand or decrease the size of groundwater recharge areas. The *Los Angeles County General Plan* as well as the individual city general plans within Frames 1 through 9 include policies to protect natural groundwater recharge areas, promote groundwater recharge, and manage drainage and stormwater. Implementation of recommended stormwater BMPs and landscaped areas that promote infiltration would allow for infiltration and promote groundwater recharge. After project implementation, recharge in the area would continue to occur through infiltration of precipitation and applied water recharge.

Pavilion areas, cafés, and other facilities in the Common Elements Typical Project would be designed to direct runoff toward landscaping, stormwater BMP areas, or other water collection and treatment areas, as required by grading and drainage plans and permit approvals. Stormwater BMPs such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches would retain rainwater and allow infiltration and would be considered and encouraged in project design,

as described in the Design Guidelines, but the decision to implement would be determined by the project proponent. Infiltration can be further enhanced by the installation of perforated pipes within the dripline of larger shrubs and tree species. These stormwater areas, landscape features, and open space areas would allow for groundwater infiltration, allowing water to percolate into the ground, thereby providing increased benefits for groundwater recharge.

The majority of water used for irrigation would likely be recycled water. Other water supply for the Common Elements Typical Project would be served by the applicable respective water agency. All Typical Projects, regardless of where they are located along the LA River, are not expected to demand substantial amounts of water such that demand would exceed supply. Water conservation measures in effect in the 18 different jurisdictions through which the LA River passes would help minimize any localized demands for water. Therefore, operation of the Common Elements Typical Project would not substantially decrease groundwater supplies. Further information regarding water and groundwater supply is described in Section 3.18, *Utilities/Service Systems.*

As described above, water supply throughout the project study area is from groundwater sources, and is greatest in the lowest reaches of the LA River (Frames 1 through 4). However, irrigation supply and system components would comply with the Public Works LID Standards Manual, County water sources, conservation standards, and the current CALGreen. Recycled or reclaimed water would be used for irrigation, where possible. For native planting, irrigation systems would only be utilized for plant establishment and drought-period watering, as recommended in the *2020 LA River Master Plan* and required by the applicable regulatory requirements. Therefore, the Project would not substantially decrease groundwater supplies, interfere with groundwater recharge, or impede sustainable groundwater management of the basin.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Multi-Use Trails and Access Gateways Typical Project construction-related impacts from decreasing groundwater supplies or interfering with groundwater recharge would be similar to those described above under the Common Elements Typical Project. Maximum excavation depths for the Multi-Use Trails and Access Gateways Typical Project would be approximately 2 feet bgs for trails or access gateway foundation and up to 7 feet bgs for fencing. In the event groundwater is encountered during construction, dewatering would be conducted on a temporary basis and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Implementation of *2020 LA River Master Plan* recommended stormwater BMPs and vegetated buffers would allow for infiltration and promote groundwater recharge. After project implementation, recharge in the area would continue to occur through infiltration of precipitation and applied water recharge.

Trail features of the Multi-Use Trails and Access Gateways Typical Project would be designed to direct runoff toward stormwater BMP areas, vegetated buffers, or other water collection and treatment areas. These stormwater areas and landscape features, where implemented, would allow for groundwater infiltration, allowing water to percolate into the ground, thereby providing increased benefits for groundwater recharge. During operation, water conservation methods and system components would comply with the Public Works LID Standards Manual, County water sources, conservation standards, and the current CALGreen. As a result, construction and operation activities of the proposed Project would not substantially utilize groundwater supplies. Therefore, the Multi-Use Trails and Access Gateways Typical Project would not substantially decrease groundwater supplies, interfere with groundwater recharge, or impede sustainable groundwater management of the basin.

Impact Determination

Impacts would less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation

impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

Construction

Maximum excavation depths for construction of KOP Category 1 would generally be approximately 10 feet. However, some design components such as the water tower, underpass, and habitat corridors may require deeper excavations to clear utilities, separate the grade from the roadway/railway, provide adequate drainage at a sump location, or provide deep footings. A conservative assumption for excavation depths is approximately 60 feet bgs. However, excavation depths depend on numerous site-specific factors and may vary once a project site is determined. In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

New impervious areas associated with KOP Category 1 could reduce infiltration such that more precipitation runs off into storm drains or surface waters instead of infiltrating and recharging the underlying aquifer. However, the *2020 LA River Master Plan* KOP Category 1 includes multi-benefit design components such as river gateways, common elements, vegetated buffers, habitat corridors, and stormwater BMPs including swales and rain gardens. These multi-benefit design components would allow for groundwater infiltration, allowing water to percolate into the ground, thereby providing increased benefits for groundwater recharge. Trails would be designed to direct runoff toward stormwater BMP areas, vegetated buffers, or other open spaces for water collection and groundwater recharge. In addition, operation of trails would not use groundwater supply. Therefore, construction and operation of KOP Category 1 is not expected to substantially decrease groundwater supplies or interfere with groundwater recharge.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Construction

Maximum excavation depths for construction of footings for walls or other structures would be approximately 20 feet bgs of the channel invert. Cast-in-drilled-hole piles would require excavation depths of approximately 30 feet bgs. However, excavation depths depend on numerous site-specific factors and may vary once a project site is determined. In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

New impervious areas could reduce infiltration capacity and increase the volume of runoff into storm drains or surface waters instead of allowing groundwater recharge. However, the *2020 LA River Master Plan* channel modifications KOP Category 2 would include terracing the banks and providing small planting areas, allowing for groundwater infiltration and providing increased benefits for groundwater recharge. Other channel modifications that affect groundwater recharge include changing the material of the channel or adding or removing concrete, depending on capacity requirements. Sediment removal would remove excess sediment from the channel that would otherwise decrease the natural filtration of harmful chemicals that could otherwise infiltrate into groundwater. Check dams would also reduce the velocity of river flows and provide micro habitat and vegetated areas, providing opportunities for groundwater recharge. Deployable barriers and levees could also manage river flows and volumes. Storm drain daylighting would replace underground drainage pipes with vegetated channels, allowing for infiltration into underlying aquifers. Furthermore, channel modifications would not use groundwater supplies or impede sustainable groundwater management of the basin. Operation of KOP Category 2 is not expected to substantially decrease groundwater supplies or interfere with groundwater recharge.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Construction

Maximum excavation depths for construction of KOP Category 3 would be approximately 30 feet bgs. However, excavation depths depend on numerous site-specific factors and may vary once a project site is determined. In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Design components of KOP Category 3 include multiuse bridges and cantilevers. These features would result in impervious surfaces associated with increased runoff and reduced infiltration capacity and groundwater recharge. However, the addition of impervious surfaces would not interfere with groundwater recharge because features would be raised above ground and would not recharge or drain directly to native soil; therefore, KOP Category 3 would not impede sustainable groundwater management of the basin. Furthermore, platforms would increase park space and contain a range of habitat, including riparian and upland conditions. These features allow infiltration and retention of water, which would reduce runoff, where appropriate. After project implementation, recharge in the area would continue to occur through infiltration of precipitation. Platforms would utilize planting soil mix and a drainage layer. In addition, stormwater BMPs as identified in the Design Guidelines, where implemented, would also provide landscape features and open space areas for groundwater infiltration, allowing water to percolate into the ground. Furthermore, groundwater supplies would not be used for operation of KOP Category 3. Therefore, construction and operation of KOP Category 3 is not expected to substantially decrease groundwater supplies or interfere with groundwater recharge.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Construction

Diversions include design components such as underground galleries, pipes, and tunnels. Underground galleries require deep excavations because they are typically placed below the elevation of a local storm drain invert. These excavations may extend up to 30 feet bgs, while excavation depths of pipes and tunnels are approximately 30 feet bgs and 25 feet bgs, respectively. However, excavation depths depend on numerous site-specific factors and may vary once a project site is determined. In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Diversions include elements such as tunnels, pipes, pumps, and weirs that remove wet- or dry-weather flows from the river to increase overall system capacity during larger storm events and provide opportunities for treatment and reuse of water for groundwater recharge during smaller storm events, or the dry season when flows are reduced. Diversions would result in negligible changes in impervious surface areas, compared to existing conditions. Therefore, infiltration rates and recharge would be similar to those under existing conditions. Diversions also include underground galleries, large subsurface tanks that hold water or allow water to seep into the ground, promoting groundwater recharge while still allowing for passive land uses on top. Wetlands are areas intended to be saturated or partially saturated as water is diverted and provide vegetated areas for infiltration and groundwater recharge into the underlying aquifer. Furthermore, groundwater supplies would not be used for operation of KOP Category 4. Therefore, operation of

KOP Category 4 would provide groundwater resource benefits and is not expected to substantially decrease groundwater supplies or interfere with groundwater recharge.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

Construction

Design components of KOP Category 5 would require maximum excavation depths of 25 feet bgs, although most other KOP Category 5 design components, such as a recreation field or side channel, would generally require shallower excavation. However, excavation depths depend on numerous site-specific factors and may vary once a project site is determined. In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Design components of KOP Category 5 include wetlands, naturalized basins, braided channels, fields, surface (water) storage, and side channels. These design components create space for the river where the hydrologic relationship between a river and its floodplain can be reconnected. Reconnecting the floodplain or transitioning adjacent rights-of-way or public lands into floodable areas would also increase the area for groundwater recharge. Surface storage or open basins typically function during rain events for the purpose of groundwater recharge or water conservation. Naturalized banks are a planted or otherwise “soft” edge to a channel or basin and braided channels reconfigure the low-flow channel into a series of interweaving waterways for the purpose of improved ecological function, including groundwater seepage. Fields are areas of open

land intended to flood, which also provide opportunities for infiltration and groundwater recharge. Groundwater supplies would not be used for operation of design features of KOP Category 5. Therefore, construction and operation of KOP Category 5 would provide groundwater resource benefits and is not expected to substantially decrease groundwater supplies or interfere with groundwater recharge.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

Design components of KOP Category 6 include construction of injection wells and dry wells along with multiple structures such as affordable housing projects. Injection wells can extend several hundred feet bgs while dry wells can extend up to 100 feet bgs; however, excavation depths depend on numerous site-specific factors and may vary once a project site is determined. In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Some design features under KOP Category 6 may result in increased impervious surface areas, which would reduce groundwater recharge capacity. However, design features under KOP Category 6 would generally occur in areas with existing impervious surfaces and would not substantially interfere with groundwater recharge. KOP Category 6 would be required to comply with the appropriate local stormwater management programs including incorporating sustainable site

design features that would reduce stormwater runoff associated with impervious surfaces and minimizing adverse effects related to groundwater recharge.

Off-channel land assets combined with in-channel and right-of-way improvements can further ensure projects are multi-benefit, addressing multiple needs, including groundwater supply and recharge. KOP Category 6 provides a range of benefits including urban agriculture, composting, natural treatment systems, wetlands, recreation fields, surface and subsurface water storage, injection wells, water treatment facilities, purple pipe connections, dry wells, groundwater recharge spreading grounds, and storm drain daylighting. Typically, during rain events, surface storage stores water for purposes including groundwater recharge. Groundwater recharge spreading grounds are broad land areas that allow collected surface water (i.e., runoff) to percolate slowly into the ground. Due to their size, spreading grounds are typically located higher in the watershed where soils are more conducive to recharge, situated above a potable groundwater aquifer, and near large channels where access to surface water runoff is greatest. In the *2020 LA River Master Plan*, injection wells would supplement local groundwater supply. Groundwater supply benefits are also related to dry wells that allow water to access subsurface aquifers. Implementation of KOP Category 6 would not impede sustainable groundwater management of the basin. Therefore, operation of KOP Category 6 is not expected to substantially decrease groundwater supplies or interfere with groundwater recharge.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Groundwater sources are used for water supply throughout the project study area. An objective of the *2020 LA River Master Plan* is to improve local water supply reliability. The *2020 LA River Master Plan* includes multi-benefit design components such as groundwater recharge spreading grounds, surface storage, underground galleries, concrete removal, wetlands, fields, and injection and dry wells. These multi-benefit design components also provide groundwater resource benefits including groundwater recharge and supply. In addition, stormwater BMPs such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches as described in the Design Guidelines would be considered and encouraged for all projects, but the decision to implement would be determined by the project proponent. These stormwater BMPs as well as other landscape features and open space areas would allow for groundwater infiltration, allowing water to percolate into the ground, thereby providing increased benefits for groundwater recharge. In addition, projects would comply with the Public Works LID Standards Manual, County water sources, conservation standards, and the current CALGreen. Recycled or reclaimed water would be used for irrigation, where possible. For native planting, irrigation systems would only be utilized for plant establishment and drought-period watering, as recommended in the *2020 LA River Master Plan* and required by the applicable regulatory requirements. Therefore, the overall *2020 LA River Master*

Plan implementation would provide groundwater resource benefits and would not substantially decrease groundwater supplies, interfere with groundwater recharge, or impede sustainable groundwater management of the basin.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.9(c): Would the proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on or off site; substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?

Typical Projects

Common Elements

Construction—Frames 1 through 4

During construction, stormwater drainage patterns could be temporarily altered. However, the Common Elements Typical Project would implement construction BMPs, required in the project SWPPP to minimize the potential for erosion or siltation in nearby storm drains and temporary changes in drainage patterns during construction. During construction, implementation of an ESCP is also required. Construction BMPs would capture and infiltrate small amounts of sheet-flow into the ground such that off-site runoff from the construction site would not increase, ensuring that drainage patterns are not significantly altered. Measures required by the NPDES Construction General Permit would also limit site runoff during construction and would not alter stormwater drainage patterns. BMPs would be implemented to control construction site runoff, ensure proper stormwater control and treatment, and reduce the discharge of pollution to the storm drain system.

Therefore, construction of the Common Elements Typical Project would not substantially alter the existing drainage pattern of the area in a manner that would result in substantial erosion or siltation or increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. Project construction would not result in an exceedance of drainage system capacities.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Construction—Frames 5 Through 9

Construction impacts related to substantially altering the existing drainage pattern in a manner that would result in erosion or flooding or contributing runoff that would exceed the capacity of drainage systems would be similar to the impacts described above under Frames 1 through 4. The Common Elements Typical Project would be subject to the same construction requirements described above, including implementing construction BMPs, required in the project SWPPP, and implementation of an ESCP to minimize the potential for erosion or siltation. Common Elements Typical Project construction activities would also comply with the NPDES Construction General Permit. The NPDES Construction General Permit requires implementation of BMPs to control construction site runoff, ensure proper stormwater control and treatment, and reduce the discharge of pollution to the storm drain system.

However, several reaches in the LA River in Frames 5 through 9 do not meet existing design standards for flood conveyance capacity (Geosyntec and Olin 2018). As a result, baseline conditions of the system capacity are exceeded in large storm events. Therefore, in a large storm event, any increase in site runoff that may occur due to construction of the Common Elements Typical Project in these frames could exceed the system capacity. As a result, during construction, the Project could create or contribute surface water runoff in Frames 5 through 9 that could exceed the capacity of existing stormwater drainage systems.

The proponent of any project that has the potential of increasing the FEMA 1 percent storm event (100-year) BFE shall consult with the NFIP Administrator(s) of the local jurisdiction(s) to ascertain whether the project proponent will need to obtain a CLOMR from FEMA. If the local jurisdiction determines a CLOMR is required, the project proponent shall obtain the CLOMR prior to construction. Within 6 months after completion of project construction, the project proponent shall apply to FEMA for a final LOMR. The CLOMR and LOMR applications will require hydraulic analyses of pre-project and post-project conditions. The Common Elements Typical Project would be designed to avoid any rise in the BFE.

With implementation of the NPDES Construction General, Mitigation Measures 3.9-1a and 3.9-1b, project construction would not result in an exceedance of drainage system capacities because it would not impede or redirect flood flows and would minimize exposing people or structures to a significant risk of loss, injury, or death involving flooding.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

As part of site design for all new developments, the applicants will prepare Drainage Report(s) for the appropriate implementing agency review and approval prior to issuance of a grading, building, site development, or any construction permits. All development, including interim conditions during construction and interim conditions with temporary improvements, within the project site is required to address stormwater management and implement stormwater control measures. Drainage report(s) will include, at a minimum, all of the following:

- Verification of existing stormwater and flood conveyance facilities, including size, elevation, material, capacity, and condition, including the existing stormwater collection system in the project area.
- Hydrologic analysis of construction-period conditions and implementation of all temporary facilities necessary during construction to avoid increases in peak flows.
- Hydrologic analysis of existing and proposed operational peak flows that accounts for all areas that will be disturbed by new development.
- Hydraulic analysis for evaluating pipe capacity and sizing of new pipes. The capacity of existing pipes that are proposed for reuse and new pipes will be sized in accordance with the County's methodology, as noted in the County Hydrology Manual or local municipal code, or otherwise approved by the County or City Engineer.
- Applicants will implement all permanent facilities necessary. such as channel refurbishment and a bypass tunnel, as included in the *2020 LA River Master Plan* to avoid increases in operational peak flows.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Based on the results of the drainage report(s) in Mitigation Measure HYDRO-1a, measures during construction and operation may be required to ensure flood flows are not impeded and to minimize redirected flood flows. The measures will identify site-specific drainage facilities necessary to avoid flows exceeding the existing system during construction and implement the necessary flood-reduction strategies and capacity improvements. Specific measures include:

- If an extreme storm event is anticipated, then temporary stormwater control measures will be implemented to avoid increases in peak flows. Stormwater control measures include but are not limited to interim onsite detention facilities, capture and reuse measures, and/or other measures approved by the County, designed to maintain or reduce current, pre-development, surface runoff, and stormwater discharge to the public storm drain system.
- Necessary flood-reduction strategies and capacity improvements will be implemented.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations—Frames 1 through 4

Under the *2020 LA River Master Plan*, operation of Common Elements Typical Project along the river must occur within the constraints of managing flood risk. This includes maintaining existing flood conveyance capacity and not deteriorating the capacity in deficient reaches. Flow at the river mouth is hydraulically unstable; however, this area is a tidally influenced estuary and the following 5 river miles are hydraulically stable. North of Compton Creek (Frame 1) through the City of Vernon (Frame 4), flow is predominantly (stable) supercritical, with short (stable) subcritical and unstable sections.

The design discharge and capacity of the LA River generally increase in the downstream direction to account for the increasing flow from runoff from the contributing tributary watersheds. River reaches within Frame 1 through Frame 4 currently meet existing design standards for flood conveyance capacity. Frame 1 through Frame 4 provide protection for both the 50-year and 100-year flood (2 percent annual chance of exceedance and 1 percent annual chance of exceedance, respectively), and the lower 12 miles (in Frames 1 through 3) were improved to accommodate the 133-year flood (0.75 percent annual chance of exceedance).

Although the impervious surface areas under future project conditions are unknown, impervious surface areas are assumed to increase under future development when compared to baseline conditions at specific locations. The amount of impervious surface cover is related to stormwater runoff. Larger areas of impervious surface are associated with larger volumes and flows of stormwater runoff. Therefore, stormwater flows would increase with future development under the Common Elements Typical Project. However, the Common Elements Typical Project would be required to comply with the Long Beach MS4 Permit (for work within Frame 1) and the County MS4 Permit and their associated provisions, local jurisdictions' LID requirements, and the appropriate local stormwater management programs. County-led, -funded, or -permitted projects would also comply with the Public Works LID Standards Manual. Incorporating sustainable site design features into project design would reduce stormwater runoff associated with impervious surfaces. The Common Elements Typical Project would be in compliance with the Los Angeles County LID and other appropriate ordinances and MS4 requirements to manage stormwater and associated pollutants. In addition, stormwater BMPs are included under the Common Elements Typical Project and could include rain gardens, vegetated swales/bioswales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters, as described under Impact 3.9(a). The Design Guidelines include a variety of recommended stormwater BMPs and site improvements to manage drainage and stormwater. Sustainable site design features such as stormwater treatment areas, surface landscaping design, and permeable materials would increase permeability and reduce stormwater runoff flows and associated pollutants. Typical drawdown time requirements for infiltration systems are between 72 and 96 hours; therefore, adequate drainage of the planting area is necessary for heavier storms or obstructed systems. Furthermore, river pavilions could incorporate on-site water retention, detention, and filtration, green roofs, and pervious paving. For the 85 percent rain event, stormwater features would capture 100 percent of on-site rainfall. Furthermore, Frame 1 through Frame 4 provide protection for both the 50-year and 100-year flood (2 percent annual chance of exceedance and 1 percent annual chance of exceedance, respectively), and the lower 12 miles (in Frames 1 through 3) were improved to accommodate the 133-year flood (0.75 percent annual chance of exceedance). Therefore, operation of the Common Elements Typical Project in Frames 1 through 4 would not result in increased surface runoff in a manner that would result in flooding on or off site, contribute runoff water that would exceed the existing or planned drainage system, or impede or redirect flood flows.

In addition, the NPDES Construction General Permit requires dischargers to maintain pre-development drainage rates. The operation and maintenance activities for the Common Elements Typical Project such as litter control, cleanup, vandal control, tree trimming, and weed control would not increase flood risk. Therefore, operation would not provide additional sources of polluted runoff.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations—Frames 5 through 9

Operation of the Common Elements Typical Project in Frames 5 through 9 would not result in substantial erosion or increased surface runoff in a manner that would result in flooding on or off site, or substantially alter the existing drainage pattern of the site or area. However, due to existing flood capacity deficiencies, the Common Elements Typical Project could contribute runoff water that would exceed the existing or planned drainage system, provide additional sources of polluted runoff, or impede or redirect flood flows.

Flow in the in the soft-bottom portions of the Glendale Narrows (Frame 6) is predominantly (stable) subcritical; however, short (stable) supercritical regions in the Glendale Narrows occur where the channel bottom consists of concrete, accelerating flows to reduce water depths under bridges. Concrete portions of the river are predominantly supercritical, although local constrictions such as bridges cause flow to locally back up, form hydraulic jumps, and become subcritical. There are several regions within Frame 6 and Frame 7 along the river that are hydraulically unstable, which may result in large and unstable surface waves. Effects of these waves are often alleviated by increasing channel and levee height to contain the waves and/or constructing channel side-slopes with rough cobble material to reduce wave run-up.

The design capacity throughout the channel varies in levels of flood risk reduction. Several reaches of the channel in Frames 5 through 9 have been identified where the conveyance capacity for the 1 percent (100-year) flood event (1 percent annual chance of exceedance) is not currently met. For example, the river has less than 2 percent storm event (50-year) flood protection along the Glendale Narrows as well as the river above the Sepulveda Flood Control Basin. River reaches throughout Frame 5 through Frame 9 also have capacity constraints for the 1 percent storm event (100-year) flood, and could exceed the capacity of the channel in a large storm event.

Reducing flows to the channel may be achieved through implementation of LID, BMPs, and distributed storage. The Common Elements Typical Project would comply with the County MS4 Permit, the County LID ordinance and Public Works LID Standards Manual, and local stormwater management programs. In addition, recommended BMPs in the Design Guidelines would also help manage drainage, stormwater, and associated pollutants. However, several reaches in the LA River in Frames 5 through 9 do not meet existing design standards for flood conveyance capacity

(Geosyntec and Olin 2018). Therefore, in a large storm event, any increase in site runoff that may occur during operation of the Common Elements Typical Project in these frames could exceed the system capacity. As a result, during operation, the Common Elements Typical Project could create or contribute surface water runoff in Frames 5 through 9 that could exceed the capacity of existing stormwater drainage systems.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Multi-Use Trails and Access Gateways

Construction—Frames 1 through 4

Construction impacts of the Multi-Use Trails and Access Gateways Typical Project related to substantial increases in the amount of surface runoff in a manner that would result in flooding, adverse impacts related to drainage capacity, and other associated impacts would be similar to the impacts described above under the Common Elements Typical Project. The Multi-Use Trails and Access Gateways Typical Project would implement construction BMPs, required in the project SWPPP, and an ESCP to minimize the potential for erosion or siltation. The Multi-Use Trails and Access Gateways Typical Project would also comply with the NPDES Construction General Permit, which requires implementation of BMPs to control construction site runoff, ensure proper stormwater control and treatment, and reduce the discharge of pollution to the storm drain system.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Construction—Frames 5 through 9

As discussed above under the Common Elements Typical Project, several reaches in the LA River do not meet existing design standards for flood conveyance capacity. Therefore, in a large storm event, any increase in site runoff would exceed the system capacity.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations—Frames 1 through 4

Operations impacts of the Multi-Use Trails and Access Gateways Typical Project related to substantial increases in the amount of surface runoff in a manner that would result in flooding, adverse impacts related to drainage capacity, and other associated impacts would be similar to the impacts described above under the Common Elements Typical Project.

The design discharge and capacity of the LA River generally increases in the downstream direction. River reaches within Frames 1 through 4 currently meet existing design standards for flood conveyance capacity, providing protection for both the 50-year and 100-year flood (2 percent annual chance of exceedance and 1 percent annual chance of exceedance, respectively), and the lower 12 miles (Frames 1 through 3) provide protection for the 133-year flood (0.75 percent annual chance of exceedance).

The Multi-Use Trails and Access Gateways Typical Project would comply with the County MS4 Permit, the County LID ordinance and Public Works LID Standards Manual, and local stormwater management programs. Incorporating sustainable site design features into project design would manage stormwater runoff associated with impervious surfaces and reduce pollutant loading. In addition, recommended stormwater BMPs included in the Design Guidelines such as rain gardens, vegetated swales/bioswales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters, as described under Impact 3.9(a), could manage drainage, stormwater, and associated pollutants. Multi-Use Trails and Access Gateways Typical Project construction activities would comply with the NPDES Construction General Permit. The NPDES Construction General Permit requires dischargers to maintain pre-development drainage rates. Flood reduction strategies would also retain or slow stormwater flow, allowing it to percolate into the ground, and improving water quality.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations—Frames 5 through 9

Several reaches of the channel in Frames 5 through 9 have been identified where the conveyance capacity for the 1 percent storm event (100-year) flood is not currently met, notably along the Glendale Narrows and reach above the Sepulveda Flood Control Basin.

The *2020 LA River Master Plan* would comply with the County MS4 Permit, the County LID ordinance and Public Works LID Standards Manual, and local stormwater management programs. In addition, the Design Guidelines provide recommended measures to manage drainage, stormwater, and associated pollutants. However, several reaches in the LA River in Frames 5 through 9 do not meet existing design standards for flood conveyance capacity (Geosyntec and Olin 2018). Therefore, in a large storm event, any increase in site runoff that may occur during operation of the Multi-Use Trails and Access Gateways Typical Project in these frames would exceed the system capacity. As a result, during operation, the Multi-Use Trails and Access Gateways Typical Project could create or contribute surface water runoff in Frames 5 through 9 that could exceed the capacity of existing stormwater drainage systems.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below

focuses on specific KOP categories only. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Stormwater drainage patterns could be temporarily altered during construction. In addition, several reaches in the LA River do not meet existing design standards for flood conveyance capacity. As a result, baseline conditions of the system capacity are exceeded in large storm events. In a large storm event, flows could exceed the system capacity. As a result, construction of KOP Categories 1 through 6 could result in potentially significant impacts associated with creating or contributing water that would exceed the capacity of existing stormwater drainage systems.

During construction, BMPs would be implemented, as required in the SWPPP, to minimize erosion or siltation and temporary changes in drainage patterns. Construction BMPs would also control construction site runoff, ensuring proper stormwater control and treatment to reduce the discharge of pollution to the storm drain system. Channel modification and diversion design components include strategies to reduce flood risks related to reducing flows to the channel and increasing channel capacity. However, several reaches in the LA River channel do not meet existing design standards for flood conveyance capacity for the 1 percent storm event (100-year) flood. Existing flood conveyance deficiencies would continue similar to existing conditions. Until strategies to reduce flood risks are implemented, KOP Categories 1 through 6 could create or contribute stormwater flows that could exceed the capacity of existing stormwater drainage systems. Therefore, in a large storm event, any increase in site runoff could exceed the drainage system capacity.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Category 1

Impervious surface areas could increase compared to existing conditions at specific locations, resulting in increased runoff rates and volumes. Considering several reaches in the LA River channel do not meet existing design standards for flood conveyance capacity, in a large storm event, any increase in site runoff could exceed the system capacity. KOP Category 1 would include multi-benefit design components such as vegetated buffers and habitat corridors, which would infiltrate small volumes of runoff. However, during larger flood events, these features would likely become closely saturated to capacity and would have a minimal effect in the reduction of runoff in major rainfall events. As a result, operation of KOP Category 1 could create or contribute stormwater flows that would exceed the capacity of existing stormwater drainage systems. Also, any above-ground project components within a FEMA 1 percent storm event (100-year) floodplain such as new vegetation (which can change the hydraulic friction factor of the floodplain), structures, or fences/gates that run perpendicular to the flow can result in increasing the floodwater levels. Structures dislodged by large flows can become floating debris and cause damage, block, or redirect flows to unintended paths. KOP Category 1 would be designed to avoid any rise in the BFE and design of subsequent projects would minimize hydraulic constraints by considering factors such as orientation, anchoring, and vegetation type. However, planting in the LA River channel would only occur where excess hydraulic capacity is confirmed.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 2

During construction, BMPs would be implemented, as required in the SWPPP, to minimize erosion or siltation and temporary changes in drainage patterns. Construction BMPs would also control construction site runoff, ensuring proper stormwater control and treatment to reduce the discharge of pollution to the storm drain system.

Several reaches in the LA River do not meet existing design standards for flood conveyance capacity, and a large storm event could exceed the system capacity. As a result, operation of KOP Category 2 could result in potentially significant impacts associated with creating or contributing water that would exceed the capacity of existing stormwater drainage systems.

KOP Category 2 would include multi-benefit design components such as a check dam, deployable barriers, levees, armored channels, vertical walls, reshaping of low flows, channel smoothing, texturing/smoothing, soft-bottom/concrete removal, and sediment removal. These design components include strategies to reduce flood risks related to reducing flows to the channel and increasing channel capacity and would be implemented depending on channel capacity requirements. For example, check dams reduce flow rates, deployable barriers such as flood gates can temporarily be lifted or lowered to channel or detain water, levees provide flood management from seasonal high water, reshaping low-flow channels improves channel hydraulics, and changing the material finish of the river channel including texturing and channel smoothing increases velocities and flow rates. Increasing the channel capacity may be achieved through increased channel width, adding levees or increasing existing levee heights, decreasing hydraulic roughness including removing vegetation, renovating existing structures, or increasing the areas with concrete channel bottoms to convey flows more effectively. Increasing the height of existing levees or adding parapet walls to the river channel would increase capacity and reduce flood risks, but requires raising several bridges, reduces connectivity to the river for wildlife and people, and is a visual impairment. Channel refurbishment such as removing invasive vegetation, removing sediment from the channel bottom, replacing dense or woody vegetation with more pliant and lower-profile native grasses, and ongoing maintenance would increase hydraulic capacity and would improve flood risk mitigation to approximately the 2 percent storm event (50-year) flood protection level (2 percent annual chance of exceedance), but would not meet the 1 percent storm event (100-year) flood protection level (1 percent annual chance of exceedance) goal. Placement of concrete on the channel bottom would reduce friction and substantially increase channel capacity, and would support the 1 percent flood event (100-year) flood risk protection goal. However, this approach would require bridges to be redesigned and the rising groundwater in the Glendale Narrows region would have to be continuously managed via groundwater pumping. To meet the 1 percent storm event (100-year) flood risk reduction goal, a combination of channel refurbishments and a bypass tunnel would generally provide enough flood capacity. Hydrologic and hydraulic analyses and modeling would be required to assess suitability and applicability of possible flood risk reduction strategies. Therefore, operation of KOP Category 2 would contribute to improved flood flows due to channel modifications and is not expected to substantially increase the amount of surface runoff in a manner that would result in flooding, adverse impacts related to drainage capacity, and other associated impacts.

Although the potential project impacts on the channel flow are beneficial, they would result in changes to the 1 percent storm event (100-year) floodplain. The project proponent shall consult with the NFIP Administrator(s) of the local jurisdiction(s) to ascertain whether the project proponent will need to obtain a CLOMR from FEMA. If the local jurisdiction determines a CLOMR is required, the project proponent shall obtain the CLOMR prior to construction. Within 6 months after completion of project construction, the project proponent shall apply to FEMA for a final LOMR. The CLOMR and LOMR applications will require hydraulic analyses of pre-project and post-project conditions. KOP Category 2 would be designed to avoid any rise in the BFE.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 3

Design components of KOP Category 3 include multiuse bridges and cantilevers. These features would result in impervious surfaces associated with increased runoff. These design components would be raised, and runoff rates and volumes would be similar to those under existing conditions. However, several reaches in the LA River channel do not meet existing design standards for flood conveyance capacity. As a result, baseline conditions of the system capacity are exceeded in large storm events. Therefore, in a large storm event, any increase in site runoff could exceed the system capacity. As a result, operation of KOP Category 3 could create or contribute stormwater flows that would exceed the capacity of existing stormwater drainage systems.

KOP Category 3 would include multi-benefit design components such as habitat crossings and provide park space, which would reduce stormwater runoff. Platforms would utilize a drainage layer and waterproofing for vegetated areas. The replacement of underground drainage pipes with a vegetated channel for storm drain daylighting would also control runoff. However, during larger flood events, these features would likely become closely saturated to capacity and would have a minimal effect in the reduction of runoff in major rainfall events. Also, any above-ground project components within a 1 percent flood event (100-year) floodplain such as new vegetation (which can change the hydraulic friction factor of the floodplain) or structures can result in increasing floodwater levels. KOP Category 3 would be designed to avoid any rise in the BFE. However, structures dislodged by large flows become floating debris and may cause damage or block or redirect flood flows to unintended paths.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 4

Diversions such as side channels and diversion pipes, tunnels, and channels would alter drainage patterns during operation. Several reaches in the LA River do not meet existing design standards for flood conveyance capacity. In a large storm event, flows could exceed the system capacity. As a result, operation of KOP Category 4 could result in potentially significant impacts associated with creating or contributing water that would exceed the capacity of existing stormwater drainage systems.

Diversions include elements such as pumps, diversion pipes, tunnels, channels, underground galleries, side channels, overflow weirs, storm drain interceptors, and wetlands. Diversions would remove wet- or dry-weather flows from the river to increase overall system capacity during larger storm events and provide opportunities for treatment. These design components include strategies to reduce flood risks related to reducing flows to the channel and increasing channel capacity. Diversion pipes, tunnels, and channels allow for the conveyance of water through or around hydraulic restriction. An overflow weir is a low point along a levee or dam that allows for the flow of water into or out of a hydraulic system. Diversions also provide water quality benefits by enabling storage of water in the diversion for subsequent treatment and use during and after smaller storms. Increasing the channel capacity may be achieved through construction of diversions or a bypass tunnel. A bypass tunnel to divert a portion of the flow around the Glendale Narrows may provide additional water supply and water quality benefits by allowing storage of water in the tunnel for subsequent treatment and use during and after smaller storms. However, a 40-foot-diameter concrete tunnel alone would have deficient capacity to meet the 1 percent storm event (100-year) flood risk capacity goal. Larger and/or multiple tunnels could also be considered. The estimated peak flow for the 1 percent storm event (100-year) flood is approximately 95,000 cubic feet per second; however, a bypass tunnel would only provide a flood capacity of 54,000 cubic feet per second (Geosyntec et al. 2020b). A combination of a bypass tunnel and channel refurbishment would generally provide enough flood capacity to meet the 1 percent storm event (100-year) flood risk reduction goal. Furthermore, KOP Category 4 would be designed to avoid any rise in the BFE. Therefore, operation of KOP Category 4 would contribute to improved flood flows due to water reuse and reduced runoff and is not expected to substantially increase the amount of surface runoff in a manner that would result in flooding, adverse impacts related to drainage capacity, and other associated impacts.

Although the potential project impacts on the channel flow are beneficial, they would result in changes to the 1 percent storm event (100-year) floodplain. The project proponent shall consult with the NFIP Administrator(s) of the local jurisdiction(s) to ascertain whether the project proponent will need to obtain a CLOMR from FEMA. If the local jurisdiction determines a CLOMR is required, the project proponent shall obtain the CLOMR prior to construction. Within 6 months after completion of project construction, the project proponent shall apply to FEMA for a final LOMR. The CLOMR and LOMR applications will require hydraulic analyses of pre-project and post-project conditions.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 5

KOP Category 5 design components such as wetlands, braided channels, fields, surface water storage, and side channels would alter drainage patterns during operation. In addition, several reaches in the LA River channel do not meet existing design standards for flood conveyance capacity. Therefore, in a large storm event, any increase in site runoff could exceed the system capacity, and the system capacity is exceeded in large storm events under baseline conditions.

However, design components such as wetlands, naturalized banks, fields, and surface water storage would allow water to infiltrate, treating stormwater runoff, and reducing stormwater runoff. These features would likely become closely saturated to capacity during larger flood events and would have a minimal effect in the reduction of runoff in major rainfall events.

Impact Determination

Impacts would be potentially significant**.**

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 6

Several reaches in the LA River channel do not meet existing design standards for flood conveyance capacity. As a result, baseline conditions of the system capacity are exceeded in large storm events. Therefore, in a large storm event, any increase in site runoff could exceed the system capacity. As a result, operation of KOP Category 6 could result in potentially significant impacts associated with

creating or contributing water that would exceed the capacity of existing stormwater drainage systems.

KOP Category 6 design components include urban agriculture, composting, natural treatment systems, wetlands, recreation fields, surface storage, water treatment facilities, purple pipe connections, spreading grounds, and storm drain daylighting. Surface storage would store water, typically during rain events, capturing water before it reaches the channel, or alongside the channel where flows from within the channel are diverted. Spreading grounds allow surface water runoff to percolate slowly into the ground and help to control and improve water quality. Urban agriculture areas, wetlands, and fields would allow water to infiltrate, treating stormwater runoff and reducing stormwater runoff. KOP Category 6 would be designed to avoid any rise in the BFE. However, during larger flood events, these features would likely become closely saturated to capacity and would have a minimal effect in the reduction of runoff in major rainfall events.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

Stormwater drainage patterns could be temporarily altered during construction. BMPs would be implemented, as required in the SWPPP, to minimize erosion or siltation and temporary changes in drainage patterns. Construction BMPs would also control construction site runoff, ensuring proper stormwater control and treatment to reduce the discharge of pollution to the storm drain system. However, existing flood conveyance deficiencies would continue similar to existing conditions. Until strategies to reduce flood risks are implemented, construction of the overall *2020 LA River Master Plan* could create or contribute stormwater flows that could exceed the capacity of existing stormwater drainage systems.

Operation of the overall *2020 LA River Master Plan* must occur within the constraints of managing flood risk. This includes maintaining existing flood conveyance capacity and improving capacity in deficient reaches. Runoff rates and volumes are also expected to increase compared to existing conditions due to changes in impervious surface areas. One of the goals of the *2020 LA River Master Plan* is to reduce flood risk and improve resiliency. There are two categories of strategies to reduce flood risks: (1) reduce flows to the channel and (2) increase channel capacity. The flood risk

reduction strategies alone do not meet the 1 percent storm event (100-year) protection level goal. However, a combination of approaches including full implementation of the 2037 EWMP goals (i.e., 28 percent reduction in impervious areas), channel refurbishment, and a bypass tunnel could provide flood conveyance capacity. Implementation of LID, BMPs, and distributed storage would reduce runoff through increased infiltration or temporary storage and provide substantial water quality improvements through contaminant filtration and biological uptake. The combined effect of LID, BMPs, and distributed storage with channel refurbishment and a bypass tunnel would have substantial flood reduction benefits for flow rates below the peak of a 1 percent storm event (100-year) flood. A combination of channel refurbishment and a bypass tunnel would provide enough capacity to meet the 1 percent storm event (100-year) flood risk reduction goal throughout most of the Glendale Narrows, with the exception of a short reach immediately upstream of Verdugo Wash (Frame 6). Adequate open space is available in this area where localized flood reduction strategies may be implemented to provide additional conveyance. For further details related to increasing the channel capacity, refer to the *2020 LA River Master Plan* Appendix Volume II Draft Technical Backup Document (Los Angeles County Public Works 2021), and Water Resources: Flood Risk Management, Water Quality, and Water Supply Progress Memo (OLIN and Geosyntec 2018).

In addition, projects would comply with the NPDES Construction General Permit, County MS4 Permit, the County LID ordinance and Public Works LID Standards Manual, and local stormwater management programs. In addition, the Design Guidelines provide further recommended measures to manage drainage, stormwater, and associated pollutants. All *2020 LA River Master Plan* projects would be designed to avoid any rise in the BFE. However, several reaches in the LA River channel do not meet existing design standards for flood conveyance capacity. As a result, baseline conditions of the system capacity are exceeded in large storm events. Therefore, in a large storm event, any increase in site runoff could exceed the system capacity. As a result, operation of the overall *2020 LA River Master Plan* could create or contribute stormwater flows that would exceed the capacity of existing stormwater drainage systems.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Mitigation Measure HYDRO-1b: Require Stormwater Control Measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.9(d): In flood hazard, tsunami, or seiche zones, would the proposed Project risk release of pollutants due to project inundation?

Typical Projects

Common Elements

Construction

As discussed under Section 3.9.2.2, *Geographic*, the lower 2 to 3 miles of the river are subject to flood risks from tsunami. In addition, the LA River channel as well as land areas within Frame 1 and Frame 3 through Frame 9 are within the 1 percent storm event (100-year) flood hazard area. As a result, in a flood hazard, the Common Elements Typical Project could risk release of pollutants due to project inundation.

During construction activities under the Common Elements Typical Project, stormwater BMPs would be implemented, as required by federal, county, and local policies to minimize degradation of water quality associated with stormwater runoff or construction-related pollutants. In addition, construction and maintenance activities would be subject to local stormwater ordinances, stormwater requirements established by County MS4 Permit requirements, and regional WDRs. Other measures in the SWPPP would include a range of stormwater control BMPs (e.g., installing silt fences, staked straw wattles, geofabric) to prevent silt runoff to storm drains or waterways. Therefore, impacts related to a risk of release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone are not expected to occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operations of the Common Elements Typical Project would be subject to stormwater requirements established by the Long Beach (Frame 1 only) and County MS4 Permit requirements, regional WDRs, and local jurisdictions' water quality and stormwater ordinances. Furthermore, the Common Elements Typical Project would be designed in accordance with the federal and local requirements such as NFIP and general plan policies to reduce impacts associated with flood risks. County-led, -funded, or -permitted projects would also comply with the County Hydrology Manual. In addition, stormwater BMPs are included under the Common Elements Typical Project and could include rain gardens, vegetated swales/bioswales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters, and are further described under Impact 3.9(a). The Design Guidelines include a variety of recommended stormwater BMPs that are encouraged to manage stormwater and associated pollutants; however, the decision to implement would be determined by the project proponent. Stormwater BMPs may include rain gardens, vegetated

swales/bioswales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters. Flood reduction strategies also include increasing channel capacity through channel widening, increased levee heights, diversions/bypass tunnels, channel refurbishment, and addition of concrete channel bottoms. Implementation of a combination of flood reduction strategies would also result in reduced risk of release of pollutants due to project inundation. In addition, these strategies would provide substantial water quality improvements through contaminant filtration and biological uptake or through storage of water for subsequent treatment and use during and after smaller storms. Therefore, impacts related to a risk of release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone are not expected to occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Construction impacts of the Multi-Use Trails and Access Gateways Typical Project for the *2020 LA River Master Plan* related to risk of pollutant release due to project inundation would be similar to the impacts described above under the Common Elements Typical Project.

Stormwater BMPs would be implemented during construction, as required by federal, county, and local policies to minimize stormwater runoff and associated construction-related pollutants. Construction would be subject to local stormwater ordinances and stormwater requirements established by Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit requirements and their associated provisions. Measures in the SWPPP, as required by the Construction General Permit, would include a range of stormwater control BMPs. Therefore, impacts related to a risk of release of pollutants due to project inundation are not expected to occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operation impacts of the Multi-Use Trails and Access Gateways Typical Project for the *2020 LA River Master Plan* related to risk of pollutant release due to project inundation would be similar to the impacts described above under the Common Elements Typical Project.

Operation would comply with the County Hydrology Manual, County Stormwater Ordinance, the County MS4 Permit requirements, and relevant local water quality and stormwater ordinances. The Design Guidelines include stormwater BMPs such as rain gardens, vegetated swales, vegetated filters/infiltration strips, infiltration trenches, and stormwater planters to manage stormwater and associated pollutants. In addition, a range of flood reduction strategies may be used to provide increased flood conveyance capacity. Flood reduction strategies include reducing flows to the channel and increasing channel capacity through LID, increasing capacity of existing basins, channel widening, diversions/bypass tunnels, and channel refurbishment. Implementation of a combination of flood reduction strategies would also reduce the risk of release of pollutants due to project inundation. These flood reduction strategies would also provide water quality improvements. Therefore, impacts related to a risk of release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone are not expected to occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Design components of KOP Category 6 include construction of structures such as affordable housing and cultural centers. The LA River channel is within the 1 percent storm event (100-year) flood zone and the lower 2 to 3 miles of the river are subject to flood risks from tsunami. Considering KOP Category 6 includes a variety of construction activities ranging from trail modifications to development of facilities, and channel access ramps anywhere in the study area, construction of KOP Categories 1 through 6 could result in potentially significant impacts associated with risk of release of pollutants due to project inundation.

Construction activities would comply with the NPDES Construction General Permit, which requires implementation of stormwater BMPs to minimize degradation of water quality associated with stormwater runoff or construction-related pollutants. Specific stormwater control BMPs would be implemented for construction occurring during the wet season. Efforts would be made to minimize the potential for large rain events to mobilize pollutants during construction. In addition, construction and maintenance activities would be subject to local stormwater ordinances, stormwater requirements established by Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit requirements and their associated provisions, and regional WDRs. In-water work would require Section 401 and Section 404 permits or a Section 10 permit. These permits would specify BMPs and require preparation and implementation of plans for the protection of water quality such as a Spill Prevention, Control, and Countermeasure Plan and equipment fueling requirements to minimize fuel leaks and spills. Therefore, impacts related to a risk of release of pollutants due to project inundation in a flood hazard or tsunami are not expected to occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Category 1

KOP Category 1 includes design components including vegetated buffers and habitat corridors. These design components would be in compliance with the requirements of the County Hydrology Manual to minimize flood risks. In addition, KOP Category 1 could incorporate rain gardens and other stormwater BMPs to manage runoff and associated pollutants through infiltration and treatment. In addition, operation would comply with stormwater requirements established by the Long Beach MS4 Permit (for work within Frame 1) and the County MS4 Permit requirements, regional WDRs, and local water quality and stormwater ordinances. Operation of KOP Category 1 is not expected to result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Channel modifications would include multi-benefit design components such as check dams, deployable barriers, levees, armored channels, vertical walls, reshaping of low flows, channel smoothing, texturing/smoothing, soft-bottom/concrete removal, and sediment removal. These design components include strategies to reduce flood risks, and associated pollutants, related to reducing flows to the channel and increasing channel capacity. Design components under KOP Category 2 would also provide water quality benefits. Channel modifications may include terracing the banks that can serve as small planting trays, wildlife ramps, and wetland terraces, allowing for infiltration and filtering of potential contaminants. Other channel modifications with water quality benefits include storm drain daylighting and changing the material of the channel (soft-bottom/ concrete removal), which affect infiltration and treatment potential. Channel modifications such as increased channel capacity through channel widening, increased levee heights, diversions/bypass tunnels, channel refurbishment, and addition of concrete channel bottoms also provide flood reduction strategies. Implementation of a combination of flood reduction strategies would also result in reduced risk of release of pollutants due to project inundation. These strategies would also provide substantial water quality improvements through contaminant filtration and biological uptake or through storage of water for subsequent treatment and use during and after smaller storms. In addition, operation would comply with stormwater requirements established by the Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit requirements, regional WDRs, local water quality and stormwater ordinances, and relevant flood policies. County-led, -funded, or -permitted projects would also comply with the County Hydrology Manual. Operation of KOP Category 2 is not expected to result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Design components of KOP Category 3 include multiuse bridges and cantilevers. Platforms would increase park space and contain a range of habitat, including riparian and upland conditions. Water quality benefits related to increased park space and addition of habitats include stormwater treatment and retention through biological uptake, contaminant filtration, and reduction of discharge of pollution to the storm drain system. Platforms would utilize a drainage layer and waterproofing for vegetated areas. The replacement of underground drainage pipes with a vegetated channel for storm drain daylighting would also provide water quality benefits. In addition, operation would comply with stormwater requirements established by the Long Beach MS4 Permit

(for work within Frame 1) and County MS4 Permit requirements, regional WDRs, local jurisdictions' water quality and stormwater ordinances, and relevant flood policies. County-led, -funded, or -permitted projects would also comply with the County Hydrology Manual. Operation of KOP Category 3 is not expected to result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Diversions include components such as pumps, diversion pipes, tunnels, channels, underground galleries, side channels, overflow weirs, storm drain interceptors, and wetlands. These design components include strategies to reduce flood risks and remove flows from the river to increase overall system capacity during larger storm events. Diversions also provide water quality benefits by enabling storage of water in the diversion for subsequent treatment and use during and after smaller storms. Storm drain interceptors capture water for possible other uses, such as treatment and/or use prior to allowing the water to discharge into the channel. Wetlands divert water out of the LA River channel and improve water quality in habitat areas. Channel modifications such as diversions/bypass tunnels also provide flood reduction strategies. A combination of diversions (i.e., a bypass tunnel) and channel refurbishment would generally provide enough flood capacity to meet the 1 percent storm event (100-year) flood risk reduction goal and associated pollutants. Implementation of a combination of flood reduction strategies would also result in reduced risk of release of pollutants due to project inundation. These strategies would also provide substantial water quality improvements through contaminant filtration and biological uptake or through storage of water for subsequent treatment and use during and after smaller storms. In addition, operation would comply with the stormwater requirements established by Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit requirements, regional WDRs, local jurisdictions' water quality and stormwater ordinances, and relevant flood policies. Therefore, operation of KOP Category 4 is not expected to result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

KOP Category 5 includes design components such as wetlands, naturalized banks, braided channels, fields, surface water storage, and side channels. Implementation of these landscape features and open space areas would allow water to infiltrate, treating stormwater runoff, filtering contaminants, and reducing the discharge of pollution to the storm drain system. Operation would also comply with stormwater requirements established by Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit requirements, regional WDRs, local water quality and stormwater ordinances, and relevant flood policies. Operation of KOP Category 5 would reduce the risk of pollutant release by accommodating flood waters and treating runoff and is not expected to result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

KOP Category 6 design components including urban agriculture, composting, natural treatment systems, wetlands, recreation fields, surface and subsurface storage, water treatment facilities, purple pipe connections, spreading grounds, and storm drain daylighting. KOP Category 6 combined with in-channel and right-of-way improvements can further ensure projects are multi-benefit, addressing multiple needs including runoff and associated pollutants. Surface storage would store water, typically during rain events, capturing water before it reaches the channel or alongside the channel where flows from within the channel are diverted. Spreading grounds allow surface water runoff to percolate slowly into the ground and help to control and improve water quality. Urban agriculture areas, wetlands, and fields would allow water to infiltrate, treating stormwater runoff and reducing stormwater runoff. In addition, operation would comply with the stormwater requirements established by Long Beach MS4 Permit (for work within Frame 1) and County MS4 Permit requirements, regional WDRs, local water quality and stormwater ordinances, and relevant flood policies. County-led, -funded, or -permitted projects would also comply with the County Hydrology Manual. Operation of KOP Category 6 is not expected to result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Primary objectives of the *2020 LA River Master Plan* are to promote healthy, safe, clean water; to reduce flood risk; and improve resiliency. Operation of the overall *2020 LA River Master Plan* must occur within the constraints of managing flood risk. Managing flood risks would also reduce the risk of pollutants due to project inundation. Strategies to reduce flood risks include reducing flows to the channel and increasing channel capacity. A combination of channel refurbishment and a bypass tunnel would generally provide enough capacity to meet the 1 percent storm event (100-year) flood risk reduction goal and associated pollutants. In addition, medium, large, and extra-large projects included in the *2020 LA River Master Plan* would include multi-benefit design components, such as water treatment facilities, natural treatment systems, storm drain daylighting, sediment removal, vegetated buffers, and wetlands, and would provide water quality benefits. Stormwater BMPs such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches would be implemented. Stormwater BMPs, landscape features, and open space areas would capture, convey, and control pollutant discharge, treating stormwater runoff through biological uptake and reducing the discharge of pollution. Furthermore, all projects would comply with the NPDES Construction General Permit, County MS4 Permit, County Hydrology Manual, local stormwater ordinances, Public Works LID Standards Manual, Design Guidelines, and local stormwater management programs. In addition, operation would reduce the risk of pollutant release by managing flood waters and provide treatment for associated pollutants. Therefore, the overall *2020 LA River Master Plan* implementation would not result in a risk of release of pollutants due to project inundation in a flood hazard or tsunami.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.9(e): Would the proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Typical Projects

Common Elements

Construction

Water quality within Frames 1 through 9 is under the jurisdiction of the Los Angeles Regional Water Board's Basin Plan. Groundwater within Frame 1 (West Coast Basin), Frame 2 through Frame 5 (Central Basin), and Frame 6 through Frame 9 (San Fernando Valley Basin) are all considered very low-priority groundwater basins and are not subject to the SGMA.

Commonly practiced BMPs such as straw wattles and mulch would be implemented to control construction site runoff associated with construction of the Common Elements Typical Project and to reduce the discharge of pollutants to storm drain systems from stormwater and other NPS runoff. As part of compliance with permit requirements during ground-disturbing or construction activities, implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including the water quality objectives that protect designated beneficial uses of surface water and groundwater, as defined in the water quality control plan. Construction runoff would also have to comply with the appropriate water quality objectives for the region. Implementation of stormwater control BMPs during construction, as required by the NPDES Construction General Permit, would reduce the discharge of pollutants and adverse impacts on water quality. The NPDES Construction General Permit also requires stormwater discharges not to contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards, including designated beneficial uses. Therefore, construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Operations

Compliance with Los Angeles County MS4 Permit including EWMPs would also reduce stormwater runoff flows and associated pollutants. In addition, implementing the appropriate general plan policies would require the protection of groundwater recharge areas and groundwater resources, where available, as required by a sustainable groundwater management plan. Furthermore, the Common Elements Typical Project would not result in adverse impacts on the local groundwater aquifer. Incorporation of stormwater BMPs and landscaping to manage stormwater would also reduce stormwater runoff flows and associated pollutants. The Common Elements Typical Project would be required to comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. In addition, stormwater BMPs are included in the Common Elements Typical Project. The Design Guidelines include a variety of recommended stormwater BMPs and related site improvements that can be implemented as BMPs to manage drainage and stormwater; the stormwater BMPs could include rain gardens, vegetated swales/bioswales, vegetated filter/infiltration strips, infiltration trenches, stormwater planters, and tree well filters. Stormwater BMPs that are incorporated would allow water to percolate into the ground, thereby treating stormwater runoff through biological uptake and reducing the discharge of pollution to the storm drain system. Any potential contaminants would be filtered, minimizing adverse effects on groundwater quality as well. The Common Elements Typical Project would be consistent with provisions in the Basin Plan. Therefore, the Common Elements Typical Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Impacts related to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan for the Multi-Use Trails and Access Gateways Typical Project would be similar to the impacts described above under Common Elements Typical Project. Groundwater basins within Frames 1 through 9 are considered very low-priority groundwater basins and are not subject to the SGMA.

Commonly practiced BMPs such as straw wattles and mulch would be implemented to control construction site runoff, reduce the discharge of pollutants, and ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. Compliance with the NPDES Construction General Permit and the County's water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. Therefore, the Multi-Use Trails and Access Gateways Typical Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Operation

Impacts related to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan for the Multi-Use Trails and Access Gateways Typical Project would be similar to the impacts described above under Common Elements Typical Project. Groundwater basins within Frames 1 through 9 are considered very low-priority groundwater basins and are not subject to the SGMA.

Stormwater BMPs, vegetated buffers, and habitat corridors would be incorporated into the Multi-Use Trails and Access Gateways Typical Project. Incorporation of these site design features and

compliance with the County's water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. The Multi-Use Trails and Access Gateways Typical Project would be in compliance with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. The Multi-Use Trails and Access Gateways Typical Project would be consistent with provisions in the Basin Plan. Therefore, the Multi-Use Trails and Access Gateways Typical Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Commonly practiced BMPs such as straw wattles and mulch would be implemented to control construction site runoff, reduce the discharge of pollutants, and ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. Compliance with the NPDES Construction General Permit and the County's water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In-channel work requires a Section 10 Rivers and Harbors Appropriation Act permit or a Section 401 and Section 404 permit. These permits would specify BMPs and require preparation and implementation of plans for the protection of water quality. Therefore, KOP Categories 1 through 6 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Operations

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

KOP Category 1

Stormwater BMPs, vegetated buffers, and habitat corridors would be incorporated into KOP Category 1. Incorporation of these site design components and compliance with the County's water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. The Project would comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. Operation of KOP Category 1 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 2

KOP Category 2 includes multi-benefit design components such as terracing the banks that can serve as small planting trays, wildlife ramps, and wetland terraces, which allow infiltration and filtering of potential contaminants. Other channel modifications with water quality benefits include storm drain daylighting and changing the material of the channel (soft-bottom/concrete removal), which affect infiltration and treatment potential. Sediment removal would remove excess sediment from the channel that would otherwise restrict the free flow of water or decrease the natural filtration of harmful chemicals. Incorporation of these site design components and compliance with the County's water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan,

would be achieved. Furthermore, the Project would comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. Operation of KOP Category 2 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 3

Design components of KOP Category 3 include multiuse bridges and cantilevers. Platforms would increase park space and contain a range of habitat, including riparian and upland conditions. Water quality benefits related to a range of habitats include stormwater treatment and retention through biological uptake, contaminant filtration, and reduction of the discharge of pollution to the storm drain system. The replacement of underground drainage pipes with a vegetated channel for storm drain daylighting would also provide water quality benefits. Incorporation of these site design components and compliance with regional water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. Furthermore, the Project would comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. Operation of KOP Category 3 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 4

KOP Category 4 includes design components such as pumps, diversion pipes, tunnels, channels, underground galleries, side channels, overflow weirs, storm drain interceptors, and wetlands. Diversions would remove wet- or dry-weather flows from the river during larger storm events and provide opportunities for treatment. Diversions also provide ancillary water supply and water

quality benefits by enabling storage of water in the diversion for subsequent treatment and use during and after smaller storms. Storm drain interceptors capture water for possible other uses, such as treatment and/or use prior to allowing the water to discharge into the channel. Wetlands divert water out of the LA River channel and improve water quality in habitat areas. Incorporation of these site design components and compliance with regional water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. Furthermore, the Project would comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. Operation of KOP Category 4 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 5

KOP Category 5 design components include incorporation of wetlands, naturalized banks, braided channels, fields, surface storage, and side channels into project features. Implementation of these landscape features and open space areas would allow water to infiltrate, treating stormwater runoff, filtering contaminants, and reducing the discharge of pollution to the storm drain system. Incorporation of these site design components and compliance with regional water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. Furthermore, the Project would comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. Operation of KOP Category 5 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 6

KOP Category 6 design components could provide a range functions related to water quality including urban agriculture, composting, natural treatment systems, wetlands, recreation fields, surface and subsurface storage, injection wells, water treatment facilities, purple pipe connections, dry wells, spreading grounds, and storm drain daylighting. Nutrient pollution from urban agriculture and composting would comply with NPS regulations. Spreading grounds allow surface water runoff to percolate slowly into the ground and help to control and improve water quality. Spreading grounds, injection wells, and dry wells allow access to subsurface aquifers and can affect groundwater quality. Incorporation of these site design components and compliance with regional water quality standards and general plan policies would also reduce stormwater runoff flows and associated pollutants, and require the protection of groundwater resources, as required by a sustainable groundwater management plan. In addition, implementation of stormwater BMPs would ensure that water quality standards and objectives, as defined in the water quality control plan, would be achieved. Furthermore, the design components would comply with the County MS4 permit, the Public Works LID Standards Manual, relevant general plan policies, and local stormwater management and water quality requirements. Operation of KOP Category 6 would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

One of the primary objectives of the *2020 LA River Master Plan* is to promote healthy, safe, clean water. Medium, large, and extra-large projects would include multi-benefit design components such as water treatment facilities, natural treatment systems, storm drain daylighting, sediment removal, vegetated buffers, and wetlands, providing water quality benefits. In addition, stormwater BMPs as described in the Design Guidelines are recommended to be implemented such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches. Stormwater BMPs would capture, convey, and control pollutant discharge. Implementation of stormwater treatment areas, landscape features, and open space areas would allow water to percolate into the ground, thereby treating stormwater runoff through biological uptake and reducing the discharge of pollution to the storm drain system. Furthermore, all elements of the *2020 LA River Master Plan* would comply with the NPDES Construction General Permit, County MS4 Permit, Public Works LID Standards Manual, and other local water quality requirements and stormwater ordinances. The overall *2020 LA River Master Plan* would be consistent with provisions in the Basin Plan. Therefore,

implementation of the overall *2020 LA River Master Plan* would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on hydrology and water quality would be the LA River Watershed because drainage and water quality impacts are a result of all waterbodies that are part of the watershed that contribute to downstream impacts. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on hydrology and water quality if, in combination with other projects within the greater Los Angeles region, it would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin; substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on or off site, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows; risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones; or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Cumulative Condition

Further urbanization in the greater Los Angeles region and implementation of transportation improvements and land use strategies would result in a continuing increase in stormwater runoff, water quality degradation, and exposure of persons and property to floodplain hazards.

Cumulative growth and development would generate additional pollutants from residential, commercial, industrial, and transportation facilities. The increase in impervious surface areas would increase urban runoff, resulting in the transport of greater quantities of contaminants to receiving waters that may currently be impaired (SCAG 2020). Paved surfaces and drainage conduits can accelerate the velocity of runoff, concentrating peak flows in downstream areas faster than under natural conditions. In addition, the increase in impervious areas could decrease groundwater

recharge, increase runoff rates and/or volumes, place structures within flood zones, and expose additional people and property to risks associated with dam inundation, seiche, tsunami, and/or mudflow. Population growth could contribute incrementally to depleted groundwater supplies due to substantial additional demands for potable water such that there would be a net deficit in aquifer volume or a lowering of local groundwater level (SCAG 2020). It is not anticipated that cumulative projects in the County would contribute incrementally by placing housing within a 100-year flood hazard area due to compliance with flood safety requirements and flood management plans (Los Angeles County 2014); however, the placement of regional projects within a 100-year flood hazard area would impede or redirect flows when considered cumulatively (SCAG 2020).

The Los Angeles County General Plan Update EIR (Los Angeles County 2014) notes that buildout in the County would involve soil disturbance, construction, and operation of developed land uses that could each generate pollutants affecting stormwater. Although specific impacts may not rise to significant runoff or pollutant levels, the cumulative effect would be significant.

However, various regulatory requirements are in place to minimize these effects, including the CWA, compliance with which is administered by the Los Angeles RWQCB. Other requirements involve preparing and implementing stormwater pollution prevention plans pursuant to the Statewide General Construction Permit, complying with the County MS4 Permit, improving flood management facilities and design requirements to raise structures above flood zones, and complying with recommendations in geotechnical reports to minimize mud flows (SCAG 2020). Even with compliance with water quality, drainage, and flood safety regulations and policies, impacts on hydrology and water quality would be cumulatively significant. Therefore, there is a cumulative condition related to hydrology and water quality.

Contribution of the Project to Cumulative Impacts

One of the primary objectives of the *2020 LA River Master Plan* is to promote healthy, safe, clean water. Construction activities could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport, generation of pollutants, or accidental spills that could temporarily contaminate runoff, surface water, or groundwater. However, BMPs, as required in a SWPPP, would be required during construction to reduce erosion and restrict non-stormwater discharges from the construction site as well as release of hazardous materials. In addition, Mitigation Measures HYDRO-1a and b would reduce potential project impacts related to erosion, runoff, and potential flooding, to less-than-significant levels.

The proposed Project would not affect the County's ability to implement or enforce its goals or policies or otherwise be inconsistent with regulatory requirements related to the minimization of water quality impacts. The Project would comply with the NPDES Construction General Permit, Long Beach MS4 Permit and County MS4 Permit and their associated provisions, and other local water quality and LID requirements and stormwater ordinances. Therefore, implementation of the *2020 LA River Master Plan* would not violate any water quality standards or degrade water quality and several components would likely improve water quality.

Implementation of the proposed Project would not deplete groundwater supply or interfere with groundwater recharge. Irrigation supply and system components would comply with local jurisdictions' LID requirements, County water sources, conservation standards, and the current CALGreen. Recycled or reclaimed water would be used for irrigation, where possible. *2020 LA River Master Plan* implementation would provide groundwater resource benefits and would not substantially decrease groundwater supplies, interfere with groundwater recharge, or impede

sustainable groundwater management of the basin. Furthermore, the *2020 LA River Master Plan* would be consistent with goals and policies identified in the applicable general plans related to hydrology and water quality. The proposed Project would not make a cumulatively considerable contribution to a cumulative impact on hydrology and water quality.

Section 3.10
Land Use and Planning

3.10.1 Introduction

This section describes the land use impacts of the proposed Project, including any conflicts with applicable land use plans, policies, or regulations. To assess potential land use impacts, an overview of existing land uses, land use designations, and applicable land use plans and policies is provided. Land use decisions pertaining to the proposed Project fall under the 18 jurisdictions, including the County, and the Cities of Los Angeles, Long Beach, Carson, Compton, Cudahy, Downey, Lynwood, Paramount, South Gate, Bell Gardens, Bell, Maywood, Huntington Park, Commerce, Vernon, Burbank, and Glendale, as the 51-mile LA River passes through each of these jurisdictions. Figure 2-4 in Chapter 2, *Project Description*, shows the river's extent and its neighboring communities.

As noted in Chapter 2, *Project Description*, a series of nine geographical frames has been developed for the *2020 LA River Master Plan* to assist in understanding where specific site opportunities are located in relation to municipal, hydraulic, and ecological zones. The nine frames along the LA River range in size from approximately 6,080 acres (Frame 2) to 11,043 acres (Frame 9). Frames 1 through 5 (Estuary, South Plain, Central Plain, North Plain, and Heights, respectively) have similar, more dense urban uses; Frame 6 (Narrows) has a large recreational component and entertainment-related uses; and Frames 7, 8, and 9 (Valley) have more suburban land uses. As described in Chapter 2, *Project Description*, the study area for the *2020 LA River Master Plan* is 1 mile on each side of the river; the land use analysis in this section considers the same geographic area.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.10.2 Setting

3.10.2.1 Geographic

Regional Context

The LA River Watershed covers a land area of 834 square miles. The eastern portion of the watershed spans from the Santa Monica Mountains to the Simi Hills and the western portion spans

from the Santa Susana Mountains to the San Gabriel Mountains. The watershed encompasses and is shaped by the path of the LA River, which flows from its headwaters in the Santa Susana Mountains eastward to the northern boundary of Griffith Park. Here the channel turns southward through the Glendale Narrows before it flows across the coastal plain and into San Pedro Bay near Long Beach. The LA River has evolved from an uncontrolled, meandering river providing a valuable source of water for early inhabitants to a major flood protection waterway. Out of the approximately 9 million people who live within the watershed, 1 million live within 1 mile of the LA River itself.

Existing Land Uses

The typical LA River right-of-way (ROW) includes flood management structures such as the channel (bank to bank), levees, and access roads, which are primarily owned and maintained by the Los Angeles County Flood Control District (LACFCD) and the U.S. Army Corps of Engineers (USACE). Currently, LACFCD and USACE each maintain approximately half of the LA River. Permits for projects along the LA River are issued by these two entities depending on project typology and location. Ownership of the approximately 2,300 acres of land within the LA River ROW varies. LACFCD owns large portions of the ROW, but municipal and private owners also own portions of the ROW. Where municipal or private interests own parcels within the channel, easements for operations and maintenance exist to allow LACFCD and USACE to operate and maintain LA River facilities.

A variety of land uses occurs adjacent to the LA River within each of the nine identified frames for the river's extent. Beginning at the Pacific Ocean in Long Beach, Frames 1 through 5 consist of dense urban uses, including heavy and light industrial, commercial, and some residential in Frames 1, 2, and 3. Frame 6, encompassing the Glendale Narrows, includes Griffith Park on the south and numerous entertainment-related and industrial facilities on the north side of the river. Frames 7, 8, and 9 include suburban uses composed of residential, local and neighborhood commercial, and offices. Frame 7 includes Burbank, where land uses are predominantly residential, commercial, and entertainment related (e.g., recording, production, and post-production studios). The greatest number of residential uses occurs in Frames 8 and 9. The largest acreage of commercial and recreational uses is in Frame 9; Frame 6 has the next-largest amount of recreational uses.

With regard to the LA River itself, in addition to the channel, the typical LA River ROW includes flood management structures such as levees and access roads. In some sections, various recreational amenities such as bike paths, parks, and trails are found within the ROW, while in other areas these amenities are directly adjacent to the ROW. Recreational amenities are primarily maintained by municipal and other public entities and/or other special interest groups through flood permits and ROW use agreements. Access points vary from well-signed trailheads to holes cut in the fence that runs adjacent to the river. Access points tend to be located on one side of the river at a time, although 45 percent connect to the opposite bank via pedestrian-accessible bridges.

3.10.2.2 Relevant Land Use Plans and Policies (Non-Regulatory)

Southern California Association of Governments Regional Comprehensive Plan

The Southern California Association of Governments (SCAG) is designated by the federal government as the Southern California region's Metropolitan Planning Organization and Regional

Transportation Planning Agency. SCAG's jurisdiction includes Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. SCAG addresses regional planning through various plans and programs, including the 2008 *Regional Comprehensive Plan* (SCAG 2008).

The *Regional Comprehensive Plan* addresses regional issues, such as housing, traffic/transportation, water, and air quality, and serves as an advisory document to local agencies in the Southern California region to use when preparing local plans and handling local issues of regional significance. The *Regional Comprehensive Plan* contains the following land use and housing, open space and habitat, transportation, and air quality goals that are relevant to a discussion of land use impacts for the proposed Project.

Land Use and Housing

- Successfully integrate land and transportation planning and achieve land use and housing sustainability.

Open Space and Habitat

- Ensure a sustainable ecology by protecting and enhancing the region's open space infrastructure and mitigate growth and transportation related impacts to natural lands by:
    - Conserving natural lands that are necessary to preserve the ecological function and value of the region's ecosystems;
    - Conserving wildlife linkages as critical components of the region's open space infrastructure;
    - Coordinating transportation and open space to reduce transportation impacts to natural lands.

Transportation

- A more efficient transportation system that reduces and better manages vehicle activity.
- A cleaner transportation system that minimizes air quality impacts and is energy efficient.

Air Quality

- Reduce emissions of criteria pollutants to attain federal air quality standards by prescribed dates and state ambient air quality standards as soon as practicable.
- Reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas.
- Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to businesses and residents.

SCAG Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy)

On May 7, 2020, SCAG's Regional Council adopted Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy; SCAG 2020) for federal transportation conformity purposes only. The Regional Council approved the Connect SoCal plan on September 3, 2020. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a course for closely integrating land use and transportation so the region can grow smartly and sustainably.

The goals of Connect SoCal fall into four core categories: economy, mobility, environment, and healthy/complete communities. The Connect SoCal goals are as follows:

1. Encourage regional economic prosperity and global competitiveness.
2. Improve mobility, accessibility, reliability, and travel safety for people and goods.
3. Enhance the preservation, security, and resilience of the regional transportation system.
4. Increase person and goods movement and travel choices within the transportation system.
5. Reduce greenhouse gas emissions and improve air quality.
6. Support healthy and equitable communities.
7. Adapt to a changing climate and support an integrated regional development pattern and transportation network.
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options.
10. Promote conservation of natural and agricultural lands and restoration of habitats.

Los Angeles River Revitalization Master Plan (2007)

The *Los Angeles River Revitalization Master Plan* (LARRMP) (City of Los Angeles 2007) provides a framework for restoring the river's ecological function and for transforming it into an amenity for residents and visitors. The LARRMP was prepared for the 32-mile length of the LA River within the City of Los Angeles. The goals include:

- Revitalize the Los Angeles River through enhanced flood storage, water quality, public safety, and ecosystem.
- Green the neighborhoods with a continuous Los Angeles River greenway, extended open space and recreation, and public art along the Los Angeles River.
- Capture community opportunities by making the Los Angeles River the focus of activity, providing opportunities for educational and public facilities, and celebrating the cultural heritage of the Los Angeles River.
- Create value with improved quality of life, focused attention on underused areas and disadvantaged communities, and increased employment, housing, and retail space opportunities.

The LARRMP includes recommendations for the following:

- Physical improvements to the Los Angeles River corridor and to the green space network in adjacent neighborhoods
- Management of public access on a policy level and ensuring public health and safety
- Recommendations for a Los Angeles River governance and management structure; and
- Recommendations for short- and long-term priority projects and potential funding strategies.

The long-term vision for the LARRMP includes restoring a continuous, functioning riparian ecosystem along the LA River corridor. This would involve restoring riparian vegetation to support birds and mammals and, ideally, developing fish passages, fish ladders, and riffle pools to allow for

restoration of steelhead trout habitat. The City of Los Angeles' Adopted Capital Improvement Expenditure Program includes a listing of projects that relate to the LA River revitalization effort, as reported by the city's administrative officer. The project listing includes bridges, recreational bike paths, parks and associated facilities, and riparian restoration features.

Lower Los Angeles River Revitalization Plan (2017)

California Assembly Bill 530 was signed into law in 2015. Authored by Assembly Speaker Anthony Rendon, the legislation requires the creation of the Lower Los Angeles River Working Group (Working Group) to lead the development of the *Lower Los Angeles River Revitalization Plan* (LLARRP). The LLARRP was developed by a Working Group composed of 40 stakeholder groups, including advocacy organizations, State and federal agencies, and the 15 cities within 1 mile of the river from Vernon to Long Beach. Over the course of 22 months, the Working Group participated in public meetings and outreach to create an inclusive process for plan development. This process was transparent and community-driven and was used to establish clear goals and objectives for river revitalization. The Working Group then used this process to identify 155 multi-benefit project opportunities within 1 mile of the river that would address the communities' revitalization objectives in a balanced and equitable manner.

The LLARRP objectives relevant to land use are summarized below:

- Prevent gentrification and resulting residential and commercial displacement through comprehensive community-driven and informed policies and programs such as, but not limited to, affordable housing, rent stabilization, enhanced infrastructure financing districts, community land trusts, city housing policies, thoughtfully planned commercial development, and additional LA River multi-use trail and bikeway access points to avoid real estate hot spots.
- Address homelessness by preventing residential displacement, supporting regional initiatives such as increasing the affordable housing stock, performing long-term homelessness interventions, and incorporating support services for the homeless into river revitalization projects.
- Increase equitable community river access and assets through smart acquisitions of river-adjacent properties to address the community and users' needs. These spaces must be safe, be accessible by the community, and meet the needs of a diverse range of users.
- Support existing local businesses and workforce through coordination with organizations, development of park space and housing areas along the lower LA River, and support of locally owned businesses. Environmental remediation, green space development, and revitalization efforts should directly engage the community and create job opportunities while providing workforce training and provisions for worker safety.
- Promote health, equity, wellness, and physical activity in communities along the lower LA River by providing access to safe and interconnected complete streets, parks, and open spaces that promote an active lifestyle, and by increasing access to and promoting healthy food.
- Increase community green infrastructure in communities along the lower LA River to protect and improve air and water quality, increase outdoor activity, improve mental health, and increase social cohesion by creating community gathering spaces.

- Enhance connectivity by improving and expanding the network of connections including streets, pathways, bikeways, and multi-use trails that connect communities, cities, and public assets to the LA River Bike Path and LA River Trail.
- Enhance and create diverse, vibrant public spaces by creating new and improving existing public spaces at and around the river that support diverse experiences, public enjoyment, health, and local community identity.
- Improve user experience and equitable access by providing a consistent, high-quality experience along the river, in surrounding public spaces, and in the connections in between that is welcoming, accessible, and safe for all users.

Long Beach RiverLink (2007)

Long Beach RiverLink (Long Beach Department of Parks, Recreation and Marine 2007) seeks to define a sense of place and envision possibilities for an integrated open space system for the west side of Long Beach. The plan provides a framework to connect west side neighborhoods, and greater Long Beach, with the LA River greenway. Long Beach's vision for the LA River, which is not unlike that of other LA River planning efforts, is one of a river that provides aesthetic, recreational, and ecological benefits in addition to serving its flood control purposes. *Long Beach RiverLink* states that it does not currently envision a reconfiguration of the existing flood control levees. The main goals of *Long Beach RiverLink* are summarized below:

- Identify areas for the acquisition of additional open space. The City of Long Beach is seeking to provide 8 acres of recreational open space for each 1,000 residents of the city. To achieve this, approximately 1,100 acres needs to be added to the current inventory of 2,855 acres.
- Identify ways to connect city residents to the LA River. This is primarily oriented toward improving physical access to the bicycle and pedestrian trails on the levees and open spaces along the river.
- Identify locations along the LA River where the native habitats could be restored. This is to preserve the scarce remnants of Long Beach's biological heritage and to allow that heritage to recover to the point that its existence will no longer be threatened. Furthermore, this is to provide places of contact where residents can understand and value that heritage.
- Improve the aesthetics of the LA River and the City of Long Beach.

Gateway Cities and Rivers Urban Greening Plan (2015)

The *Gateway Cities and Rivers Urban Greening Plan* (WCA and North East Trees 2015) seeks to expand, develop, and enhance greenways, parks, open space, and green infrastructure both along the river corridors and throughout the 26 urban cities and unincorporated County areas that make up the Gateway Cities in the central and lower Los Angeles basin. The plan is wide in scope, promoting a common vision and direction, with focus on guiding greening efforts, collaboration, and funding in the region. The Watershed Conservation Authority (WCA) seeks to connect communities through nature to:

- Protect open space for people and wildlife.
- Support water conservation and ecosystem improvement.
- Inspire environmental stewardship in diverse communities and among recreational users.

- Expand public access to existing and new recreation opportunities.

Through the *Gateway Cities and Rivers Urban Greening Plan*, the WCA is working to improve conditions through the "missing middle" study area, which includes the cities along the lower LA River, Rio Hondo, lower San Gabriel River, and Coyote Creek. The plan takes a holistic approach by integrating several regional plans and leveraging a joint-powers authority between LACFCD and the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy.

Common Ground from the Mountains to the Sea: Watershed and Open Space Plan, San Gabriel and Los Angeles Rivers (2001)

The California Resources Agency, San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, and Santa Monica Mountains Conservancy jointly developed *Common Ground from the Mountains to the Sea: Watershed and Open Space Plan, San Gabriel and Los Angeles Rivers* (California Resources Agency et al. 2001). Some portions of the upper LA River are included within the territory of the Santa Monica Mountains Conservancy. The plan articulates a vision for the future of the San Gabriel and LA Rivers Watersheds and provides a framework for future watershed and open space planning. The plan identifies several guiding principles including, but not limited to:

- Create, expand, and improve public open space throughout the region.
- Improve access to open space and recreation for all communities.
- Improve habitat quality, quantity, and connectivity connect open space with a network of trails.
- Promote stewardship of the landscape encourage sustainable growth to balance environmental, social, and economic benefits.
- Maintain and improve flood protection.
- Establish riverfront greenways to cleanse water, hold floodwaters, and extend open space.
- Coordinate watershed planning across jurisdictions and boundaries.
- Encourage multi-objective planning and projects.

3.10.3 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of land use in this PEIR.

3.10.3.1 Federal

No federal land use regulations are applicable to the proposed Project land use impact analysis.

3.10.3.2 State

The California Department of Parks and Recreation supports California's state parks and its recreational programs. The department administers 280 state park units, over 340 miles of coastline, 970 miles of lake and river frontage, 15,000 campsites, and 4,500 miles of trails.

Los Angeles State Historic Park, most recently known as the Cornfield or Chinatown Yard property, is a 32-acre site located within half a mile of El Pueblo de Los Angeles Historical Monument on what has been recorded as communal agricultural land during the pueblo's early years. At its northern end, the site is about 150 feet from the LA River. The Taylor Yard property, a unit of the State Park System known as the Rio de Los Angeles State Park, is located along the east bank of the LA River approximately 2 miles north of the Los Angeles State Historic Park site. Both parks are subject to an adopted general plan (California State Parks 2005), which contains land use regulations relevant to the proposed Project. Guidelines in the general plan address managing and interpreting the park's resources, providing recreational facilities and opportunities, and operating and maintaining the park. The goals establish the purpose and the guidelines provide the direction that California State Parks will consider to achieve these specific goals. Goals related to land use include:

- Provide recreational areas in the Park for visitors to improve their health and wellness in harmony with the physical surroundings that are compatible with the natural and historic nature of the Park.
- Promote healthy watershed processes and manage the site to restore and protect natural watershed functions as much as possible within the limits of the urban setting.
- Work cooperatively in partnerships to provide a coordinated and coherent network of educational, open space and recreational opportunities.
- Work cooperatively to enhance visitor experiences and to provide a coordinated and coherent network of regional open space and recreational opportunities.

3.10.3.3 Regional

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Los Angeles County Board of Supervisors on October 6, 2015. The *Los Angeles County General Plan* provides the policy framework for how and where the unincorporated County areas will grow through the year 2035, while recognizing and celebrating the County's wide diversity of cultures, abundant natural resources, and status as an international economic center. The general plan discusses new housing and jobs within the unincorporated County areas in anticipation of population growth in the County and the region. The Land Use Element provides strategies and planning tools to facilitate and guide future development and revitalization efforts. In accordance with the California Government Code, the Land Use Element designates the proposed general distribution and general location and extent of uses. The General Plan Land Use Policy Map and Land Use Legend serve as the "blueprint" for how land will be used to accommodate growth and change in the unincorporated County areas. Land use policies for projects within unincorporated County areas along the LA River would be relevant to the proposed Project.

Table 3.10-1 summarizes *Los Angeles County General Plan* policies and objectives regarding land use and recreation that are relevant to the proposed Project. It should be noted that there are numerous policies and objectives that relate to mobility, air quality, noise, etc.; these policies and objectives are listed in the individual resource chapters of this PEIR. Only policies relevant to land use compatibility and recreation are included in this section.

Table 3.10-1. County General Plan Relevant General Plan Policies and Objectives

Element	Policies and Objectives
Land Use Element	• **Policy LU 2.2:** Ensure broad outreach, public participation, and opportunities for community input in community-based planning efforts. • **Policy LU 2.3:** Consult with and ensure that applicable County departments, adjacent cities and other stakeholders are involved in community-based planning efforts. • **Policy LU 2.8:** Coordinate with the Los Angeles County Department of Public Works and other infrastructure providers to analyze and assess infrastructure improvements that are necessary for plan implementation. • **Policy LU 5.2:** Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs. • **Policy LU 6.2:** Encourage land uses and developments that are compatible with the natural environment and landscape. • **Policy LU 10.1:** Encourage community outreach and stakeholder agency input early and often in the design of projects. • **Policy LU 10.4:** Promote environmentally sensitive and sustainable design.
Mobility Element	• **Policy M 2.6:** Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible.
Open Space Element	• **Policy C/NR 1.3:** Support the acquisition of new available open space areas. Augment this strategy by leveraging County resources in concert with the compatible open space stewardship actions of other agencies, as feasible and appropriate. • **Policy C/NR 1.4:** Create, support and protect an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the southwestern extent of the Mojave Desert to Puente Hills and Chino Hills. • **Policy C/NR 1.5:** Provide and improve access to dedicated open space and natural areas for all users that considers sensitive biological resources. • **Policy C/NR 2.2:** Encourage the development of multi-benefit dedicated open spaces. • **Policy C/NR 2.3:** Improve understanding and appreciation for natural areas through preservation programs, stewardship, and educational facilities.

Parks and Recreation Element	• **Goal P/R 1:** Enhanced active and passive park and recreation opportunities for all users.
	  ○ **Policy P/R 1.1:** Provide opportunities for public participation in designing and planning parks and recreation programs.
	  ○ **Policy P/R 1.2:** Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.
	  ○ **Policy P/R 1.3:** Consider emerging trends in parks and recreation when planning for new parks and recreation programs.
	  ○ **Policy P/R 1.4:** Promote efficiency by building on existing recreation programs.
	  ○ **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.
	  ○ **Policy P/R 1.6:** Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories.

Element	Policies and Objectives
	○ **Policy P/R 1.7:** Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities. ○ **Policy P/R 1.8:** Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities. ○ **Policy P/R 1.10:** Ensure a balance of passive and recreational activities in the development of new park facilities. ○ **Policy P/R 1.11:** Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances. • **Goal P/R 2:** Enhanced multi-agency collaboration to leverage resources. ○ **Policy P/R 2.5:** Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, the County, state, and federal agencies, private groups, schools, private landowners, and other organizations. • **Goal P/R 3:** Acquisition and development of additional parkland. ○ **Policy P/R 3.1:** Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County. ○ **Policy P/R 3.3:** Provide additional parks in communities with insufficient local parkland as identified through the gap analysis. • **Goal P/R 4:** Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages. • **Policy P/R 4.1:** Create multi-use trails to accommodate all users.

Source: Los Angeles County 2015

3.10.3.4 Local

City of Los Angeles General Plan

The *City of Los Angeles General Plan* is a comprehensive, long-term declaration of purposes, policies, and programs for the development of the City of Los Angeles. It sets forth goals, objectives, and programs to provide a guideline for day-to-day land use policies and meet the existing and future needs and desires of the community while integrating a range of State-mandated elements, including transportation, noise, safety, housing, and conservation. In place of a Land Use Element, the general plan includes community plans that establish policy and standards for each of the 35 geographic areas in the city. As such, the community plans are oriented toward specific geographic areas of the city, locally defining the general plan's more general citywide policies and programs.

Framework Element

The Citywide General Plan Framework, an Element of the City of Los Angeles General Plan is the citywide plan that establishes how Los Angeles will grow in the future. Adopted in 1996 and re-adopted in 2001, the Framework Element is a strategy for long-range growth and development, setting a citywide context for the update of community plans and citywide elements. The Framework Element responds to State and federal mandates to plan for the future by providing goals, policies, and objectives on a variety of topics, such as land use, housing, urban form, open

space, transportation, infrastructure, and public services. Many of the Framework Element's key guiding principles, can be advanced at the community level via community plans.

The Framework Element's open space and conservation objectives are oriented around the conservation of significant resources, provision of outdoor recreational opportunities, minimization of public risks from environmental hazards, and use of open space to enhance community and neighborhood character. Key policies include establishing a linear open space and greenway system that connects the city's regional open spaces (mountains, coastline, and parks) and is linked to communities and neighborhoods. This may consist of improvements along the LA River, other drainages, transit corridors, and utility corridors, where appropriate. Biking, hiking trails, parks, and passive open space are among the improvements that may be considered.

Land Use Element

The City of Los Angeles maintains 35 community plans, one for each of its community plan areas. The community plans establish neighborhood-specific goals and implementation strategies to achieve the broad objectives laid out in the city's general plan. Together, the 35 community plans compose the general plan's Land Use Element, which plays an important role in bolstering housing and job opportunities, conserving open space and natural resources, and balancing different neighborhoods' needs.

Each community plan consists of a policy document and a land use map. The policy document lays out the community's goals, policies, and programs, while the land use map identifies where certain uses (such as residential, commercial, and industrial) are permitted. Together, the policy document and land use map inform local zoning decisions. Proposed changes to the city's land use designations and zoning are usually initiated though community plan updates. Figure 3.10-1 illustrates the community plan areas that overlap the identified land use frames for the LA River. The following community plans are applicable to the *2020 LA River Master Plan*:

- Wilmington – Harbor City (Frame 1)
- Southeast Los Angeles (Frame 5)
- Boyle Heights (Frame 5)
- Central City North (Frame 5)
- Central City (Frame 5)
- Northeast Los Angeles (Frames 5 and 6)
- Silver Lake - Echo Park - Elysian Valley (Frame 6)
- Hollywood (Frames 6 and 7)
- North Hollywood - Valley Village (Frames 7 and 8)
- Van Nuys - North Sherman Oaks (Frame 8)
- Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass (Frames 7 and 8)
- Encino-Tarzana (Frames 8 and 9)
- Reseda-West Van Nuys (Frame 9)
- Canoga Park-Winnetka-Woodland Hills-West Hills (Frame 9)

Table 3.10-2 summarizes *City of Los Angeles General Plan* policies and objectives regarding land use and recreation as well as other jurisdictions' policies regarding land use that are relevant to the proposed Project. It should be noted that there are numerous policies and objectives that relate to mobility, air quality, noise, etc.; these policies and objectives are listed in the individual resource chapters of this PEIR. Only policies relevant to land use compatibility and recreation are included in this section.

Table 3.10-2. City of Los Angeles General Plan Goals and Policies (Frame 1, Frame 5, Frame 6, Frame 7, Frame 8, and Frame 9)

Planning Document	Objectives/Goals/Policies
Framework Element	**Objective 3.1:** Accommodate a diversity of uses that support the needs of the City's existing and future residents, businesses, and visitors. • **Policy 3.1.1** Identify areas on the Long-Range Land Use Diagram and in the community plans sufficient for the development of a diversity of uses that serve the needs of existing and future residents (housing, employment, retail, entertainment, cultural/institutional, educational, health, services, recreation, and similar uses), provide job opportunities, and support visitors and tourism. • **Policy 3.1.3** Identify areas for the establishment of new open space opportunities to serve the needs of existing and future residents. These opportunities may include a citywide linear network of parklands and trails, neighborhood parks, and urban open spaces. • **Policy 3.1.4** Accommodate new development in accordance with land use and density provisions of the General Plan Framework Long-Range Land Use Diagram. **Objective 3.2:** Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicular trips, vehicle miles traveled, and air pollution. • **Policy 3.2.3** Provide for the development of land use patterns that emphasize pedestrian/bicycle access and use in appropriate locations.
Land Use Element – Community Plans	
Canoga Park-Winnetka-Woodland Hills-West Hills (Frame 9)	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development • **Policy 1-1.5** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
Reseda – West Van Nuys (Frame 9)	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses, especially the RA-1 zoned lots.
Encino-Tarzana (Frames 8 and 9)	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses. • **Policy 1-3.1** Seek a high degree of compatibility and landscaping for new infill development to protect the character and scale of existing residential neighborhoods. • **Policy 2-3.1** Existing pedestrian-oriented areas are to be preserved.

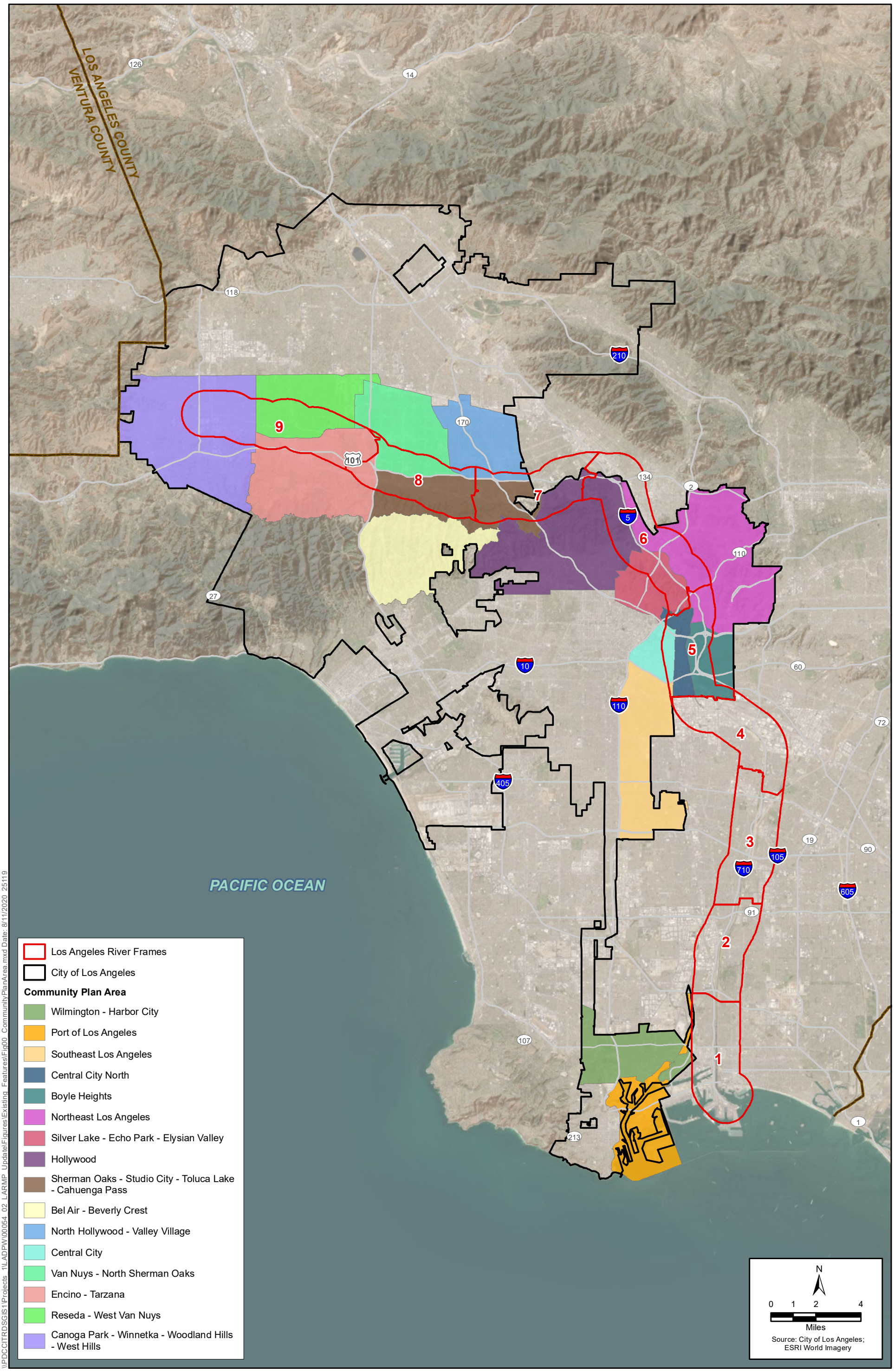

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Figure 3.10-1
Applicable Community Plans – City of Los Angeles within the Project Study Area

Planning Document	Objectives/Goals/Policies
	• **Policy 2-3.2** New development needs to add to and enhance the existing pedestrian street activity.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass (Frames 7 and 8)	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
Van Nuys - North Sherman Oaks (Frame 8)	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
North Hollywood - Valley Village (Frames 7 and 8)	This Community Plan contains no specific numbered policies related to land use, the plan proposes that the low-density residential character of North Hollywood-Valley Village should be preserved and that single-family neighborhoods be protected from other types of uses.
Hollywood (Frames 6 and 7)	The Hollywood Community Plan does not contain specific policies or objectives specifically relevant to land use.
Silver Lake - Echo Park - Elysian Valley (Frame 6)	• **Policy** 1-1.3 Protect existing single-family neighborhoods from new out-of-scale development. • **Policy 1-1.5** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
Northeast Los Angeles (Frames 5 and 6)	• **Policy 1-1.1** Protect existing stable single-family and other lower density residential neighborhoods from encroachment by higher density residential and other uses that are incompatible as to scale and character or would otherwise diminish the quality of life.
Central City (Frame 5)	The Central City Community Plan does not contain specific policies or objectives specifically relevant to land use.
Central City North (Frame 5)	The Central City North Community Plan Community Plan does not contain specific policies or objectives specifically relevant to land use.
Boyle Heights (Frame 5)	• **Policy 3.** To improve the relationship between residential uses, the circulation system and the service system facilities (streets, schools, parks, fire, police, utilities).
Southeast Los Angeles (Frame 5)	• **Policy LU2.1** Preserve Neighborhoods. Strive to maintain existing single-family land use designations throughout the Community Plan Area and protect them from encroachment by higher density residential and other incompatible uses. • **Policy LU.2.2** Appropriate Scale. Proposed development should be designed to achieve transition in scale and be compatible with adjacent single-family neighborhoods.
Wilmington – Harbor	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development.

Planning Document	Objectives/Goals/Policies
City (Frame 1)	• **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses. • **Policy 1-6.1** The enlargement of nonconforming, incompatible commercial and industrial uses within areas designated on the Plan map for residential land use shall be prohibited, and action shall be taken toward their removal on a scheduled basis in conformance with Section 12.23 of the Municipal Code. • **Policy 1-6.2** Compatible non-conforming uses, that are a recognized part of a neighborhood (e.g., "Mom and Pop" neighborhood stores), should be allowed to continue as legal nonconforming uses in accordance with applicable provisions of the Municipal Code.
Public Facilities and Services Element	**Equestrian Trails Objectives** • To provide a means for the promotion of horseback riding as a healthful and relaxing activity. • To guide public and private decision makers in the development of new trails to form a system connecting City trails with County, State, and Federal systems and connecting urban trails with wilderness trails. **Equestrian Trails Standards and Criteria** • Trails should have a minimum tread width of ten feet and a cleared width of twelve feet. • Routes shown on the Major Trails Plan should be only backbone trails which connect the various equestrian areas together to form a major trails system. Connections with other city trials and the major County, State, and Federal trails surrounding the City should be included. • Trails should be along interesting routes with varied features and scenery. • Trails should be used by equestrians and hikers only. Bicycles, motorcycles, and all other vehicles except maintenance vehicles should be prohibited. • A maximum grade of 10 percent is desirable. Steeper grades may be allowed in exceptional terrain, but the distance should be limited to a maximum of 500 feet. • Trails should be aligned to eliminate the need for sharp switchbacks. However, if these are unavoidable, the trail should be reinforced and drainage provisions made to prevent erosion of the trail and properties adjoining it. **Hiking Trails Objectives** • To provide policies and a plan which can be used in the promotion of hiking as a healthful and relaxing activity. • To describe standards for the improvement of existing and proposed trails. **Hiking Trails Standards and Criteria** • Trails should have a minimum tread width of five feet and a cleared width of seven feet except in unusual circumstances. • The grade of the trail should be related to the purpose for using the particular trail. The rock climber, as well as the beginning hiker, should be served by the various trails proposed. **Public Recreation Objectives** • To provide a guide for the orderly development of the City's public recreational facilities • To develop and locate public facilities to provide the greatest benefit to the greatest number of people at the least cost and with the least environmental impact. • To provide a guide for the acquisition and development of public recreational facilities.

Planning Document	Objectives/Goals/Policies
	Public Recreation Policies • Recreational facilities and services should be provided for all segments of the population on the basis of present and future projected needs, the local recreational standards, and the City's ability to finance. • Park and recreation sites shall be acquired and developed first in those areas of the City found to be most deficient in terms of the recreation standards. • Recreational use should be considered for available open space and unused or underused land, particularly publicly owned lands having potential for multiple uses. • High priority will be given to areas of the City which have the fewest recreational services and the greatest numbers of potential users.
Open Space Element	**Goal:** To ensure the preservation and conservation of sufficient open space to serve the recreational, environmental, health and safety needs of the City. **Goal:** To conserve unique natural features, scenic areas, cultural and appropriate historical monuments for the benefit and enjoyment of the public. **Goal:** To conserve and/or preserve those open space areas containing the City's environmental resources including air and water. **Goal:** To provide access, where appropriate, to open space lands. **Objective:** To encourage private persons and all levels of government to assume a logical role in the regulation, funding, planning, development, and operation of a coordinated open space system for the State, County, region, and City. **Objective:** To emphasize the importance of, and to preserve open space and natural features in private and public development. • **Policy:** Small parks, public and private, should be located throughout the City. Not only should recreation activities be provided, but an emphasis shall be placed on greenery and openness. • **Policy:** Open space lands held by the public for recreational use should be accessible and should be provided with essential utilities, public facilities, and services.
General Plans of Other Jurisdictions	
City of Long Beach (Frames 1 and 2)	• **Policy 2.4.1** Promote Non-Motorized Transportation: Promote convenient and continuous bicycle paths and pleasant pedestrian environments that will encourage non-motorized travel within the City. • **LU Policy 1-1:** Promote sustainable development patterns and development intensities that use land efficiently and accommodate and encourage walking. • **LU Policy 1-9:** Correlate new land uses to the existing street system such that that existing street system, in combination with improvements focused on supporting alternative modes of travel, operates at an acceptable level of capacity. New rights-of-way essential to the accommodating all modes of travel will avoid significant social, neighborhood and environmental impacts by utilizing adjacent paved area (e.g. formerly parking or development). The conversion of open space, parkland, buffer areas adjacent to wetlands and rivers and streams for street improvements is discouraged. • **LU Policy 6-1:** Encourage a mix of land uses that is diverse, innovative, competitive, entrepreneurial, local and sustainable, which thereby promotes economic development, increases City revenues, expands job growth and increases value, access and usability for existing neighborhoods and communities. • **LU Policy 9-1:** Protect neighborhoods from the encroachment of incompatible activities or land uses that may have negative impacts on residential living environments. • **LU Policy 10-1:** Ensure neighborhoods contain a variety of functional attributes that

Planning Document	Objectives/Goals/Policies
	contribute to residents' day-to-day living, including schools, parks and commercial and public spaces. • **LU Policy 10-2:** Complete neighborhoods by allowing low-intensity commercial uses to locate along neighborhood edges, in transition areas and at key intersections. • **LU Policy 10-3:** Plan for and accommodate neighborhood-serving goods and services, learning facilities, public amenities and transit stops within walking distance of most residences. • **LU Policy 10-4:** Enhance neighborhoods and connect housing to commercial uses to provide residents with an active choice to walk or bike within their local neighborhoods. • **LU Policy 11-1:** Require that land use plans, policies and regulations promote health and wellness and reduce barriers to healthy living. • **LU Policy 11-2:** Provide for a wide variety of creative, affordable, sustainable land use solutions to help resolve air, soil and water pollution, energy consumption and resource depletion issues. • **LU Policy 11-5:** Ensure neighborhoods are accessible to open spaces, parks, trails and recreational programs that encourage physical activity and walkability. • **LU Policy 14-4:** Establish livable communities across all neighborhoods that encourage walking, bicycling, using public transit and exercising outdoors, and that provide for economic and social opportunities for all community members. • **LU Policy 18-5:** Enhance access to safe open space and recreation facilities for all residents. • **LU Policy 18-7:** Prioritize the location of new parks in underserved or low-income communities with the lowest ratio of park space per thousand residents. • **LU Policy 18-9:** Utilize Public Lands for Recreational Needs by coordinating with City departments, County, State and Federal agencies to utilize existing public lands such as flood control channels, utility easements and Water Department properties to provide for such recreational needs as hiking and biking. • **LU Policy 18-10:** Prioritize vacant and underutilized land for the development of new green space, including parks, community gardens and local urban farms in park-poor communities. • **LU Policy 21-1:** Transition the Los Angeles and San Gabriel Rivers to more attractive, multi-functional, healthier environments that are easily accessible for passive recreation. • **LU Policy 21-5:** Encourage the creation and expansion of nature centers, interpretive displays and wildlife habitats along the Los Angeles and San Gabriel Rivers.
City of Carson (Frame 2)	• **LU Policy 15.5** Ensure that the design of public spaces encourages the attention and presence of people at all hours of the day and night. • **LU Policy 15.6** Ensure development of pedestrian-oriented improvements which provide better connections between and within all developments while reducing dependence on vehicle travel.
City of Compton (Frames 2 and 3)	• **Land Use Policy 1.5.** The City of Compton will participate in regional planning efforts to support consistency with the goals of the City's General Plan. • **Land Use Policy 1.7.** The City of Compton will review and comment on General Plan and zoning changes proposed for parcels within "1/4 mile" of the City's borders.
City of Cudahy (Frame 3)	• **Policy LUE 1.1:** Develop, maintain, and enhance the beneficial and unique character of the different neighborhoods, districts, and open spaces.

Planning Document	Objectives/Goals/Policies
	• **Policy LUE 3.7** Require buildings and properties be designed to ensure compatibility within, and provide interfaces between, neighborhoods and districts. • **Policy LUE 6.1:** Ensure neighborhoods are "complete" neighborhoods by integrating schools, childcare centers, community centers, infrastructure, green spaces and parks, and other public amenities into each neighborhood. • **Policy LUE 8.1:** Accommodate a range of land uses to meet the economic, environmental, and social needs of Cudahy's residents and businesses.
City of Downey (Frame 3)	• **Policy 1.2.1.** Promote livable communities concepts that allow added flexibility in addressing land use needs. • **Policy 1.3.1** Minimize or eliminate conflicts where incompatible land uses are in proximity to each other.
City of Lynwood (Frame 3)	Goal LU-5 To Provide a range of active and passive recreational areas as well as provide areas for the preservation of the natural environment.
City of Paramount (Frame 3)	• **Land Use Element Policy 7.** The City of Paramount will continue to maintain and conserve its existing residential neighborhoods. • **Land Use Element Policy 16.** The City of Paramount will continue to maintain, and where possible, expand its open space resources. • **Land Use Element Policy 17.** The City of Paramount will develop new open space areas in utility rights-of-way, along the Los Angeles River, and as part of future park development.
City of South Gate (Frame 3)	Objective CD 4.5: Locate services and amenities within walking distance of neighborhoods.
City of Bell Gardens (Frame 4)	There are no specific land use policies in the City of Bell Gardens General Plan Land Use Element.
City of Bell (Frame 4)	• **Land Use and Sustainability Element Policy 1.** The City of Bell shall promote development and land uses that are consistent with the General Plan that will address the current and future need of all of the residential and business sectors. The City shall ensure that future land uses will be in compliance with current zoning codes. The City's Zoning Code and map shall also be updated to ensure conformity with the General Plan. • **Land Use and Sustainability Element Policy 3.** The City of Bell shall prevent incompatibility among land uses for the health and safety of occupants and the protection of property values. The City shall ensure all new development conforms with surrounding properties as a means to protect the health and safety of occupants and maintain property values. • **Land Use and Sustainability Element Policy 14.** The City of Bell shall strive to provide adequate public facilities through capital improvement strategies, grants, and other funding programs.
City of Maywood (Frame 4)	Relevant City goals and objectives with respect to land use are to: • Retain and enhance the residential character of Maywood. • Plan for an orderly growth and development, and the growth impact on public services. • Increase park acreage.
City of Huntington	• **Land Use & Community Development Element Policy 1.** The City of Huntington Park shall maintain and preserve those industrial and commercial areas of the City

Planning Document	Objectives/Goals/Policies
Park (Frame 4)	while preventing land use conflicts through comprehensive land use planning and environmental review. • **Land Use & Community Development Element Policy 6.** The City of Huntington Park shall require that new developments are properly designed so as to minimize potential land use conflicts and environmental impacts. • **Land Use & Community Development Element Policy 17.** The City of Huntington Park shall use various land use and development incentives to facilitate the revitalization of underutilized or blighted properties. • **Land Use & Community Development Element Policy 25.** The City of Huntington Park shall cooperate with surrounding jurisdictions in the review and implementation of larger development projects in the region.
City of Commerce (Frame 4)	• **Community Development Policy 1.1.** The city of Commerce will continue to promote land use compatibility. • **Community Development Policy 1.6.** The city of Commerce will ensure that commercial and industrial development provide sufficient landscaped buffers and other design features to separate new non-residential uses located in areas adjacent to existing residential neighborhoods. • **Community Development Policy 4.1.** The city of Commerce will explore the feasibility of developing an area devoted to active family recreation.
City of Vernon (Frame 4)	There are no relevant land use policies in the City of Vernon General Plan.
City of Glendale (Frame 6)	Improve the livability of the total community for all Glendale residents as expressed in living, working and shopping areas, as well as community facilities. Safeguard residential neighborhoods from intrusion of incompatible and disruptive uses.
City of Burbank (Frame 7)	• **Policy 1.1** Accommodate a mix of residential and non-residential land uses in appropriate locations that support the diverse needs of Burbank residents, businesses, and visitors. Provide opportunities for living, commerce, employment, recreation, education, culture, entertainment, civic engagement, and socializing. • **Policy 1.3** Maintain and protect Burbank's residential neighborhoods by avoiding encroachment of incompatible land uses and public facilities. • **Policy 4.2** Identify opportunities for publicly accessible open spaces to be provided in conjunction with both public and private development projects.

Sources: City of Bell 2018; City of Bell Gardens 1995; City of Burbank 2013; City of Carson 2004; City of Commerce 2008; City of Compton 1991, 2011; City of Cudahy 2018; City of Downey 2005; City of Glendale 1986; City of Huntington Park 1991, 2017; City of Long Beach 1996, 2019; City of Los Angeles 1968; 1973; 1995, 1996, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 1999d, 2000, 2003, 2004, 2014, 2017; City of Lynwood 2003; City of Maywood 2008; City of Paramount 2017; City of South Gate 2009; City of Vernon 2007

Land Uses Designated by the Applicable General Plans

The 18 jurisdictions along the river's extent have individual general plans that guide development for that agency. California state law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which in the planning agency's judgment bears relation to its planning" (Gov. Code § 65300). The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private (OPR 2017). Each general plan contains a land use map that illustrates the designated land uses. Designated land uses do not necessarily

match existing uses, as some existing uses may be allowable non-conforming uses. Table 3.10-3 summarizes the various land uses within each frame and the percentage of the total acreage for each type of land use within that frame. Figures 3.10-2 through 3.10-10 illustrate the various existing land uses within each of the identified frames.

Table 3.10-4 summarizes the general plan land designations for each frame.

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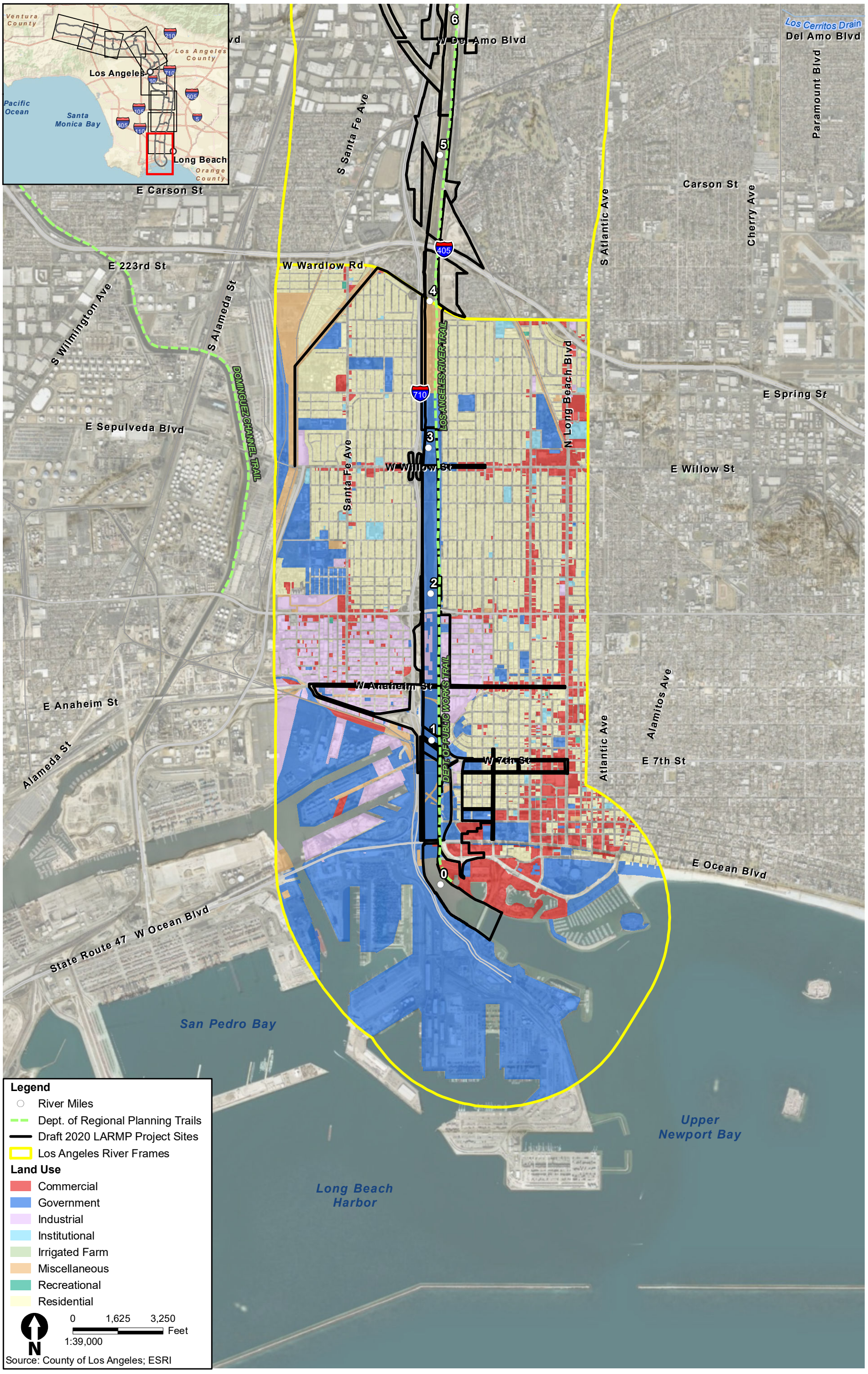

Figure 3.10-2
Land Use Designations in Frame 1

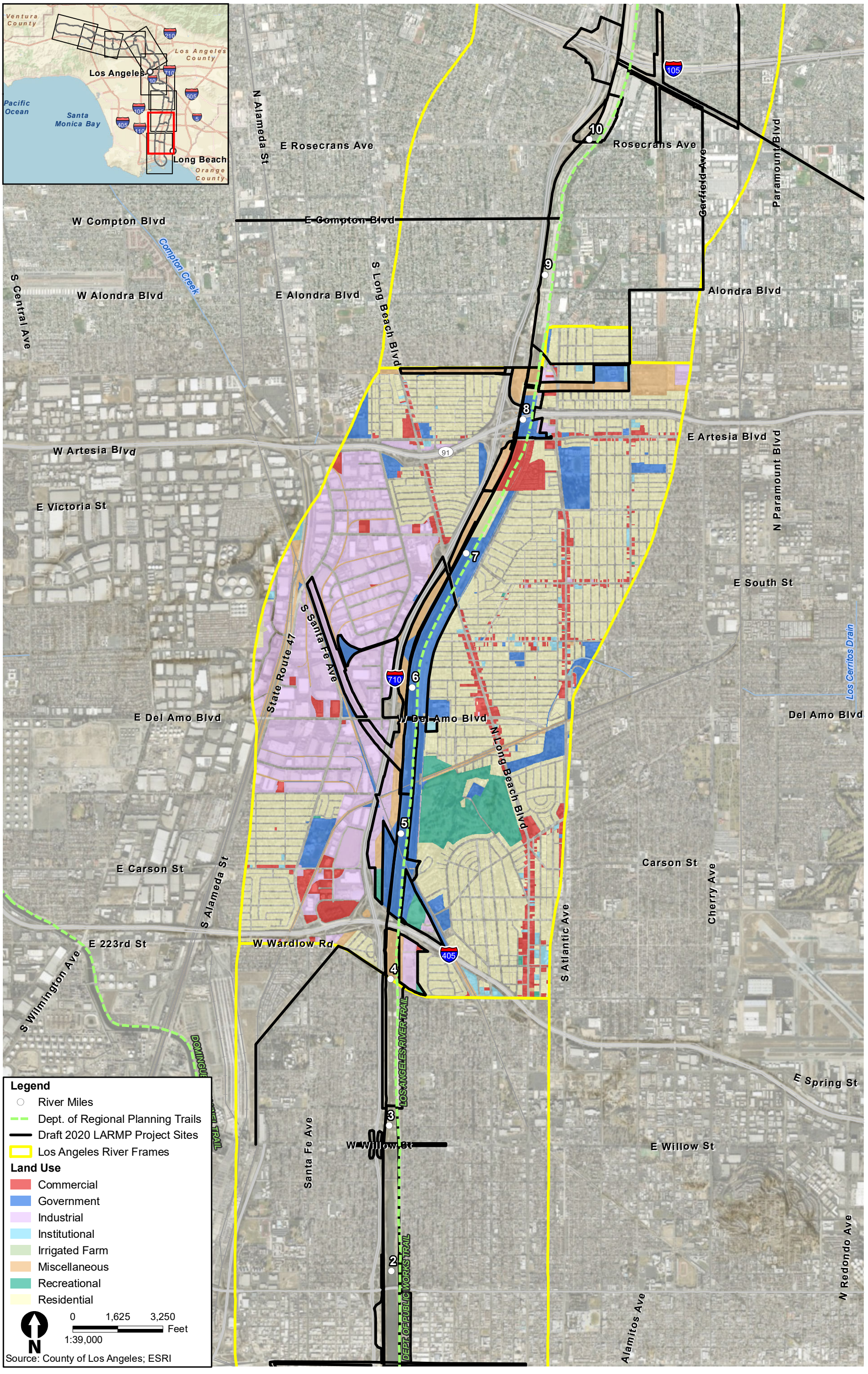

Figure 3.10-3
Land Use Designations in Frame 2

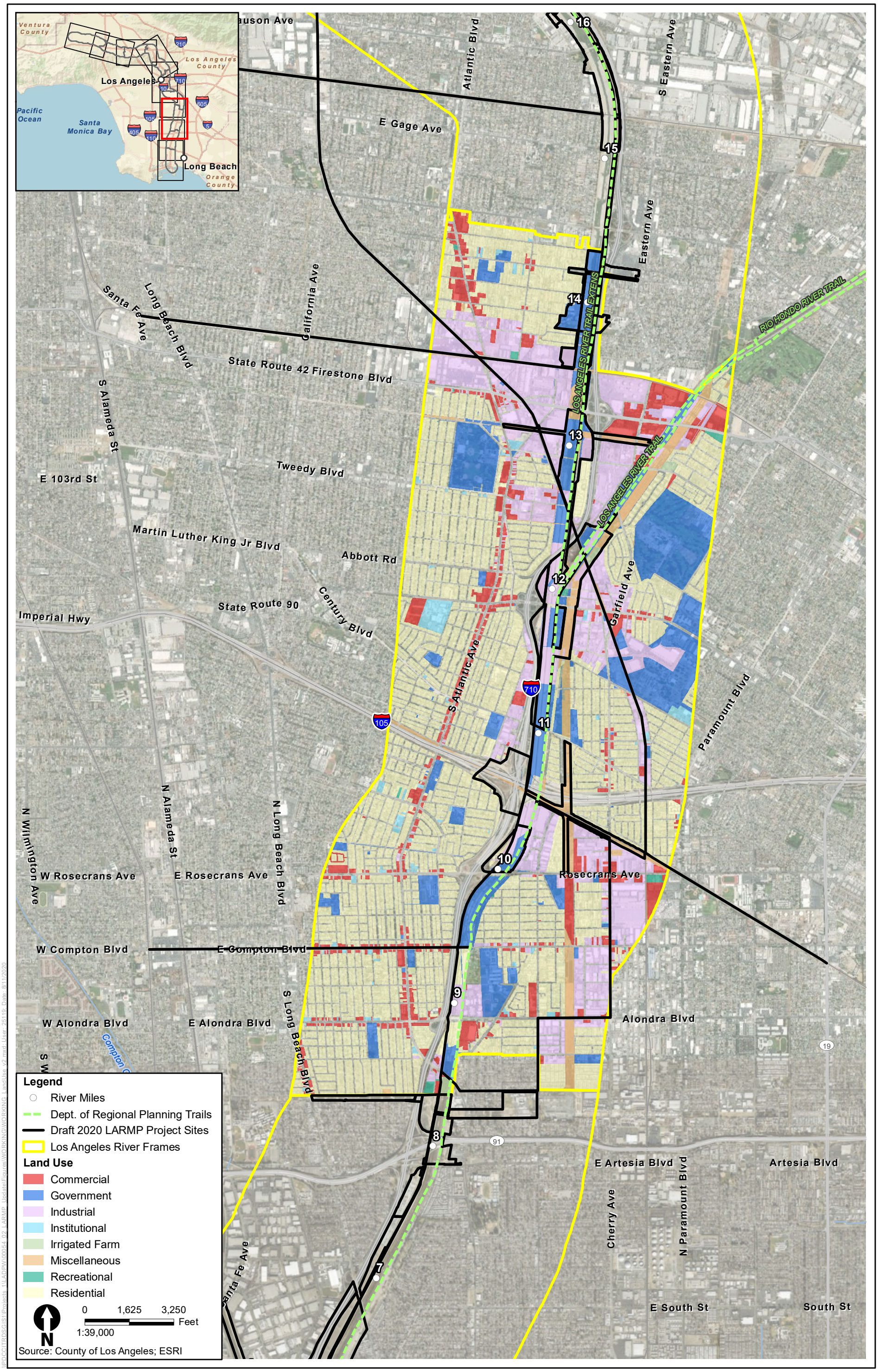

Figure 3.10-4
Land Use Designations in Frame 3

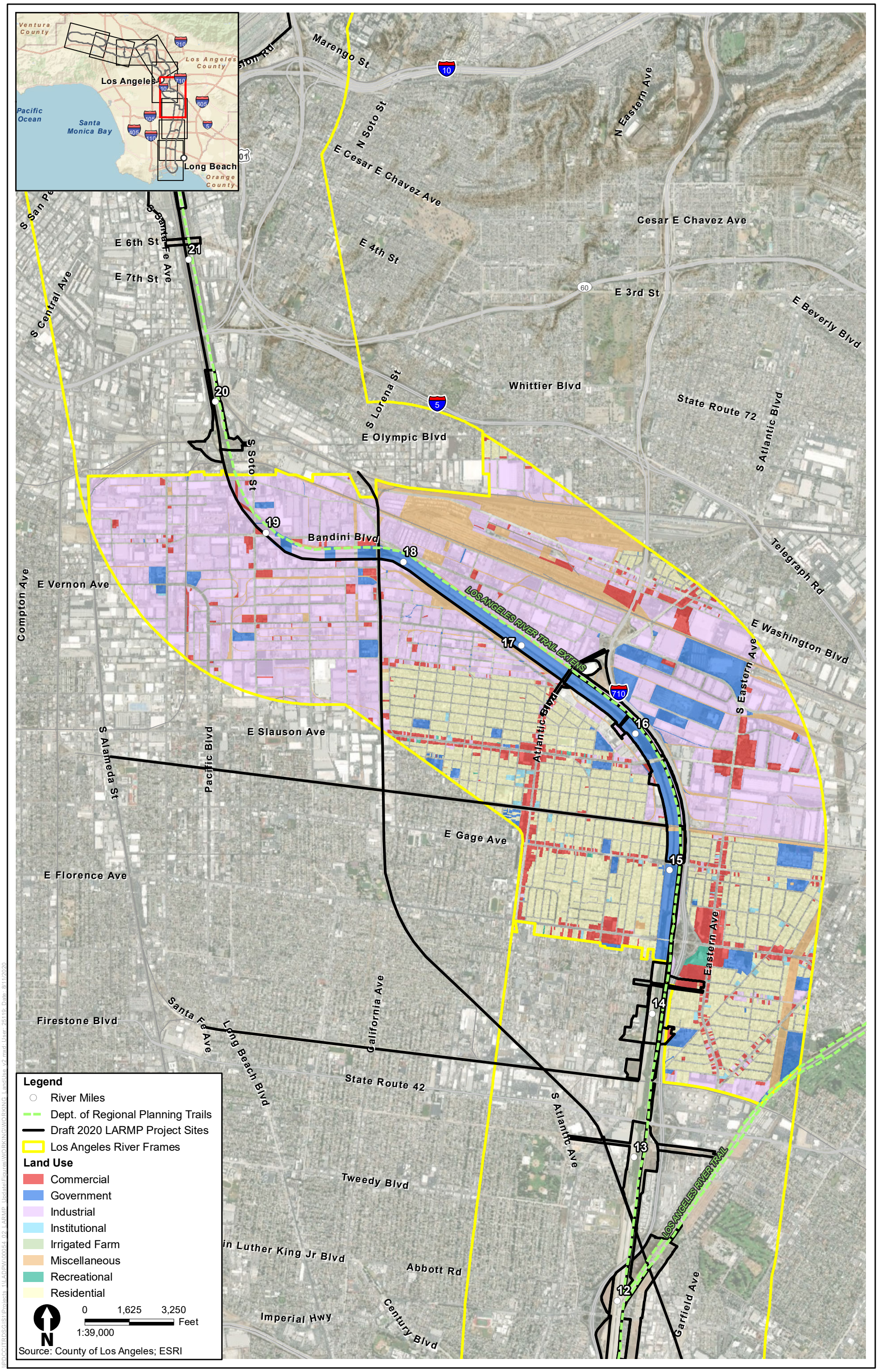

Figure 3.10-5
Land Use Designations in Frame 4

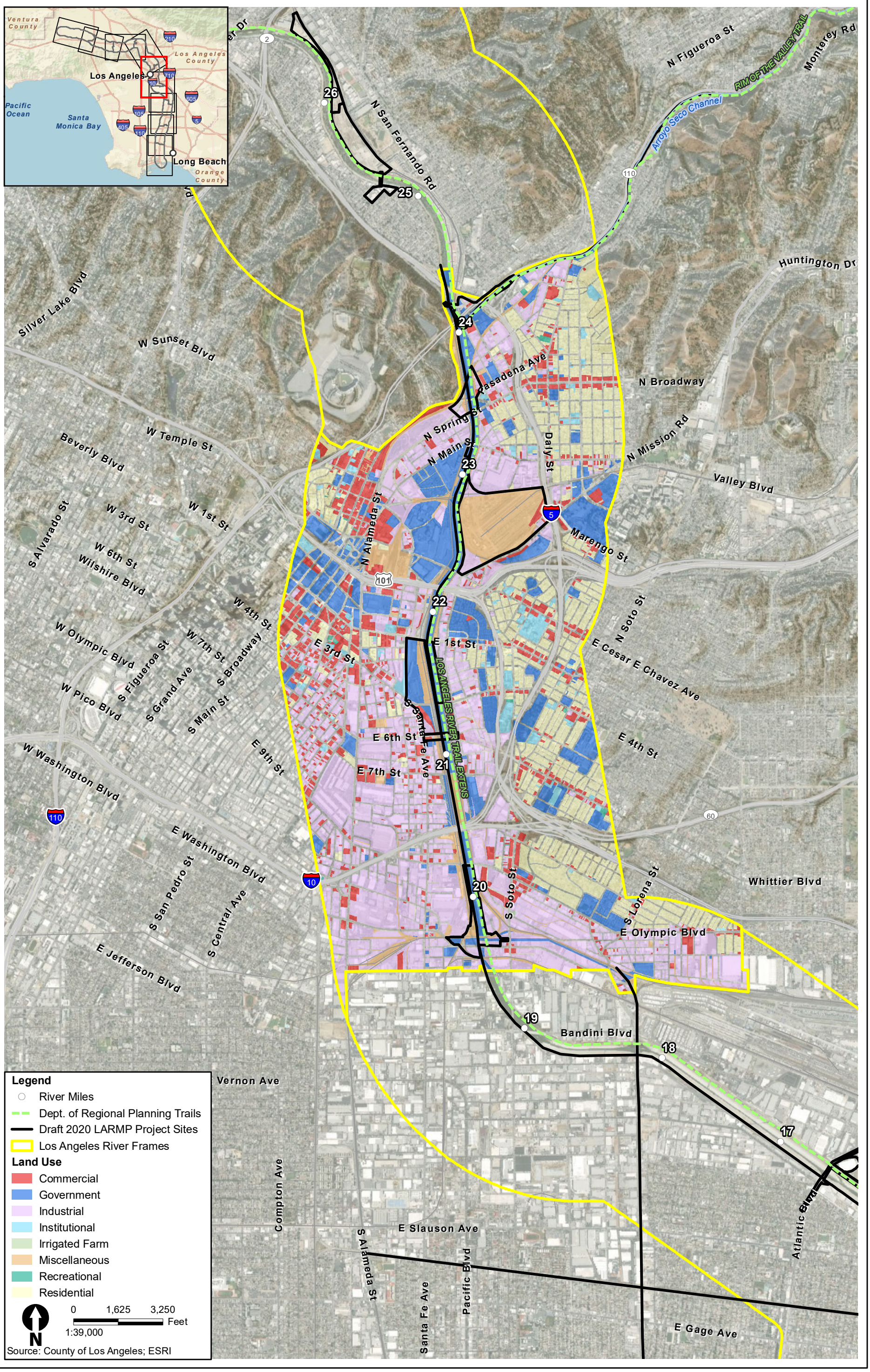

Figure 3.10-6
Land Use Designations in Frame 5

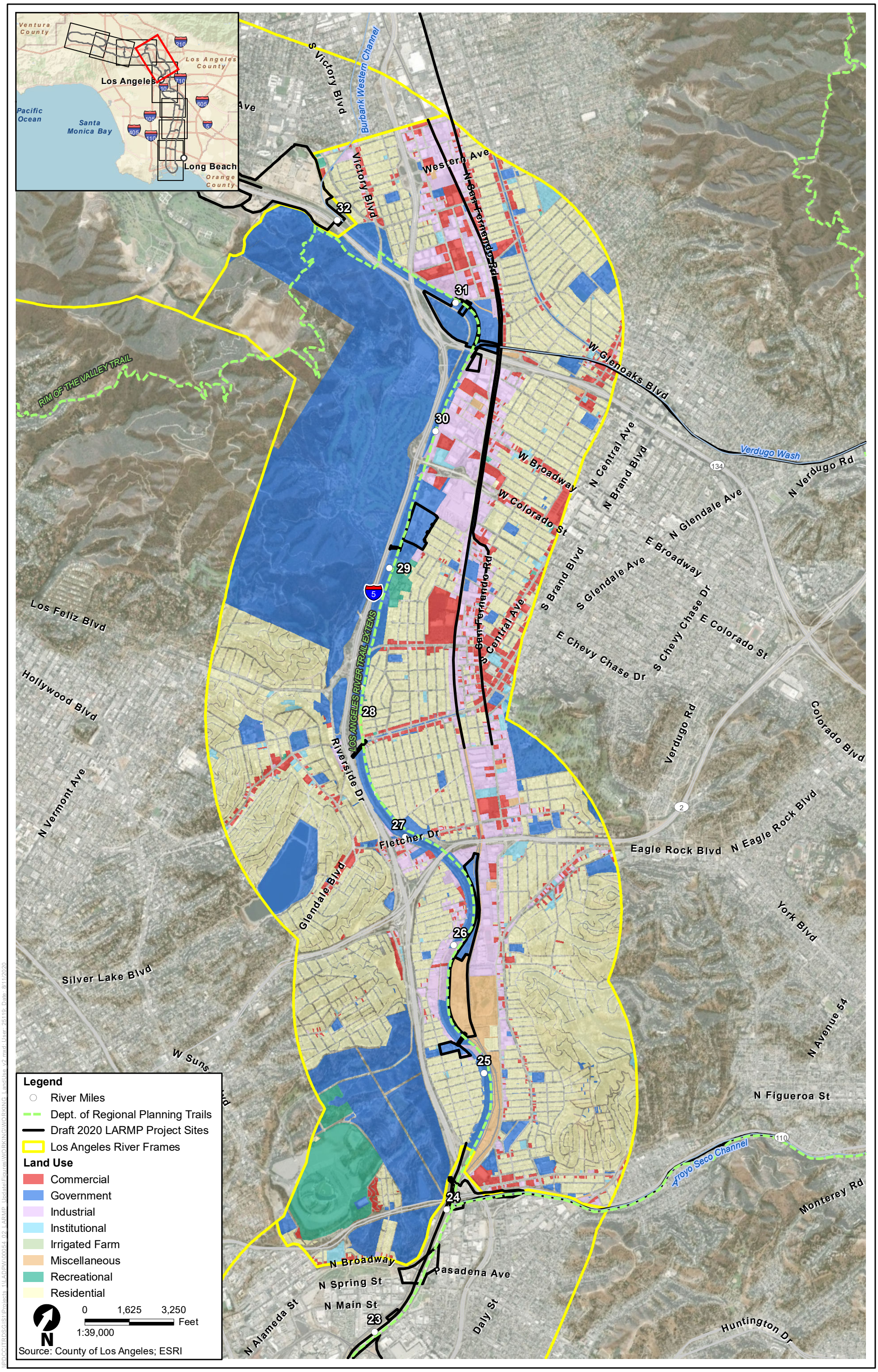

Figure 3.10-7
Land Use Designations in Frame 6

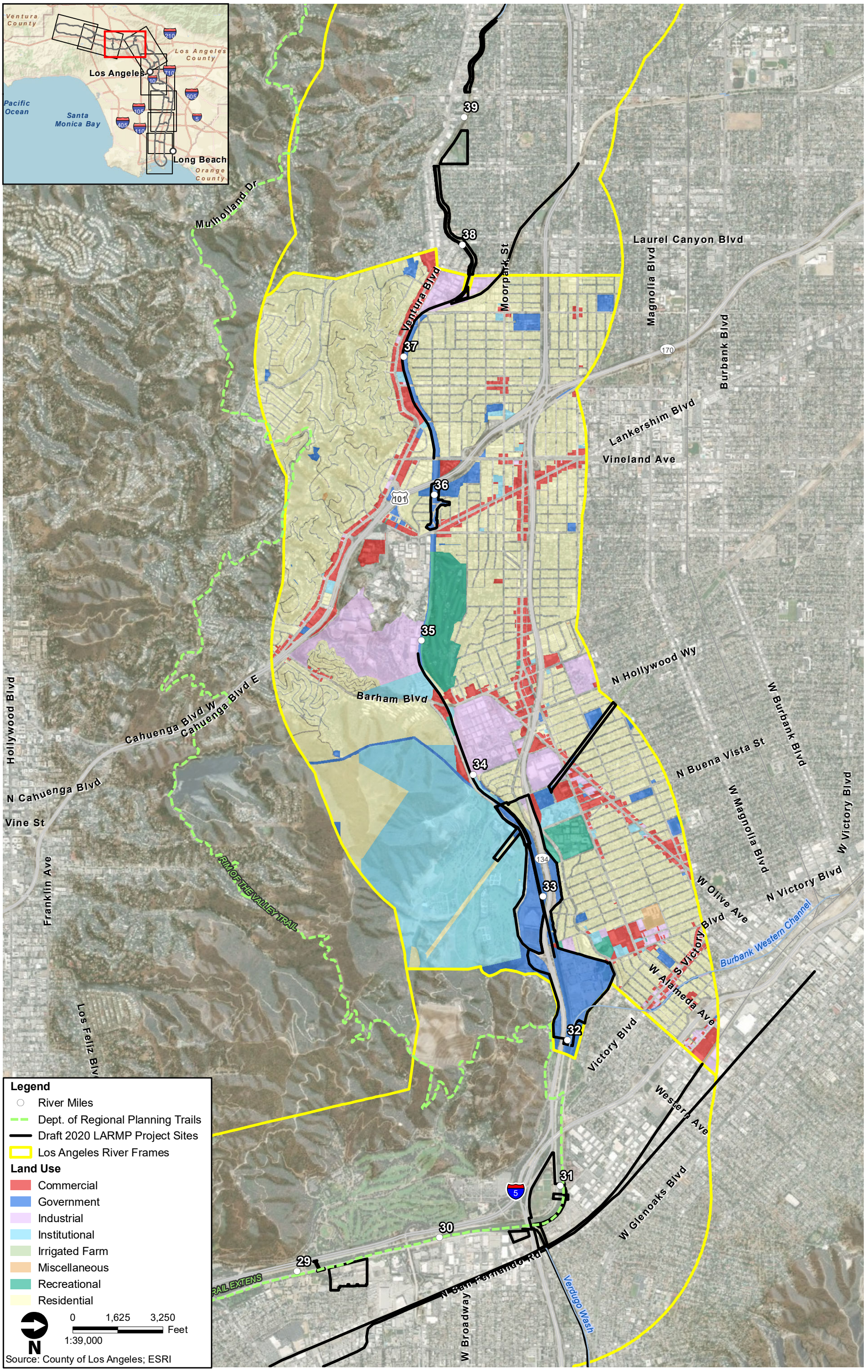

Figure 3.10-8
Land Use Designations in Frame 7

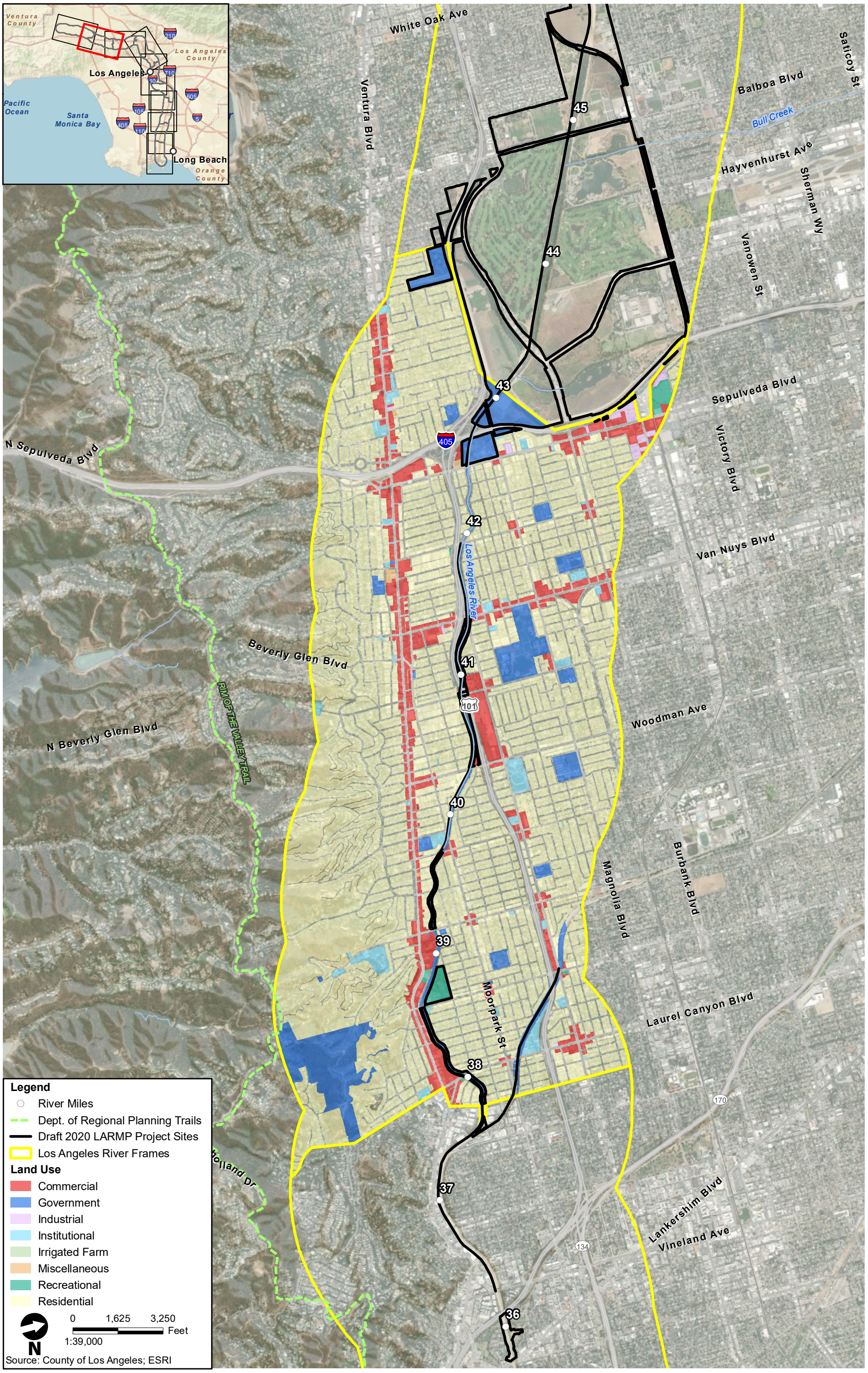

Figure 3.10-9
Land Use Designations in Frame 8

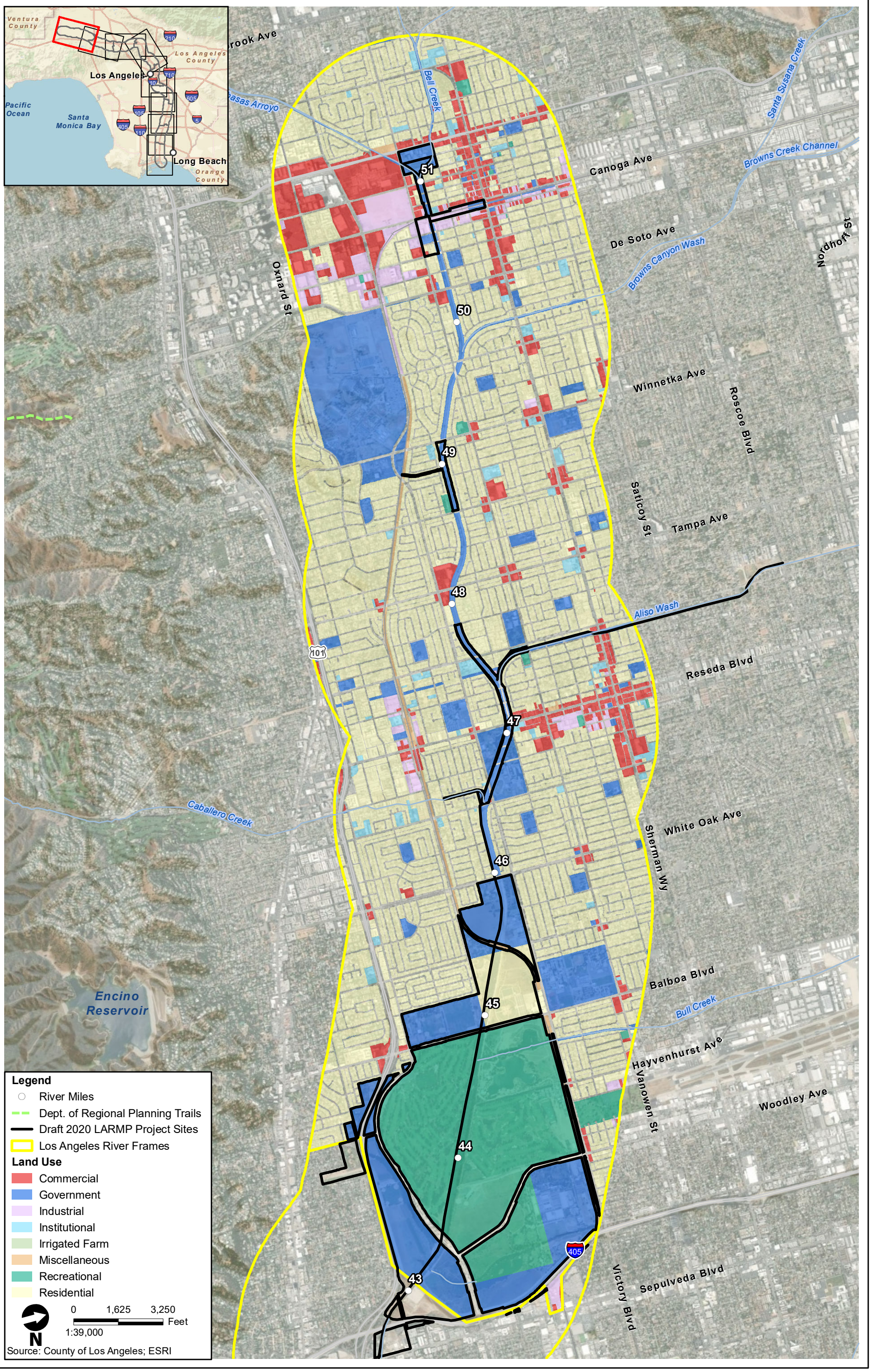

Figure 3.10-10
Land Use Designations in Frame 9

Table 3.10-3. Existing Land Uses by Frame

	Frame 1 Estuary		Frame 2 South Plain		Frame 3 Central Plain		Frame 4 North Plain		Frame 5 Heights		Frame 6 Narrows		Frame 7 East Valley		Frame 8 Mid Valley		Frame 9 West Valley		Grand Total	Overall %[1]
Total Acres	**7,591.0**		**6,079.8**		**7,487.7**		**6,993.0**		**6,156.0**		**10,864.7**		**7,125.6**		**7,051.3**		**11,037.2**		**70,386.30**	
Land Use	**Acres**	**%**	**Acres**	**%**	**Acres**	**6.03%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**		
Commercial	553.7	7.3%	314.54	5.17%	451.60	12.10%	405.90	5.80%	522.53	8.49%	548.8	5.1%	370.2	5.2%	455.4	6.5%	652.8	5.9%	4,275.47	6.07%
Government	2,023.2	26.7%	583.49	9.60%	906.19	15.19%	581.48	8.32%	854.65	13.88%	2,937.3	27.0%	485.3	6.8%	497.9	7.1%	1,619.7	14.7%	10,489.21	14.90%
Industrial	502.9	6.6%	1,169.78	19.24%	1,137.48	1.01%	2,728.84	39.02%	1,626.22	26.42%	772.9	7.1%	44.54	6.2%	29.7	0.4%	244.8	2.2%	8,257.16	11.73%
Institutional	70.7	0.9%	51.10	0.84%	75.73	0.19%	27.11	0.39%	113.81	1.85%	108.2	1.0%	865.3	12.1%	109.4	1.6%	148.8	1.4%	1,570.15	2.23%
Irrigated Farm	--	--	1.58	0.03%	14.12	4.14%	1.22	0.02%	0.71	0.01%	--	--	--	--	--	--	--	--	17.63	0.03%
Miscellaneous	259.2	3.4%	347.37	5.71%	309.63	0.24%	631.96	9.04%	405.79	6.59%	222.1	2.0%	17.2	0.2%	9.1	0.1%	82.8	0.8%	2,285.15	3.25%
Recreational	4.7	0.1%	205.10	3.37%	17.91	38.01%	12.56	0.18%	9.74	0.16%	269.8	2.5%	188.4	2.6%	36.1	0.5%	1,088.8	9.9%	1,833.11	2.60%
Residential	1,665.6	21.9%	1,941.67	31.94%	2,846.05	23.09%	1,374.32	19.65%	880.92	14.31%	3,535.3	32.5%	3,192.6	44.8%	4,239.1	60.1%	4,926.3	44.6%	24,601.86	34.95%
(blank) ROW or no data	2,511.1	33.1%	1,465.18	24.10%	1,728.94	6.03%	1,229.58	17.58%	1,741.63	28.29%	2,470.5	22.7%	1,564.0	22.0%	1,674.8	23.8%	2,273.1	20.6%	16,658.83	23.67%

[1] May not equal 100% due to rounding.

-- No applicable land use for this frame.

Table 3.10-4. General Plan Land Use Designations by Frame

	Frame 1 Estuary		Frame 2 South Plain		Frame 3 Central Plain		Frame 4 North Plain		Frame 5 Heights		Frame 6 Narrows		Frame 7 East Valley		Frame 8 Mid Valley		Frame 9 West Valley		Grand Total[1]	Overall %[2]
Total Acres	**7,577.03**		**6,079.85**		**7,482.16**		**6,992.75**		**6,097.55**		**10,864.07**		**7,039.38**		**7,047.54**		**11,033.54**		**70,213.87**	
Land Use	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**		
Residential	--	--	--	--	--	--	429.14	6.14%	--	--	--	--	--	--	--	--	--	--	429.14	0.61%
Single-Family Residential	1,084.88	14.32%	1,459.54	24.01%	1,697.37	22.69%	89.55	1.28%	37.97	0.62%	2,179.37	20.06%	2,500.82	35.53%	3,604.13	51.14%	3,850.33	34.90%	16,503.96	23.51%
Multi-Family Residential	285.91	3.77%	1,696.13	27.90%	2,109.04	28.19%	471.55	6.74%	936.94	15.37%	1,359.43	12.51%	567.43	8.06%	723.44	10.27%	1,004.09	9.10%	9,153.96	13.04%
Mixed Residential	245.26	3.24%	201.20	3.31%	749.50	10.02%	308.46	4.41%	--	--	--	--	--	--	--	--	--	--	1,504.42	2.14%
General Commercial	293.88	3.88%	4.71	1.37%	61.08	0.82%	98.08	1.40%	96.33	1.58%	197.70	1.82%	142.34	2.02%	137.18	1.95%	147.05	1.33%	1,178.35	1.68%
General Office Use	--	--	--	--	--	--	--	--	15.93	0.26%	17.56	0.16%	15.14	0.22%	86.24	1.22%	96.94	0.88%	231.81	0.33%
Retail & Commercial Services	69.31	0.91%	108.80	0.08%	218.53	2.92%	55.69	0.80%	60.62	0.99%	93.19	0.86%	472.12	6.71%	162.36	2.30%	248.01	2.25%	1,488.63	2.12%
Regional Shopping Center	1.63	0.02%	31.50	1.79%	0.77	0.01%	70.99	1.02%	239.70	3.93%	20.34	0.19%	75.51	1.07%	79.25	1.12%	167.17	1.52%	686.86	0.98%
Public Facilities	183.37	2.42%	236.44	0.52%	212.21	2.84%	81.01	1.16%	538.87	8.84%	394.06	3.63%	95.52	1.36%	115.55	1.64%	959.56	8.70%	2,816.59	4.01%
Education K-12	--	--	--	--	85.74	1.15%	34.80	0.50%	--	--	--	--	24.32	0.35%	--	--	--	--	144.86	0.21%
General Industrial	--	--	7.06	0.12%	259.84	3.47%	2,833.23	40.52%	0.75	0.01%	--	--	--	--	--	--	--	--	3,100.88	4.42%
Light Industrial	55.03	0.73%	134.08	2.21%	0.34	0.00%	--	--	634.57	10.41%	20.84	0.19%	44.73	0.64%	23.78	0.34%	206.41	1.87%	1,119.78	1.59%
Light Manufacturing	273.27	3.61%	534.05	8.78%	84.59	1.13%	6.86	0.10%	156.52	2.57%	528.12	4.86%	0.26	0.00%	21.77	0.31%	189.51	1.72%	1,794.95	2.56%
Heavy Industrial	0.28	0.00%	594.65	9.78%	--	--	650.69	9.31%	0.03	0.00%	--	--	--	--	--	--	--	--	1,245.65	1.77%
Heavy Manufacturing	17.12	0.23%	--	--	--	--	5.17	0.07%	1,420.77	23.30%	204.94	1.89%	--	--	5.39	0.08%	--	--	1,653.39	2.35%
Transportation, Communications & Utilities	--	--	--	--	168.66	2.25%	--	--	--	--	--	--	--	--	--	--	--	--	168.66	0.24%
Transportation	1,533.43	20.24%	159.76	2.63%	20.23	0.27%	0.31	0.00%	0.01	0.00%	--	--	2.36	0.03%	0.90	0.01%	--	--	1,717.00	2.45%
Utility Facilities	--	--	--	--	94.11	1.26%	166.82	2.39%	--	--	--	--	--	--	--	--	--	--	260.93	0.37%
Mixed Commercial & Industrial	--	--	--	--	815.81	10.90%	122.63	1.75%	41.03	0.67%	190.77	1.76%	300.51	4.27%	4.83	0.07%	1.49	0.01%	1,477.07	2.10%
Mixed Residential & Commercial	559.43	7.38%	69.45	1.14%	410.07	5.48%	122.08	1.75%	--	--	225.81	2.08%	0.02	0.00%	--	--	--	--	1,386.86	1.98%
Open Space & Recreation	403.45	5.32%	700.76	11.53%	232.48	3.11%	85.04	1.22%	211.97	3.48%	3,276.65	30.16%	1,419.81	20.17%	413.97	5.87%	1,915.47	17.36%	8,659.60	12.33%
Local Parks & Recreation	--	--	--	--	23.35	0.31%	7.05	0.10%	--	--	--	--	--	--	--	--	--	--	30.40	0.04%
Water	--	--	58.47	0.96%	238.45	3.19%	240.43	3.44%	--	--	--	--	--	--	--	--	--	--	537.35	0.77%
Unallocated	2,570.78	33.93%	1,459.54	24.01%	1,697.37	22.69%	1,113.16	15.92%	1,705.54	27.97%	2,142.02	19.72%	1,378.50	19.58%	1,668.75	23.68%	2,247.51	20.37%	15,983.17	22.76%
Cemeteries	--	--	--	--	--	--	--	--	--	--	13.26	0.12%	--	--	--	--	--	--	13.26	0.02%

[1] Total acreages for general plan land use designations may differ slightly from the acreages shown for existing land uses.
-- No land use designation for this frame.

Land Use Zoning Designated by Applicable Municipal Codes

While general plans for the jurisdictions along the river's extent contain land use maps that illustrate the vision for distribution of land uses, each jurisdiction along the river's extent relies on zoning for implementation of the general plan. Zoning defines and provides parameters for various types of land uses in a community, such as commercial, residential, industrial, etc. These zoning districts benefit the community by establishing design/development standards such as allowable uses, setbacks, height limits, and massing for land uses (City of Glendale 2020).

Table 3.10-5 summarizes existing zoning for each of the nine frames along the river's extent.[1,]

Planned land uses in the study area vary from jurisdiction to jurisdiction but, overall, planned residential composes the greatest percentage (nearly 50 percent). Each municipality has a process for environmental and design review as well as review of projects for consistency with its general plan and zoning. In a few cases, zoning and general plan land use designations may be changed on a project-by-project basis, but in general the zoning maps are representative of the uses that will be likely in the future.

[1] For clarity and ease of reading, similar categories have been combined where appropriate.

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Table 3.10-5. Existing Zoning by Frame

	Frame 1 Estuary		Frame 2 South Plain		Frame 3 Central Plain		Frame 4 North Plain		Frame 5 Heights		Frame 6 Narrows		Frame 7 East Valley		Frame 8 Mid Valley		Frame 9 West Valley		Grand Total	Overall %[1]
Total Acres	**7,576.96**		**6,079.81**		**7,482.15**		**6,992.75**		**6,097.55**		**10,863.94**		**7,039.37**		**7,047.54**		**11,033.54**		**70,213.59**	
Zoning	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**		
Agriculture	--	--	6.24	0.10%	--	--	87.00	1.24%	--	--	323.79	2.98%	858.82	12.20%	30.93	0.44%	56.99	0.52%	1,363.77	1.94%
Commercial-Retail	103.06	1.4%	255.88	4.21%	291.21	3.89%	369.92	5.29%	349.55	5.73%	297.45	2.745	409.98	5.82%	396.32	5.62%	347.86	3.15%	2,821.23	4.02%
Commercial-Office	--	--	--	--	11.34	0.15%	--	--	--	--	--	--	12.24	0.17%	--	--	--	--	23.58	0.03%
Industrial	1,767.63	23.32%	1,243.29	20.45%	1,236.09	16.52%	2,061.12	29.48%	557.76	9.15%	867.61	7.99%	83.82	1.19%	50.91	0.72%	--	--	7,868.23	11.21%
Cemeteries	--	--	--	--	--	--	--	--	1,389.27	22.78%	13.28	0.12%	--	--	--	--	--	--	1,402.55	2.00%
Mobile Homes And Trailer Parks	39.69	0.52%	57.87	0.95%	19.68	0.26%	--	--	--	--	1.22	0.01%	--	--	--	--	8.57	0.08%	127.03	0.18%
Residential-Single-Family	999.76	13.17%	1,621.27	26.67%	2,135.69	28.54%	107.93	1.54%	217.09	3.56%	2,519.13	23.19%	2,640.89	37.52%	3,601.83	51.11%	3,962.35	35.19%	17,805.94	25.36%
Residential-Multi-Family	329.61	4.35%	297.90	4.90%	1,280.46	17.11%	989.36	14.15%	772.01	12.66%	2,810.33	25.87%	2,014.92	28.62%	3,978.62	56.45%	4,738.52	42.95%	17,211.73	24.51%
Mixed Use	--	--	6.23	0.10%	337.00	4.50%	679.11	9.71%	363.36	5.96%	386.22	3.56%	288.21	4.09%	4.80	0.07%	1.70	0.02%	2,066.63	2.94%
Improved Flood Waterways and Structures	--	--	--	--	60.64	0.81%	0.001	0.00%	--	--	--	--	--	--	--	--	--	--	60.641	0.09%
Railroads	--	--	--	--	3.68	0.05%	--	--	--	--	52.39	0.48%	2.36	0.03%	--	--	--	--	58.43	0.08%
Non-Attended Public Parking Structures	--	--	--	--	4.56	0.06%	--	--	2.47	0.04%	0.42	0.00%	8.33	0.12%	48.44	0.69%	67.73	0.61%	131.95	0.19%
Open Space And Recreation	59.61	0.79%	110.15	1.81%	155.09	2.07%	14.57	0.21%	226.79	3.72%	2,958.77	27.23%	405.12	5.76%	395.51	5.61%	1,868.02	16.93%	6,193.63	8.82%
Public Facilities	167.03	2.20%	294.89	4.85%	139.012	1.86%	35.66	0.51%	482.45	7.91%	249.01	2.29%	57.12	0.81%	116.04	1.65%	994.14	9.01%	2,535.35	3.61%
Educational Institutions	--	--	--	--	29.17	0.39%	--	--	--	--	--	--	--	--	--	--	--	--	29.17	0.04%
Military	--	--	--	--	--	--	39.85	0.57%	--	--	--	--	--	--	--	--	--	--	39.85	0.06%
Transportation, Communication, and Utilities	123.42	1.63%	577.62	9.50%	65.24	0.87%	779.03	11.14%	0.37	0.01%	--	--	--	--	--	--	--	--	1,545.68	2.20%
Water	--	--	--	--	219.48	2.93%	142.56	2.04%	--	--	--	--	--	--	--	--	--	--	362.04	0.52%
No Photo Coverage	973.03	12.84%	124.16	2.04%	70.741	0.95%	97.33	1.39%	0.20	0.00%	--	--	--	--	--	--	275.48	2.50%	1,540.94	2.19%
(blank)	3,014.67	39.79%	1,484.03	24.41%	1,749.19	23.38%	1,272.96	18.20%	1,775.28	29.11%	2,139.31	19.69%	1,714.94	24.36%	1,667.40	23.66%	2,525.19	22.89%	17,342.97	24.70%

[1] May not total 100% due to rounding.
-- No applicable zoning designation.

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3.10.4 Impact Analysis

3.10.4.1 Methods

This analysis evaluates whether the proposed Project would physically divide an established community and the consistency or compliance of the Project with relevant land use plans, policies, and regulations, based on the 18 jurisdictions in the study area. The analysis consisted of a two-step process: consistent with the program-level approach of this PEIR, rather than addressing each individual policy of the local jurisdictions' general plans, similar policies are grouped and analyzed against the Project for consistency. The groupings include: (1) compatibility with adjacent land uses; (2) avoidance of out-of-scale development; (3) ensuring diversity of land uses; (4) protection of existing residential neighborhoods from encroachment; (5) enhanced active and passive park and recreation opportunities for all users; and (6) improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages. Consistency with regional plan policies is addressed individually in tabular format.

Local plans and policies (including general plans, specific plans, zoning ordinances, land use and zoning maps, etc.) were reviewed to analyze the consistency of the proposed Project with such plans in accordance with the approach described above. The analysis determines if there is the potential for physical incompatibilities between the *2020 LA River Master Plan* and adjacent land uses based on potential conflicts. Despite some land use differences across Frames 1 through 9, land use impacts would be substantially the same for all frames and an individual analysis by frame is not necessary. Therefore, the analysis that follows applies to Frames 1 through 9 collectively.

This analysis is focused specifically on land use plans, policies, and regulations. As described above under Section 3.10.3, *Regulatory,* plans, policies, and regulations governing specific resources such as air quality, greenhouse gas emissions, noise, hazards and hazardous materials, etc., are identified in the relevant resource chapters of this PEIR. Furthermore, secondary effects (e.g., noise generated outside allowable zoning ordinance timeframes) associated with inconsistencies between the Project and applicable plans, policies, and regulations are discussed within the specific applicable resource chapters.

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.10.4.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of this PEIR and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.10(a) Physically divide an established community.

3.10(b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.10.4.3 Impacts and Mitigation Measures

Impact 3.10(a): Would the proposed Project physically divide an established community?

The LA River as it exists today physically divides the communities through which it passes. Access to the river is restricted to limited areas; bridges are located intermittently along the river corridor to connect the land uses on both sides of the river. While some frames have fewer existing connections across the river than others, the proposed Project would improve connectivity across all nine frames; therefore, the effects with regard to physical division of an established community relevant to land use would be substantially similar along all 51 miles of the study area. As such, the analysis that follows would apply to each of the nine project frames.

Typical Projects

Common Elements

Construction

The LA River currently provides a physical barrier within the communities along its length. Construction of the Common Elements Typical Project, regardless of size and extent, would not further physically divide established communities. The LA River ROW includes the entirety of the river channel (bank to bank) as well as landside areas immediately adjacent to the channel banks that facilitate continuous operations and maintenance access by LACFCD and USACE. Construction of the Common Elements Typical Project would occur off-channel (outside of the bank) between the top of the levee and the fenceline and would not provide long-term physical barriers to the community (construction would last no more than 10 months). Although construction of the Common Elements Typical Project could require temporary closure of some roadway lanes, all lanes would not be closed at the same time. Staging areas for construction equipment would be located within the fenceline and on the ROW. As part of the demolition/construction permitting process, the project proponent would coordinate road closures or detours with the local fire and police departments to ensure that access would not be restricted. Construction workers would be required to park in designated areas so as not to block access in the community. Therefore, there would be a less-than-significant impact with regard to physical division of an established community during construction of the Common Elements Typical Project.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Specific amenities of the Common Elements Typical Project, such as pavilions, cafés, hygiene facilities, restrooms, benches, water fountains, bike racks, environmental graphics, lighting, planting, stairs/ramps, guardrails, fences and gates, and art/performance spaces, would provide new and enhanced recreational facilities such as outdoor seating, water fountains, and performing arts space, and opportunities for gathering and eating spaces for the visitors and neighborhoods along the river's extent. The Common Elements Typical Project would decrease the physical division of the community that the LA River presents by incorporating enhanced recreational uses that would connect communities. The Common Elements Typical Project would provide increased access and connections along the river to the adjacent communities and neighborhoods through ramps and stairs. Therefore, the Common Elements Typical Project would result in no impacts with regard to physical division of an established community.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Impacts from construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above. Construction work would occur off-channel (outside of the bank) between the top of the levee and the fenceline and would not provide long-term physical barriers to the community (construction would not last more than 10 months). Staging areas for construction equipment would be located within the fenceline and on the ROW. Construction workers would be required to park in designated areas so as not to block access in the community. As part of the permitting process, the subsequent project proponent would coordinate road closures or detours with the local fire and police departments to ensure that access would not be restricted.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

As noted for the Common Elements Typical Project, the Multi-Use Trails and Access Gateways Typical Project would provide new and enhanced access to the LA River and opportunities for community engagement by increasing connectivity between recreational opportunities. The Multi-Use Trail and Access Gateways Typical Project would provide additional entrances to the river through the installation of river gateways and access points. This enhanced access and the increased connectivity between recreational opportunities would reduce the physical barrier that the LA River presents and allow greater connectivity with adjacent neighborhoods. Therefore, there would be no impacts with regard to physical division of an established community from operation of the Multi-Use Trails and Access Gateways Typical Project.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Certain design components of the Trails and Access Gateways KOP (KOP Category 1) inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5 for KOP Category 1. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 5

Construction activities for KOP Categories 1 through 5 would be similar, as would construction equipment. The larger subsequent projects would involve the use of cranes and jackhammers to break concrete. Staging areas for construction equipment would be within the fenceline in the ROW; however, depending on the location, staging could be located on other local jurisdiction areas, accordingly. Staging would occur on appropriate vacant areas for in-channel or off-channel subsequent projects. Construction workers would be required to park in designated areas so as not to block access in the community.

The LA River currently provides a physical barrier within the communities along its length, with intermittent access points and roadway crossings. Staging and construction worker parking under KOP Categories 1 through 5 would be managed based on the location of subsequent projects and

would not be expected to further divide the community in which the construction occurs. There could be temporary off-channel impacts due to road closures or detours during construction. During the permitting process, the project proponent would coordinate any road closures or detours with the local fire and police agencies to ensure that there would be no substantial physical obstruction in the community. It is not anticipated that construction of KOP Categories 1 through 5 would physically divide an established community.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Off-channel land asset design components would likely entail greater levels of construction than the other five KOP categories and would occur outside the ROW. KOP Category 6 design components would be anticipated to be considerably larger than the other KOP categories' design components, resulting in more extensive environmental effects during construction. This KOP category could occur within established neighborhoods and could result in temporary road closures and obstructions to community facilities, which could divide an established community. Site-specific and project-specific design details of subsequent projects would determine their construction schedules and would ultimately be driven by the County's needs or the needs of any other jurisdictions implementing these subsequent projects under the *2020 LA River Master Plan*. For these larger KOP Category 6 design components, a potentially significant impact could occur as a result of physical division of an established community.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

If staging or construction activities for subsequent projects under KOP Category 6 occur outside of the fenceline or ROW of LACFCD or USACE, the implementing agency would implement the following mitigation measures on a project-by-project basis, depending on location and construction conditions.

Mitigation Measure LU-1: Construction Management Plan.

The implementing agency will require a construction management plan (CMP) be prepared that will include the following elements:

- No construction staging will be allowed within residential neighborhoods.

- Construction workers will park in a specified off-site location and be shuttled to and from the construction site. Local residential neighborhoods will not be used for construction worker parking under any circumstances.
- The CMP will provide a traffic control plan that identifies the location and timing of temporary closures and detours of public streets with the goal of maintaining traffic flow, especially during peak travel periods. The CMP will be site specific and include, at a minimum, signage to alert drivers to the construction zone, traffic control methods, traffic speed limitations, and alternative access and detour provisions during road closures. Local police and fire departments will be consulted during preparation of the CMP.
- Any temporary closure or removal of parking areas or roadways during construction will be temporary and will be restored upon completion of construction. Efforts will be made to minimize their removal or shorten the length of time that these facilities are inoperable to the extent possible.
- Construction hours and parking for construction vehicles will be implemented; freight and passenger rail services will be protected; and truck routes and construction for special events during project construction, bicycle and pedestrian access, and transit access will be maintained. Screening will be provided for all construction equipment to the maximum extent feasible.
- Alternative access to community facilities and neighborhood-serving commercial uses will be provided if access is obstructed by construction activities.

Mitigation Measure LU-2: Consultation

During the site selection process, the implementing agency will consult with the applicable municipality to determine whether the site is suitable for the proposed development and whether the project would physically divide an established community. This will be determined through aerial or site reconnaissance and comparison with the jurisdiction's planned and existing land uses in the project area, which will then be confirmed, in writing, by the applicable jurisdiction. If it is determined that a significant impact could result, the implementing agency will take one or more of the following actions:

- Select an alternate site that is more appropriate for the proposed use and not likely to result in a significant impact.
- Revise the project features to avoid the impact.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

KOP Categories 1, 2, and 3

Components of KOP Categories 1, 2, and 3 would provide new and enhanced access to the LA River and opportunities for recreation and community engagement. These components would, when constructed in or adjacent to the river, reduce the physical barrier presented by the LA River. If these design components occur within 1 mile on either side of the river, no physical divisions of communities would be anticipated.

Operations would not provide barriers to community connectivity; rather, connectivity would be improved that would reduce the physical barrier the LA River currently presents. Therefore, there would be no impacts from operation of KOP Categories 1, 2, and 3.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Categories 4 and 5

Side channels under KOP Category 4 could result in a localized barrier but this would not be substantial enough to physically divide an established community. Some diversions could occur outside the ROW or be underground (like diversion pipes or underground gallery), but they would not be anticipated to physically divide an established community; residential neighborhoods would be avoided. Channel diversion projects, when operational, would not present a physical barrier that would divide an established community.

Subsequent projects under KOP Category 5 would include both ecological and recreational uses. Recreational uses such as recreation fields would be expected to be located in vacant areas and would bring communities together. Ecological uses would similarly be sited on vacant or underutilized sites. Therefore, operation of KOP Categories 4 and 5 would not result in physical division of an established community.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

KOP Category 6 could occur within established neighborhoods considering they would be located off-channel and occur outside of the ROW. As it is unknown the location and extent of subsequent projects that could operate under KOP Category 6, in the absence of specific details (e.g., type of project, detailed design, location, size), it cannot be stated with certainty whether there would be physical division of an established community. Permanent road closures or other barriers such as walls could physically divide a community if alternative connectivity is not provided.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure LU-2: Consultation.

In addition, Mitigation Measure LU-3: Alternative Connectivity would be implemented on a site-specific basis if physical division of an established community could occur.

Mitigation Measure LU-3: Alternative Connectivity.

During the subsequent project design process, determination will be made whether the project design would result in a physical barrier to the community in the form of road closures, walls, or other project features that could disrupt connectivity within the community. If it is determined that physical barriers would result, the implementing agency will do one or more of the following:

- Redesign the project to avoid the impact.
- Provide alternative connections that maintain connections across the community. This may include constructing off-site street connections, including alleys and other roadways, that maintain community connectivity and access.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

All of the projects envisioned in the *2020 LA River Master Plan* would improve connectivity across the river, providing gateways and additional recreational uses and trails. Many of the projects include bridges and overcrossings that would connect both sides of the river. These projects would reduce the effects of the physical barrier the LA River presents and would not further divide an established community; rather, the *2020 LA River Master Plan* would result in no impact or less-than-significant impact with the exception of projects under KOP Category 6. Depending on the size and extent of projects under KOP Category 6, there could be a significant impact with respect to division of an established community without mitigation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure LU-2: Consultation.

Mitigation Measure LU-3: Alternative Connectivity.

Significance after Required Mitigation

Impacts would be less than significant for KOP Category 6 for later activities when carried out by the County.

Impacts would be significant and unavoidable for KOP Category 6 for later activities when not carried out by the County.

For all other KOP Categories, no impacts would occur.

Impact 3.10(b): Would the proposed Project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

This section discusses whether the proposed Project would cause a significant environmental impact due to a conflict with applicable land use policies and objectives or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Applicable recreation policies are also discussed. As noted in Section 3.10.4.1, *Methods*, the analysis consisted of a two-step process: rather than addressing each individual policy of the local jurisdictions' general plans, similar policies are grouped and analyzed against the Project for consistency. These include: (1) compatibility with adjacent land uses; (2) avoidance of out-of-scale development; (3) ensuring diversity of land uses; (4) protection of existing residential neighborhoods from encroachment; (5) enhanced active and passive park and recreation opportunities for all users; and (6) improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages. As described above under Section 3.10.4.1, *Methods,* other sections in this section describe potential adverse impacts (including air quality, aesthetics, biological resources, noise, cultural resources, geology and soils, hazards and hazardous materials, public services, utilities, and transportation/ traffic) in the vicinity of the project site and any conflicts with the applicable regulations governing those impacts. Policies relevant to land use of the various jurisdictions along the river's extent are identified in Table 3.10-1 and Table 3.10-2.

As described above, the LA River passes through numerous different municipalities over its 51 miles. While each of the 18 jurisdictions along the study area (17 cities in addition to unincorporated County areas) contain discrete adopted land use policies, these policies are similar across all applicable land use plans and generally pertain to ensuring compatible uses for all development and redevelopment within the jurisdiction as well as avoiding out-of-scale development and protecting existing residential neighborhoods from encroachment by incompatible uses. These goals and policies also promote a diversity of land uses, including increased opportunities for open space and recreation. There are no land use policies that are substantially different for each frame along the river's extent; therefore, the analysis that follows applies to all nine frames.

Typical Projects

Common Elements

Construction

The Common Elements Typical Project would be relatively small and would occur within the existing ROW between the top of levee and fenceline (no work in the channel). The Common Elements Typical Project would not require additional land acquisition, as it would occur completely within the ROW and would thus be consistent with applicable land use designations. The Common Elements Typical Project would be subject to design guidelines of applicable jurisdictions and could follow recommended *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B), as applicable. The Design Guidelines for fences, guardrails and walls, structure architecture, signage, and landscaping, including buffers, would help visually integrate the new use with existing adjacent uses. Furthermore, projects would be expected to follow design guidelines of the applicable jurisdiction.

As noted, construction activities, staging, and construction worker parking of the Common Elements Typical Project would occur within the fenceline and on the ROW. No incompatibilities with adjacent land uses or inconsistencies with applicable land use plans, policies, and regulations adopted for the purpose of avoiding an environmental impact would result from construction with respect to land use. For a discussion of effects of noise, air emissions, and other resource topics, please see the other sections in this section that identify topic-specific goals and policies relevant to the Common Elements Typical Project.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Operation of the Common Elements Typical Project would provide beneficial recreational uses and result in increased access to the river and connectivity to adjacent neighborhoods. While the Common Elements Typical Project would be within the ROW, it could be adjacent to residential uses. The Common Elements Typical Project would include a café with indoor and outdoor seating, site lighting, and a performing arts area, which could result in periodic amplified noise (noise impacts are addressed in Section 3.12, *Noise*). The café would be low-profile at one story and lighting would be designed to avoid spillover into adjacent neighborhoods (lighting impacts are addressed in Section 3.1, *Aesthetics*). There are often small recreational facilities such as parks and outdoor lit playing areas sited within residential areas. The Common Elements Typical Project would be consistent with land use and recreation policies that promote accessibility to trails and other open space. The Common Elements Typical Project would not be incompatible with residential neighborhoods, intrude into existing neighborhoods, or be out-of-scale with existing development,

and would provide additional recreational opportunities that would be available to the adjacent neighborhoods.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Table 3.10-6 summarizes the consistency of the Common Elements Typical Project with the six overarching themes of the 18 jurisdictions' general plans.

Table 3.10-6. Consistency of Common Elements Typical Projects with Land Use/Recreation Goals and Policies

Goal/Policy	Consistent?
Compatibility with adjacent land uses	**Yes.** The recreational uses of the Common Elements Typical Project would be compatible with adjacent land use, including residential neighborhoods.
Avoidance of out-of-scale development	**Yes.** The structures of the Common Elements Typical Project (e.g., café, restroom facilities) would not exceed one story.
Ensuring diversity of land uses	**Yes.** The Common Elements Typical Project would provide additional recreational uses that would benefit the surrounding communities.
Protection of existing residential neighborhoods from encroachment	**Yes.** The Common Elements Typical Project would be constructed and operated entirely within the ROW.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** The Common Elements Typical Project would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** The Common Elements Typical Project would include trails, but would not be inconsistent with this goal.

Multi-Use Trails and Access Gateways

Construction

Similar to the Common Elements Typical Project, the Multi-Use Trails and Access Gateway Typical Project would be subject to design guidelines of applicable jurisdictions and could follow recommended Design Guidelines, which identify connective elements such as trail dimensions, path materiality, lighting, artwork, and signage, as applicable. Trail guidelines would facilitate a degree of consistency in experience from one segment of the LA River Trail to the next. In addition, following the recommended Design Guidelines for fences and guardrails, lighting, and trail design would help integrate the new use into the existing environment.

The Multi-Use Trails and Access Gateways Typical Project would be larger than the Common Elements Typical Project, up to 5 miles in length. Similar to the Common Elements Typical Project, construction of the Multi-Use Trails and Access Gateways Typical Project would occur within the ROW. Staging and construction worker parking would occur within the fenceline and ROW. No incompatibilities with adjacent land uses or inconsistencies with applicable land use plans, policies, and regulations adopted for the purpose of avoiding an environmental impact would result from construction with respect to land use.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

The impact discussion above for operation of the Common Elements Typical Project would also apply to the Multi-Use Trails and Access Gateway Typical Project.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Table 3.10-7 summarizes the consistency of the Multi-Use Trails and Access Gateways Typical Project with the six overarching themes of the 18 jurisdictions' general plans.

Table 3.10-7. Consistency of Multi-Use Trails and Access Gateways Typical Projects with Land Use/Recreation and Policies

Goal/Policy	Consistent?
Compatibility with adjacent land uses	**Yes.** The recreational uses of the Multi-Use Trails and Access Gateways Typical Project would be compatible with adjacent land use, including residential neighborhoods.
Avoidance of out-of-scale development	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would be at ground level.
Ensuring diversity of land uses	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would provide additional recreational uses that would benefit the surrounding communities.

Goal/Policy	Consistent?
Protection of existing residential neighborhoods from encroachment	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would be constructed and operated entirely within the ROW.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** The Multi-Use Trails and Access Gateways Typical Project would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. The Multi-Use Trails and Access Gateways Typical Project would include trails and connection points/access gateways to the LA River.

2020 LA River Master Plan Kit of Parts

Each of the 18 jurisdictions through which the river passes has adopted land use plans that include goals, objectives, and policies related to land use in addition to the *Los Angeles County General Plan* and other relevant land use plans such as the LARRMP and *Long Beach RiverLink*. While policies across jurisdictions may have different wording, six main land use themes emerge that are consistent for all land use plans (in addition to multiple goals and policies related to other resource topics, such as air quality and recreation). These include:

- Compatibility with adjacent land uses
- Avoidance of out-of-scale development
- Ensuring diversity of land uses
- Protection of existing residential neighborhoods from encroachment
- Enhanced active and passive park and recreation opportunities for all users
- Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages

The analysis that follows considers these six main policy themes and applies them equally to all nine frames.

KOP Categories 1 and 2

Construction

Projects under KOP Categories 1 and 2 could include a variety of flood management improvements, recreational uses, trails, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor. Impacts during construction would be substantially similar to those identified for the Multi-Use Trails and Access Gateways Typical Project. No incompatibilities with adjacent land uses or inconsistencies with applicable land use plans, policies, and regulations adopted for the purpose of avoiding an environmental impact would result from construction with respect to land use.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Minor inconsistencies with applicable land use policies could occur, such as if a subsequent project under KOP Categories 1 and 2 would conflict with planned land uses on adjacent parcels, be incompatible with adjacent land uses, or result in out-of-scale development. A project is not required under CEQA to be consistent with each and every policy of a general or specific plan to be approved but should be generally consistent with the overarching goals of the applicable plan. Because subsequent projects under KOP Categories 1 and 2 could consist of multi-use trails, a recreational use, or a range of flood management, recreation, and ecological functions. These subsequent projects would not be located within residential neighborhoods and would provide additional recreational uses serving visitors and residents. KOP Categories 1 and 2 would not be expected to result in inconsistency with these goals, but the potential remains for a significant impact to occur.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply Mitigation Measure LU-4 as needed as specific sites are identified.

Mitigation Measure LU-4: Site Selection Process.

To avoid potential project inconsistency with applicable land use plans, the following will be implemented:

- During the site selection process, as specific projects under the KOP category are developed, the implementing agency will consult with the affected jurisdiction to determine if potential inconsistencies with land use plans and policies could occur.
- Results of the consultation could include:
    - Selection of an alternative site
    - Revision or substitution of specific project components (alternative design)
    - Reduction in size of the project
    - Abandonment of the project

    The results of the consultation will be documented in writing, with written concurrence from the affected jurisdiction, and incorporated into the County's project file.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Table 3.10-8 summarizes the consistency of KOP Category 1 and 2 projects with the six overarching themes of the 18 jurisdictions' general plans.

Table 3.10-8. Consistency of KOP Category 1 and 2 with Land Use/Recreation and Policies

Goal/Policy	KOP Category	Consistent?
Compatibility with adjacent land uses	1	**No.** It is possible that equestrian facilities or towers could be sited adjacent to residential neighborhoods, which could result in incompatibilities.
	2	**No.** It is possible that flood management facilities or intensive recreational uses like amphitheaters could be sited adjacent to residential neighborhoods, which could result in incompatibilities.
Avoidance of out-of-scale development	1	**No.** There is the potential that certain structures under KOP Category 1 would be out of scale with adjacent development if structures are incongruous or result in a use (such as equestrian) that may be incompatible with residential development.
	2	**No.** There is the potential that certain flood management structures under KOP Category 2 would be out of scale with adjacent development.
Ensuring diversity of land uses	1	**Yes.** KOP Category 1 would provide additional recreational uses that would benefit the surrounding communities.
	2	**Yes.** KOP Category 2 would provide additional recreational uses that would benefit the surrounding communities in addition to improving flood management.
Protection of existing residential neighborhoods from encroachment	1	**Yes.** KOP Category 1 would not encroach on residential neighborhoods.
	2	**Yes.** KOP Category 2 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	1	**Yes.** KOP Category 1 would provide additional recreational uses that would benefit the surrounding communities.
	2	**Yes.** KOP Category 2 would provide additional recreational uses that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	1	**Yes**. A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. KOP Category 1 would include trails and connection points/access gateways to the LA River.
	2	**Neutral.** KOP Category 2 would not include trail connections but would not be inconsistent with this goal.

KOP Categories 3, 4, and 5

Construction

Construction impacts would be substantially similar to those identified for KOP Categories 1 and 2. Construction activities and construction equipment used would be similar to those utilized for KOP Categories 1 and 2.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

The recreational uses under KOP Category 3 would be compatible with adjacent land uses, including residential neighborhoods. There would be no anticipated incompatibilities with adjacent land uses or out-of-scale development. There would be no conflict with goals and policies aimed at ensuring a diversity of land uses and avoiding intrusion into residential neighborhoods. Subsequent projects under KOP Category 3 would not expected to be within residential neighborhoods.

The subsequent projects under KOP Category 4 would consist of either tunnel or naturalized channel adjacent to the river channel at ground level. These would not result in incompatible land uses or out-of-scale development. This KOP category could provide additional recreational opportunities like educational exhibits near side channels during the dry season and would not be inconsistent with goals and policies related to ensuring diversity of land uses. The subsequent projects under KOP Category 4 would not occur within residential neighborhoods. Diversions would not be expected to result in inconsistencies with applicable land use plans and policies.

Floodplain reclamation projects would consist of boardwalks, naturalized banks, and a farmer's market. These uses would not be incompatible with adjacent land uses, including residential neighborhoods, and would be small in scale. The KOP Category 5 design components would provide additional recreational opportunities and would not be sited within residential neighborhoods. Therefore KOP Category 5 would not be expected to result in inconsistencies with applicable land use plans and policies.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Table 3.10-9 summarizes the consistency of KOP Category 3 with the six overarching themes of the 18 jurisdictions' general plans.

Table 3.10-9. Consistency of KOP Category 3, 4, and 5 with Land Use/Recreation and Policies

Goal/Policy	KOP Category	Consistent?
Compatibility with adjacent land uses	3	**Yes.** Recreational components under KOP Category 3 would be compatible with adjacent land uses.
	4	**Yes.** KOP Category 4 would occur adjacent to the existing channel and would consist of ground-level or underground tunnel or naturalized channel.
	5	**Yes.** The proposed recreational uses and floodplain reclamation would be compatible with adjacent land uses.
Avoidance of out-of-scale development	3	**No.** There is the potential that certain structures under KOP Category 3 would be out of scale with adjacent development.
	4	**Yes.** KOP Category 4 would occur adjacent to the existing channel and would consist of ground-level or underground tunnel or naturalized channel. Development would not be out of scale with adjacent land uses.
	5	**Yes.** The proposed recreational uses and floodplain reclamation would be compatible with adjacent land uses.
Ensuring diversity of land uses	3	**Yes.** KOP Category 3 would provide additional recreational uses that would benefit the surrounding communities in addition to improving flood management.
	4	**Neutral.** While KOP Category 4 would not provide many additional recreational uses that would benefit the surrounding communities in addition to improving flood management, water quality, and some habitat features, it would not be inconsistent with this overarching goal.
	5	**Yes.** KOP Category 5 would provide additional recreational uses that would benefit the surrounding communities.
Protection of existing residential neighborhoods from encroachment	3	**Yes.** KOP Category 3 would not encroach on residential neighborhoods.
	4	**Yes.** KOP Category 4 would not encroach on residential neighborhoods.
	5	**Yes.** KOP Category 5 would not encroach on residential neighborhoods.
Enhanced active and passive park and recreation opportunities for all users	3	**Yes.** KOP Category 3 would provide additional recreational uses that would benefit the surrounding communities.
	4	**Neutral.** While KOP Category 4 would not provide many additional recreational uses that would benefit the surrounding communities in addition to improving flood management, water quality, and some habitat features, it would not be inconsistent with this overarching goal.
	5	**Yes.** KOP Category 5 would provide additional recreational uses that would benefit the surrounding communities.

Goal/Policy	KOP Category	Consistent?
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	3	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. KOP Category 3 would include connection points/access gateways to the LA River.
	4	**Neutral.** While KOP Category 4 would not include trails or provide many additional recreational uses that would benefit the surrounding communities in addition to improving flood management, water quality, and some habitat features, it would not be inconsistent with this overarching goal.
	5	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points. Subsequent projects under KOP Category 5 would include connection points/access gateways to the LA River.

KOP Category 6

Construction

Larger off-channel land asset projects such as affordable housing and museums would entail greater levels of construction than the other five KOP categories. As it is unknown the location and extent of subsequent projects under KOP Category 6, there could be inconsistencies with applicable land use plans, policies, and regulations, a potentially significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure LU-1: Construction Management Plan.

Mitigation Measure LU-2: Consultation.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

As it is unknown the location and extent of subsequent projects that could operate under KOP Category 6, in the absence of specific details (e.g., type of project, detailed design, location, size), it cannot be stated with certainty whether there would be inconsistencies with applicable land use plans, policies, or regulations.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure LU-4: Site Selection.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Table 3.10-10 summarizes the consistency of KOP Category 6 with the six overarching themes of the 18 jurisdictions' general plans.

Table 3.10-10. Consistency of KOP Category 6 with Land Use/Recreation and Policies

Goal/Policy	Consistent?
Compatibility with adjacent land uses	**Potentially No.** The proposed recreational uses would be compatible with adjacent land uses. However, other uses that could occur under KOP Category 6, such as museums, could be incompatible with applicable with land use policies depending on the site location. These inconsistencies could result in significant environmental impacts.
Avoidance of out-of-scale development	**Potentially No.** The scale of structures under KOP Category 6 is unknown. Therefore, KOP Category 6 could result in out-of-scale development. These inconsistencies could result in significant environmental impacts.
Ensuring diversity of land uses	**Yes.** KOP Category 6 would provide additional recreational uses, affordable housing, and potentially museums and other infrastructure improvements that would benefit the surrounding communities. Off-channel land assets combined with ROW improvements can further ensure subsequent projects are multi-benefit, addressing multiple needs.
Protection of existing residential neighborhoods from encroachment	**Potentially No.** As it is unknown the extent and location of subsequent projects under KOP Category 6, they could encroach on existing residential neighborhoods and result in a significant environmental impact.
Enhanced active and passive park and recreation opportunities for all users	**Yes.** KOP Category 6 could include fields and parks that would benefit the surrounding communities.
Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages	**Yes.** A primary goal of the proposed Project is to create 51 miles of connected open space with equitable access, including trails, gateways, and access points.

Overall 2020 LA River Master Plan Implementation

Construction

Construction impacts would be the same as those of the *2020 LA River Master Plan* KOP categories. Some projects would cover more area than others, but the same general construction equipment and activities would be involved, e.g., the use of backhoes, trucks, hand-held power equipment, and

generators. As noted, some projects would be larger than others and include a wide variety of project components. It is possible that construction activities, including roadway closures, could result in temporary incompatibility with adjacent uses or inconsistencies with applicable land use plans, policies, or regulations for the same reasons as outlined for the KOP categories. Therefore, the impact is potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure LU-2: Consultation.

Mitigation Measure LU-3: Alternative Connectivity.

Mitigation Measure LU-4: Site Selection Process.

Significance after Required Mitigation

While temporary inconsistencies with land use plans and policies could occur during construction, these would be minimized with implementation of Mitigation Measures LU-1 and LU-2, which would reduce the impact to less-than-significant levels for KOP Categories 1, 2, 4, and 5 for later activities when carried out by the County, but would be significant and unavoidable for later activities when not carried out by the County. Subsequent projects under KOP Category 3 could result in out-of-scale development despite implementation of Mitigation Measure LU-4, which would result in significant and unavoidable impacts. For KOP Category 6, impacts would be significant and unavoidable.

Operation

Operation of projects pursuant to the *2020 LA River Master Plan* would provide increased access to the LA River as well as additional recreational opportunities. Furthermore, the projects would encourage community interaction. Operation of the projects would promote interconnectivity with adjacent neighborhoods and would further the goals and policies of the applicable land use plans.

Table 3.10-11 provides a brief consistency analysis of the overall *2020 LA River Master Plan* with the policies of the *Los Angeles County General Plan*, SCAG's Connect SoCal Plan, and other regional plans. Specific policies of the other jurisdictions' general plans are not called out, as the preceding analysis considers the overarching themes that have been identified as common across all plans.

Table 3.10-11. Consistency with Los Angeles County General Plan, SCAG Connect SoCal Plan, and other Regional Plan Policies

Plan	Policies and Objectives	Consistent?
Los Angeles County General Plan		
Land Use Element	• **Policy LU 2.2:** Ensure broad outreach, public participation, and opportunities for community input in community-based planning efforts.	***Typical Projects*** **Yes.** The County has engaged in substantial public outreach during development of the *2020 LA River Master Plan*. The County has

Plan	Policies and Objectives	Consistent?
	• **Policy LU 2.3:** Consult with and ensure that applicable County departments, adjacent cities and other stakeholders are involved in community-based planning efforts. • **Policy LU 2.8:** Coordinate with the Los Angeles County Department of Public Works and other infrastructure providers to analyze and assess infrastructure improvements that are necessary for plan implementation. • **Policy LU 5.2:** Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs. • **Policy LU 6.2:** Encourage land uses and developments that are compatible with the natural environment and landscape. • **Policy LU 10.1:** Encourage community outreach and stakeholder agency input early and often in the design of projects. • **Policy LU 10.4:** Promote environmentally sensitive and sustainable design.	also consulted with all applicable County departments regarding infrastructure needs. The Project would provide recreational opportunities and neighborhood connectivity benefits and Design Guidelines would minimize incompatibility with the natural environment and adjacent land uses. ***KOP Categories 1, 2, 4, and 5*** **Yes.** Please see discussion above for Typical Projects. ***KOP Categories 3, 6*** **Potentially No.** Subsequent projects under KOP Category 3 could result in localized incompatibilities with adjacent land uses or out-of-scale development. ***2020 LA River Master Plan*** **Yes.** The County has engaged in substantial public outreach during development of the *2020 LA River Master Plan*. The County has also consulted with all applicable County departments regarding infrastructure needs. The Project would provide recreational opportunities and neighborhood connectivity benefits and Design Guidelines would ensure compatibility with the natural environment and adjacent land uses.
Mobility Element	**Policy M 2.6:** Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible.	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes**. The *2020 LA River Master Plan* includes design concepts for multi-use trails and access gateways that promote pedestrian-, bicycle-, and equestrian-friendly activities.
Open Space Element	• **Policy C/NR 1.3:** Support the acquisition of new available open space areas. Augment this strategy by leveraging County resources in concert with the compatible open space stewardship actions of other agencies, as feasible and appropriate. • **Policy C/NR 1.4:** Create, support and protect an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes**. The *2020 LA River Master Plan* would utilize existing ROW to provide additional recreational and community benefits that would increase neighborhood connectivity. Design Guidelines would ensure sensitivity to the natural environment and sustainable design.

Plan	Policies and Objectives	Consistent?
	southwestern extent of the Mojave Desert to Puente Hills and Chino Hills. • **Policy C/NR 1.5:** Provide and improve access to dedicated open space and natural areas for all users that considers sensitive biological resources. • **Policy C/NR 2.2:** Encourage the development of multi-benefit dedicated open spaces. • **Policy C/NR 2.3:** Improve understanding and appreciation for natural areas through preservation programs, stewardship, and educational facilities.	
Parks and Recreation Element	**Goal P/R 1:** Enhanced active and passive park and recreation opportunities for all users. • **Policy P/R 1.1:** Provide opportunities for public participation in designing and planning parks and recreation programs. • **Policy P/R 1.2:** Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences. • **Policy P/R 1.3:** Consider emerging trends in parks and recreation when planning for new parks and recreation programs. • **Policy P/R 1.4:** Promote efficiency by building on existing recreation programs. • **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible. • **Policy P/R 1.6:** Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories. • **Policy P/R 1.7:** Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities. • **Policy P/R 1.8:** Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities.	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes.** The County has engaged in substantial public outreach during development of the *2020 LA River Master Plan*. The County has also consulted with all applicable County departments regarding infrastructure needs. The Project would provide recreational opportunities and neighborhood connectivity benefits and Design Guidelines would minimize incompatibility with the natural environment and adjacent land uses.

Plan	Policies and Objectives	Consistent?
	• **Policy P/R 1.10:** Ensure a balance of passive and recreational activities in the development of new park facilities. • **Policy P/R 1.11:** Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances **Goal P/R 2:** Enhanced multi-agency collaboration to leverage resources. • **Policy P/R 2.5:** Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, the County, state, and federal agencies, private groups, schools, private landowners, and other organizations. **Goal P/R 3:** Acquisition and development of additional parkland. • **Policy P/R 3.1:** Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County. • **Policy P/R 3.3:** Provide additional parks in communities with insufficient local parkland as identified through the gap analysis. **Goal P/R 4:** Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages. • **Policy P/R 4.1:** Create multi-use trails to accommodate all users.	
SCAG *Connect SoCal* (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy)		
	1. Encourage regional economic prosperity and global competitiveness 2. Improve mobility, accessibility, reliability, and travel safety for people and goods 3. Enhance the preservation, security, and resilience of the regional transportation system 4. Increase person and goods movement and travel choices within the transportation system	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes**. The Project would provide recreational opportunities and neighborhood benefits and Design Guidelines would ensure compatibility with the natural environment and adjacent land uses. The *2020 LA River Master Plan* would utilize existing ROW to provide additional recreational and community benefits that would increase neighborhood connectivity. Design Guidelines would ensure sensitivity to the natural environment and sustainable design.

Plan	Policies and Objectives	Consistent?
	5. Reduce greenhouse gas emissions and improve air quality 6. Support healthy and equitable communities 7. Adapt to a changing climate and support an integrated regional development pattern and transportation network 8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel 9. Encourage development of diverse housing types in areas that are supported by multiple transportation options 10. Promote conservation of natural and agricultural lands and restoration of habitats	
Other Relevant Land Use Plans		
Los Angeles River Revitali-zation Master Plan (2007)	• Revitalize the Los Angeles River through enhanced flood storage, water quality, public safety, and ecosystem. • Green the neighborhoods with a continuous Los Angeles River greenway, extended open space and recreation, and public art along the Los Angeles River. • Capture community opportunities by making the Los Angeles River the focus of activity, providing opportunities for educational and public facilities, and celebrating the cultural heritage of the Los Angeles River. • Create value with improved quality of life, focused attention on underused areas and disadvantaged communities, and increased employment, housing, and retail space opportunities.	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes.** Please see above consistency discussion for SoCal Connect policies.
Lower Los Angeles River Revitali-zation Plan (2018)	• Prevent gentrification and resulting residential and commercial displacement through comprehensive community-driven and informed policies and programs such as, but not limited to affordable housing, rent stabilization, enhanced infrastructure financing districts (EIFDs), community land trusts, city housing policies, thoughtfully planned commercial development, and additional LA River	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes.** Please see above consistency discussion for SoCal Connect policies.

Plan	Policies and Objectives	Consistent?
	multi-use trail and bikeway access points to avoid real estate hot spots. • Address homelessness by preventing residential displacement, supporting regional initiatives such as increasing the affordable housing stock, long-term homelessness interventions and incorporating support services for the homeless into river revitalization projects. • Increase equitable community river access and assets through smart acquisitions of river adjacent properties to address the community and users' needs. These spaces must be safe, accessible by the community and meet the needs of a diverse range of users. • Support existing local businesses and workforce through coordination with organizations, development of park space and housing areas along the Lower LA River and support of locally owned businesses. Environmental remediation, green space development and revitalization efforts should directly engage the community and create job opportunities while providing workforce training and provisions for worker safety. • Promote health, equity, wellness and physical activity in communities along the lower LA River by providing access to safe and interconnected complete streets, parks and open spaces that promote an active lifestyle, and by increasing access to and promoting healthy food. • Increase community green infrastructure in communities along the Lower LA River in order to protect and improve air and water quality, increase outdoor activity, improve mental health, and increase social cohesion by creating community gathering spaces. • Enhance connectivity by improving and expanding the network of connections including streets, pathways, bikeways, and multi-use trails that connect communities, cities, and public assets to the LA River Bikeway and Trail.	

Plan	Policies and Objectives	Consistent?
	• Enhance and create diverse, vibrant public spaces by creating new and improving existing public spaces at and around the river that support diverse experiences, public enjoyment, health, and local community identity. • Improve user experience and equitable access by providing a consistent, high-quality experience along the river, in surrounding public spaces, and in the connections in between, that is welcoming, accessible, and safe for all users.	
Long Beach RiverLink (2007)	• Identify areas for the acquisition of additional open space. As previously mentioned, the City is seeking to provide eight acres of recreational open space for each 1,000 residents of the city. To achieve this, approximately 1,100 acres needs to be added to the current inventory of 2,855 acres. • Identify ways to connect city residents to the Los Angeles River. This is primarily oriented toward improving physical access to the bicycle and pedestrian trails on the levees and open spaces along the River. • Identify locations along the Los Angeles River where the native habitats could be restored. This is to preserve the scarce remnants of Long Beach's biological heritage, and to allow that heritage to recover to the point that its existence will no longer be threatened. Furthermore, this is to provide places of contact where residents can understand and value that heritage. • Improve the aesthetics of the Los Angeles River and the City.	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes.** Please see above consistency discussion for SoCal Connect policies.
Gateway Cities and Rivers Urban Greening Master Plan (2015)	• Protect open space for people and wildlife • Support water conservation and ecosystem improvement • Inspire environmental stewardship in diverse communities and among recreational users • Expand public access to existing and new recreation opportunities Through the Gateway Cities and Rivers Urban Greening Master Plan, the WCA is working to improve conditions through the "missing middle" study area, which	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes.** Please see above consistency discussion for SoCal Connect policies.

Plan	Policies and Objectives	Consistent?
	includes the cities along the Lower Los Angeles River, Rio Hondo, Lower San Gabriel River and Coyote Creek. The plan takes a holistic approach by integrating several regional plans and leveraging a joint-powers authority (JPA) between the Los Angeles County Flood Control District and the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy.	
Common Ground from the Mountains to the Sea: Watershed and Open Space Plan San Gabriel and Los Angeles Rivers (2001)	• Create, expand, and improve public open space throughout the region. • Improve access to open space and recreation for all communities. • Improve habitat quality, quantity, and connectivity connect open space with a network of trails. • Promote stewardship of the landscape encourage sustainable growth to balance environmental, social, and economic benefits. • Maintain and improve flood protection. • Establish riverfront greenways to cleanse water, hold floodwaters and extend open space. • Coordinate watershed planning across jurisdictions and boundaries. • Encourage multi-objective planning and projects.	***Typical Projects, 6 KOP categories, and the overall 2020 LA River Master Plan*** **Yes.** Please see above consistency discussion for SoCal Connect policies.

Sources: Los Angeles County 2015; SCAG 2020; City of Los Angeles 2007; Lower Los Angeles River Working Group 2018; Long Beach Department of Parks, Recreation and Marine 2007; WCA and North East Trees 2015; California Resources Agency et al. 2001

As noted, CEQA does not require consistency with each and every policy contained in an applicable land use plan. While there may be some inconsistencies with individual policies of different jurisdictions, the proposed Project would be generally consistent with the overarching themes of these land use policies. The Project would be designed to be consistent and compatible with adjacent land uses, provide more diversity in land uses, and provide greater access to the river from neighborhoods along the river, and would not encroach on existing residential neighborhoods. Any land use inconsistencies will have been addressed during the site selection process and there would be a less-than-significant impact during operation with regard to policy consistency.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure LU-4: Site Selection Process.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Cumulative Impacts

As the LA River extends over 51 miles, the geographic context for a consideration of cumulative impacts is the County, which is the planning area within which the Project resides and encompasses all 18 jurisdictions. This context allows consideration of consistency across the affected jurisdictions. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on land use and planning, if, in combination with other projects within the greater Los Angeles region, it would be inconsistent with adopted land use goals, objectives, or policies of applicable lands use plans or create incompatible land uses with the immediate surrounding land uses. The cumulative growth and development in the greater Los Angeles region is expected to be largely consistent with the plans that have been established to guide and regulate growth patterns and infrastructure improvements. Regional planning documents, such as SCAG's Regional Comprehensive Plan (RCP) and the 2020–2045 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), are used for planning within the greater Los Angeles area. However, some strategies may not be consistent with the general plans of city and County areas when it comes to land use patterns and densities. On a local level, goals and policies in the local jurisdictions' general plans would supersede strategies in the 2020–2045 RTP/SCS.

Cumulative Condition

The development patterns encouraged by the 2020–2045 RTP/SCS, where implemented by local jurisdictions, would influence the distribution of growth in existing urbanized areas or suburban town centers and opportunity areas such as in high-quality transit areas, including livable corridors and neighborhood mobility areas. To accommodate growth, the 2020–2045 RTP/SCS includes transportation and land use strategies that encourage higher densities in areas with infill potential and existing infrastructure; emphasizes an increase in transportation mode choice such as transit, walking, and biking; promote diverse housing choices; support implementation of sustainability policies; and promote a green region and other benefits.

As noted in the PEIR for the 2020–2045 SCAG RTP/SCS, physical division of an established community could occur as a result of real or perceived barriers to pedestrians, bicyclists, and motorists. Long-term impacts could result from the completion of new or expanded roadways or transit facilities in existing communities. The PEIR found that land use impacts could be significant and unavoidable even with implementation of mitigation on a regional basis.

Local land use plans and policies guide development within a particular jurisdiction. Past, present, and reasonably foreseeable development within the applicable jurisdictions along the river's extent may have resulted in some site-specific physical division of an established community or inconsistencies with land use plans and policies; however, all local jurisdictions require design review for all projects and consideration of consistency with its land use plans. Therefore, the impact with regard to land use would not be cumulatively significant. On a local level, there is no

cumulative condition with regard to land use. Therefore, the proposed Project would not make a cumulatively considerable contribution to land use and planning.

Local land use plans and policies guide development within a particular jurisdiction. Past, present, and reasonably foreseeable development within the applicable jurisdictions along the river's extent may have resulted in some site-specific physical division of an established community or inconsistencies with land use plans and policies; however, all local jurisdictions require design review for all projects and consideration of consistency with its land use plans. Therefore, the impact with regard to land use would not be cumulatively significant. On a local level, there is no cumulative condition with regard to land use.

Contribution of the Project to Cumulative Impacts

The proposed Project would not physically divide an established community. Project impacts with regard to land use compatibility would be less than significant, and the Project would be generally consistent with land use plans and policies. As there is no cumulative condition with regard to land use, the proposed Project would not make a cumulatively considerable contribution to land use and planning impacts.

Section 3.11
Mineral Resources

3.11.1 Introduction

Mineral resources are naturally occurring chemical and compounds that are formed from inorganic and organic substances. Mineral Resources include oil and natural gas, and commercially viable minerals and aggregate resources, including areas suitable for the drilling for and production of oil and natural gas, and surface mining activities. This section describes existing conditions and applicable laws or regulations pertaining to mineral resources, with an analysis of the potential mineral resource impacts that could result from the *2020 LA River Master Plan*. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.11.2 Setting

3.11.2.1 Geographic

This section discusses the existing conditions related to mineral resources in the project study area.

Regionally Important Mineral Resources

Based on preliminary data for 2017 from the U.S. Geological Survey (USGS) National Minerals Information Center, California ranked fifth – after Nevada, Arizona, Texas, and Alaska – in the value of non-fuel mineral production (USGS 2018). Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate including sand, gravel, and crushed stone. The market value of non-fuel mineral production for California was $3.6 billion – approximately 4.7 percent of the nation's total (USGS 2018).

In Los Angeles County, mineral resources serve various public, commercial, scientific, and recreational purposes. Local extraction sites are valuable assets used to help facilitate the continual growth of the region and economic market. Important local mineral resources include construction

materials and minerals of historical significance including precious gemstones and metals. Aggregate resources include rock, sand, and gravel; which are important for the construction and manufacturing of concrete. According to the *Los Angeles County General Plan*, major local mineral resources consist of oil, rock deposits, and sand and gravel (County of Los Angeles 2015).

Non-Fuel Mineral Resources

Sand and Gravel

The mining of sand and gravel began in the region in the early 1900s when the demand increased by the popular use of concrete in construction and building material and was spurred by construction associated with growth in California and the southwestern United States. Construction aggregate refers to sand and gravel (natural aggregates) and crushed stone (rock) that are used as Portland cement concrete aggregate, asphaltic-concrete aggregate, road base, railroad ballast, riprap, and fill for the production of other construction materials. According to the California Geological Survey (CGS), the State currently has approximately 4.3 billion tons of permitted resources, and the CGS estimates the State would need approximately 13.5 billion tons of aggregate in the next 50 years.

California is the largest producer of sand and gravel in the nation and the greater Los Angeles area is the nation's leading producer for its geographical size. The County has high quantities of sand and gravel, which are located close to the market. Sand and gravel deposits follow the LA River flood plain, coastal plain, and other water bodies and courses. Significant potential deposit sites have been identified by the State Geologist. They lie along the flood plain from the San Fernando Valley through downtown Los Angeles. Much of the area identified has been developed with structures and is inaccessible for mining extraction. Major sand and gravel extraction sites are located in the alluvial fans of the Big Tujunga Wash in the San Fernando Valley and in the San Gabriel River near Irwindale. Other extraction areas are located in northern Los Angeles County in other washes (County of Los Angeles 2015).

Non-Fuel Mineral Resource Zones

The California Geological Survey Mineral Resources Project (Mineral Resources Project) provides information about California's nonfuel mineral resources. The Mineral Resources Project classifies lands throughout the State that contain regionally significant mineral resources as mandated by the Surface Mining and Reclamation Act (SMARA) of 1975. Development generally results in a demand for minerals, especially construction aggregate. SMARA requires all cities and counties to incorporate in their general plans the mineral designations approved by the State Mining and Geology Board.

The classification process involves the determination of Production-Consumption Region boundaries, based on identification of active aggregate operations (Production) and the market area served (Consumption). The Production-Consumption Regional boundaries are modified to include only the portions of the region that are urbanized or urbanizing and are classified for their aggregate content. An aggregate appraisal further evaluates the presence or absence of significant sand, gravel, or stone deposits that are suitable sources of aggregate. The classification of these mineral resources is a joint effort of the State and the local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four Mineral Resource Zones (MRZs), Scientific Resource Zones (SZ), or Identified Resource Areas (IRAs), described below:

- **MRZ-1:** No significant mineral deposits are present.

- **MRZ-2a**: Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. As shown on the California Mineral Land Classification Diagram, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information.
- **MRZ-2b**: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered mineral deposits that are either inferred reserves as determined by limited sample analysis, exposure, and past mining history or are deposits that presently are sub-economic.
- **MRZ-3a:** Areas containing known mineral occurrences of undetermined mineral resource significance.
- **MRZ-3b:** Areas containing inferred mineral occurrences of undetermined mineral resource significance. Land classified MRZ-3b represent areas in geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits.
- **MRZ-4**: Insufficient data available to assign any other MRZ designation.
- **SZ Areas**: Scientific Resource Zones containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
- **IRA Areas:** County or State Division of Mines and Geology Identified Resource Areas where adequate production and information indicates that significant minerals are present.

Table 3.11-1 and Figure 3.11-1, *Mineral Resource Zones in Project Study Area*, show the MRZs in the various frames within the project study area. In Los Angeles County, many of the MRZ sites were developed with structures prior to the MRZ classification and, therefore, is unavailable for extraction. No SZ or IRA Areas are present within the project study area.

Table 3.11-1. Mineral Resources by Frames

Frame	Mineral Resource Zones Present
1	MRZ-1, MRZ-3, and MRZ-4
2	MRZ-1, MRZ-3, and MRZ-4
3	MRZ-1
4	MRZ-1, MRZ-2, and MRZ-3
5	MRZ-1, MRZ-2, and MRZ-3
6	MRZ-2 and MRZ-3
7	MRZ-1, MRZ-2, and MRZ-3
8	MRZ-1 and MRZ-3
9	MRZ-1

Source: California Department of Conservation 1982

As shown above, Frames 4, 5, 6, and 7 are the only frames where MRZ-2 occurs, where adequate information indicates that significant mineral deposits are present or a likelihood of their presence and development should be controlled. As seen on Figure 3.11-1, Frame 1 contains lands designated as MRZ-1, MRZ-3, and MRZ-4, which signifies there are areas where mineral resources are

potentially located but their value is unknown as well as areas where no mineral resource are located. Frame 2 is show to be predominantly MRZ-1 which signifies no mineral deposits are found in the frame except for small portions of land designated as MRZ-3 and MRZ-4, which signifies there is either not enough data to make a determination or that there are mineral resources but their value is unknown. Frame 3 is entirely MRZ-1, which signifies there are no mineral resources in the frame. Frame 4 is predominately MRZ-1, with a small portion of land designated as MRZ-2 located west of the LA River predominately in the City of Vernon, which identifies land as containing known mineral resources as well as a small portion of land designated as MRZ-3 which signifies there could be mineral resources but their value is unknown. In Frame 5, which is entirely located in the City of Los Angeles, MRZ-2 is located west of the LA River, and runs the entirety of the frame, while land designated as MRZ-3 is located on the east side of the LA River and runs the entirety of the frame. In Frame 6, MRZ-2 is found within the entire frame mostly in the center of the frame while lands designated MRZ-3 are found encompassing almost the rest of the frame with a small portion of land designated as MRZ-1 is located in the east of the frame. Frame 6 contains the Cities of Glendale and Los Angeles. In Frame 7, MRZ-2 is found in the northeastern portion of the frame, which contains the Cities of Los Angeles and Burbank. Much of the area identified has been developed with structures and is currently inaccessible for mining extraction (County of Los Angeles 2015). Frame 7 also contains land designated as MRZ-1 and MRZ-3 which signifies there are portions of the frame that contain no mineral resources and there are portions with mineral resources of unknown value. Frame 8 is predominately MRZ-1 and MRZ-3. Frame 9 is entirely MRZ-1 which signifies there are no mineral resources located in the frame.

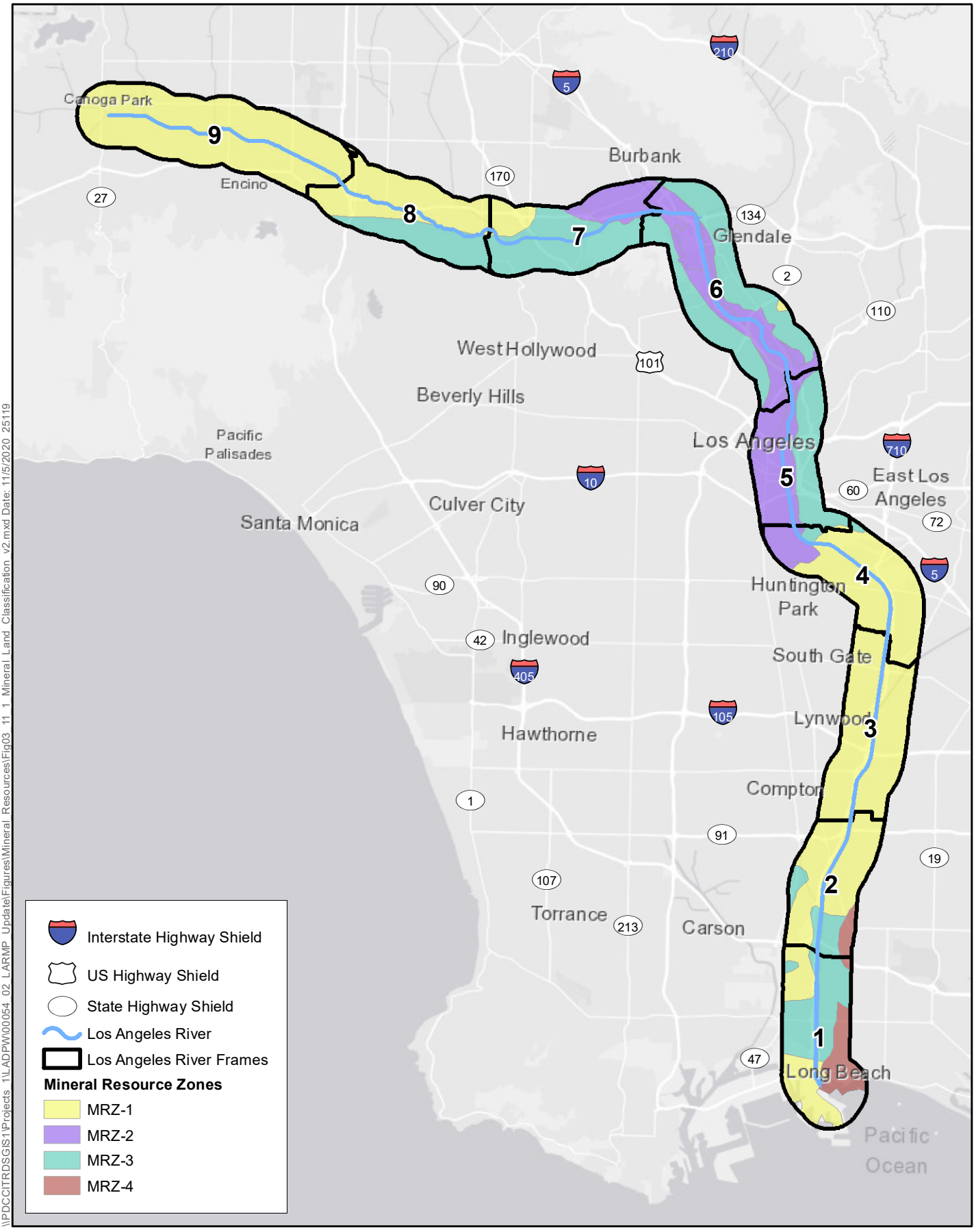
Oil and Gas Extraction

According to California Department of Conservation, Geologic Energy Management Division (CalGem), there are 72 oil fields located in Los Angeles County (17 abandoned, 55 active). Within these oil fields, there are a total of 2,750 active oil wells, not including those offshore. (CalGem 2018).

As depicted on Figure 3.11-2, the project study area runs through 7 oil fields, including Wilmington Oil Field, Long Beach Oil Field, Dominguez Oil Field, Bandini Oil Field, Boyle Height Oil Field, Union Station Oil Field, and Los Angeles City Oil Field.

Table 3.11-2. Oil Fields and Oil and Gas Wells by Frame

Frame	Oil Fields Present	Active Oil and Gas Wells	Plugged and Abandoned Oil and Gas Wells
1	Wilmington Oil Field Long Beach Field	824	1,270
2	Dominguez Oil Field	5	339
3	None	0	0
4	Bandini Oil Field	1	34
5	Boyle Heights Oil Field Union Station Oil Field Los Angeles City Oil Field	0	104
6	None	0	45



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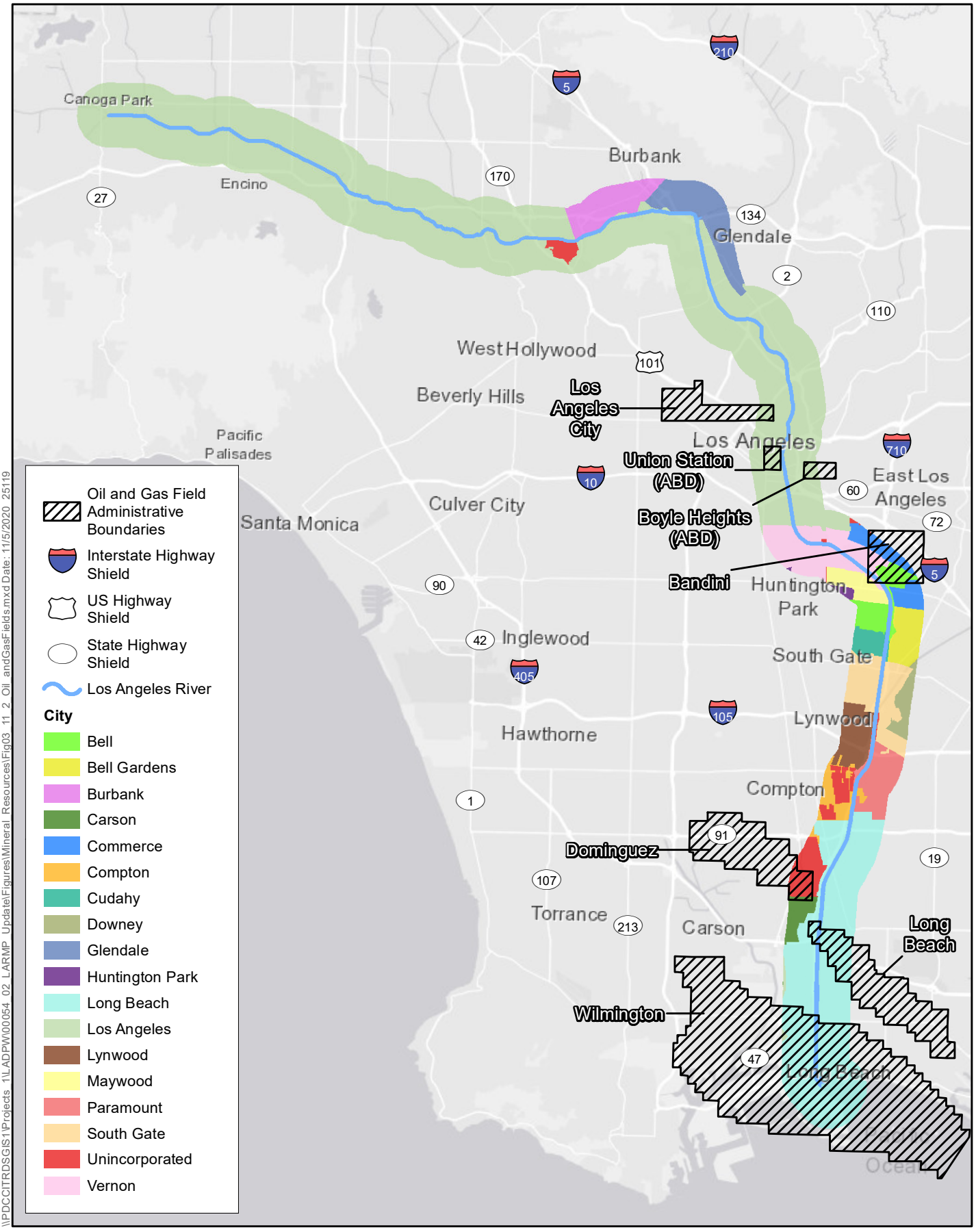
Source: California Department of Conservation; Los Angeles County; ESRI StreetMap
Map Prepared: 11/5/2020

N 0 1 2 4
Miles

Figure 3.11-1
Mineral Resource Zones in Project Study Area



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Source: California Department of Conservation; Los Angeles County; ESRI StreetMap
Map Prepared: 11/5/2020

N 0 1 2 4
Miles

Figure 3.11-2
Oil and Gas Field Administrative Boundaries in the Project Study Area

Frame	Oil Fields Present	Active Oil and Gas Wells	Plugged and Abandoned Oil and Gas Wells
7	None	0	0
8	None	0	0
9	None	0	0
Total		**830**	**1,792**

Source: California Department of Conservation 1982

As shown on Figure 3.11-3, there are 830 active oil and gas wells located in the 2-mile-wide study area. The majority of the active oil wells (824 active oil wells) are located in Frame 1 within the Wilmington and Long Beach Oil Fields, which are shown on Figure 3.11-4. The Wilmington Oil Field is the third largest oil field in the contiguous United States (City of Long Beach 2020). The Long Beach Oil Field is largely depleted but is still operational (City of Signal Hill 2020). There are five active oil wells in Frame 2 and one active oil well in Frame 3, as seen on Figure 3.11-5 and Figure 3.11-6. As seen on Figures 3.11-4 through 3.11-10, there are 1,792 plugged and abandoned oil and gas wells located in the 2-mile-wide study area, with 1,270 located in Frame 1, 339 located in Frame 2, 34 located in Frame 4, 104 located in Frame 5, and 45 located in Frame 6.

3.11.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of mineral resources in this PEIR.

Federal

Mining and Mineral Policy Act of 1970

The Mining and Mineral Policy Act of 1970 intended to promote and expand the development of a domestic mineral industry. This statute established a federal policy regarding mineral resources across the United States, covered hard rock mining and oil and gas production, and established modern federal policy in regard to mineral resources nationally. The act applies to all minerals, including aggregate (sand and gravel), coal, geothermal, and oil and gas, that are subject to federal jurisdiction including Bureau of Land Management and United States Forest Service.

State

California Surface Mining and Reclamation Act of 1975

SMARA is the principle legislation addressing mineral resources in California (Public Resources Code [PRC] §§ 2710–2719), which was enacted in response to land use conflicts between urban growth and essential mineral production. The stated purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized; that mined lands are reclaimed and residual hazards to public health and safety are eliminated; and that consideration is given to recreation, watershed, wildlife, aesthetic, and other related values. SMARA governs the use and conservation of a wide variety of mineral resources, although some resources and activities are exempt from its provisions, including

excavation and grading conducted for farming, construction, or recovery from flooding or other natural disasters.

SMARA provides for the evaluation of an area's mineral resources using a system of MRZ classifications that reflect the known or inferred presence and significance of a given mineral resource, as discussed above.

Although the State of California is responsible for identifying areas containing mineral resources, the county or city is responsible for SMARA implementation and enforcement by providing annual mining inspection reports and coordinating with the California Geological Survey.

Mining activities that disturb more than 1 acre or 1,000 cubic yards of material require a SMARA permit from the lead agency, which is the county, city, or board that is responsible for ensuring that adverse environmental effects of mining are prevented or minimized. The lead agency establishes its own local regulations and requires a mining applicant to obtain a surface mining permit, submit a reclamation plan, and provide financial assurances, pursuant to SMARA.

Certain mining activities do not require a permit, such as excavation related to farming, grading related to restoring the site of a natural disaster, and grading related to construction.

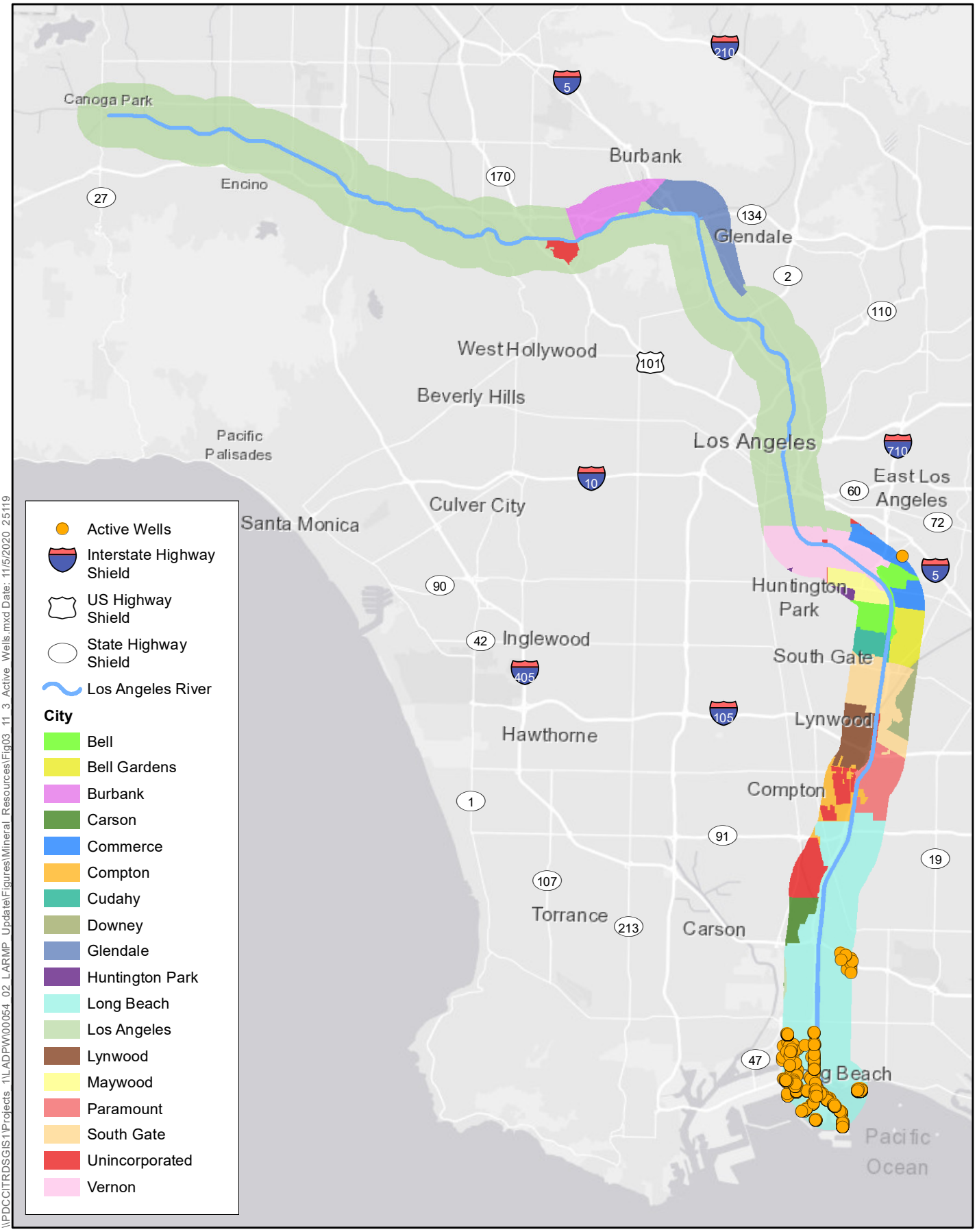
Mineral Resources and Mineral Hazards Mapping Program

The CGS provides geologic expertise and information about California's diverse non-fuel mineral resources. As required by the SMARA of 1975, the State Geologist classifies these resources in an effort to locate economically significant mineral deposits and potential areas of deposits based upon scientific data. Information relating to California's non-fuel resources, naturally occurring mineral hazards, and active and historic mining activities are collected to classify land under the Mineral Resources and Mineral Hazards Mapping Program. As described above, the CGS defines several geographic areas that collectively cover a single mineral classification study as P-C Regions. The CGS identifies MRZs for each P-C Region, mine/quarry, or other geographic area included in a mineral classification study. MRZs are areas classified by the presence or absence of significant sand, gravel, or stone deposits which are suitable as sources of aggregate. Construction aggregate is California's primary mineral resource.

California Department of Conservation

The California Department of Conservation is the primary agency with regard to mineral resource protection. The Department is charged with conserving earth resources (PRC §§ 600–690) and has five program divisions that address mineral resource issues:

1. Division of Land Resource Protection (DLRP) – supports a number of programs designed to promote orderly growth in coordination with agricultural endeavors.
2. California Geological Survey (CGS) – provides scientific products and services about the State's geology, seismology and mineral resources. They also provide the SMARA Land Classification maps.
3. Geologic Energy Management Division (CalGem) – provides regulatory programs that emphasize the wise development of oil, natural gas, and geothermal resources. They also provide well location and production data.

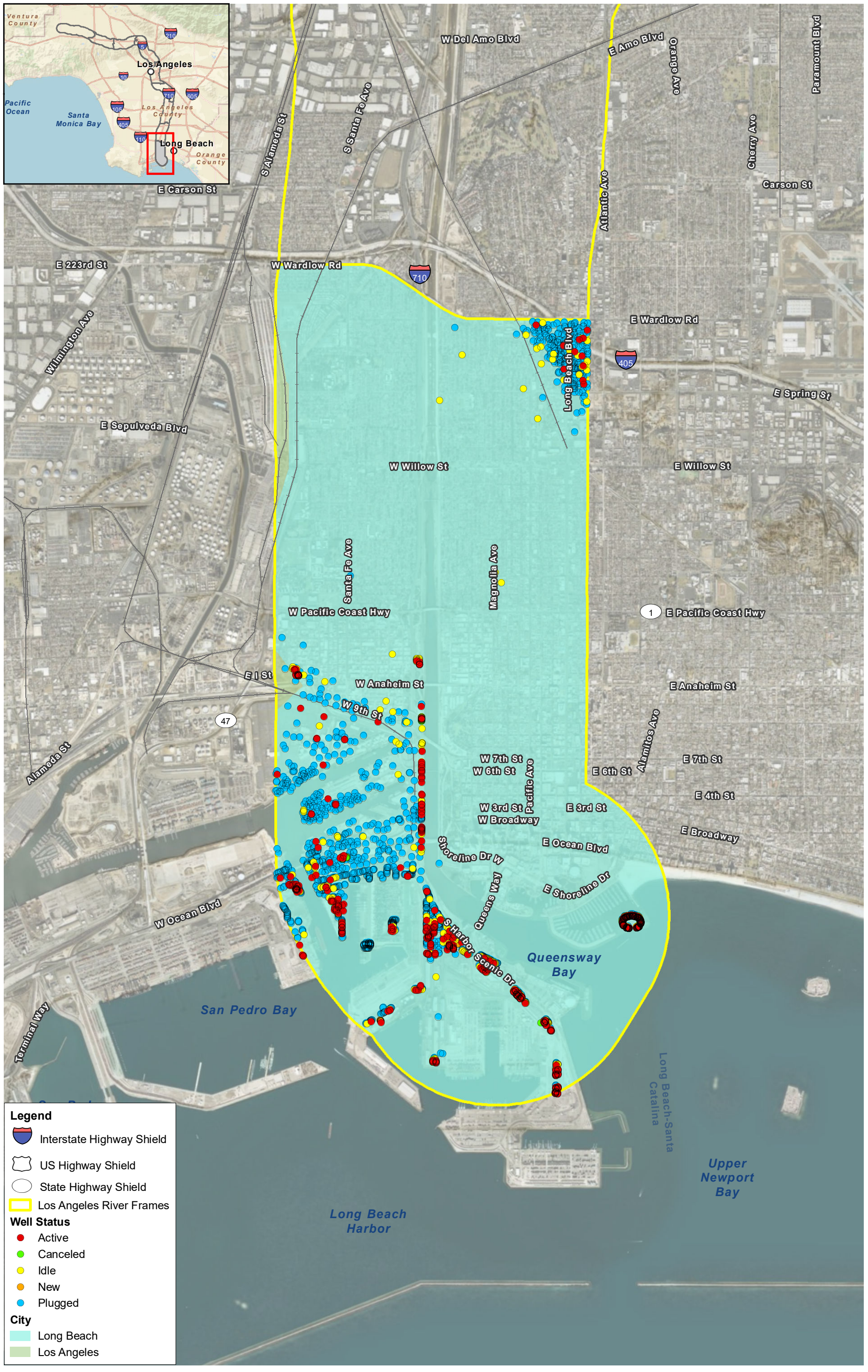


\\PDCCITRDSGIS1\Projects 1\LADPW\00054 02 LARMP Update\Figures\Mineral Resources\Fig03 11 3 Active Wells.mxd Date: 11/5/2020 25119

Source: California Department of Conservation; Los Angeles County; ESRI StreetMap
Map Prepared: 11/5/2020

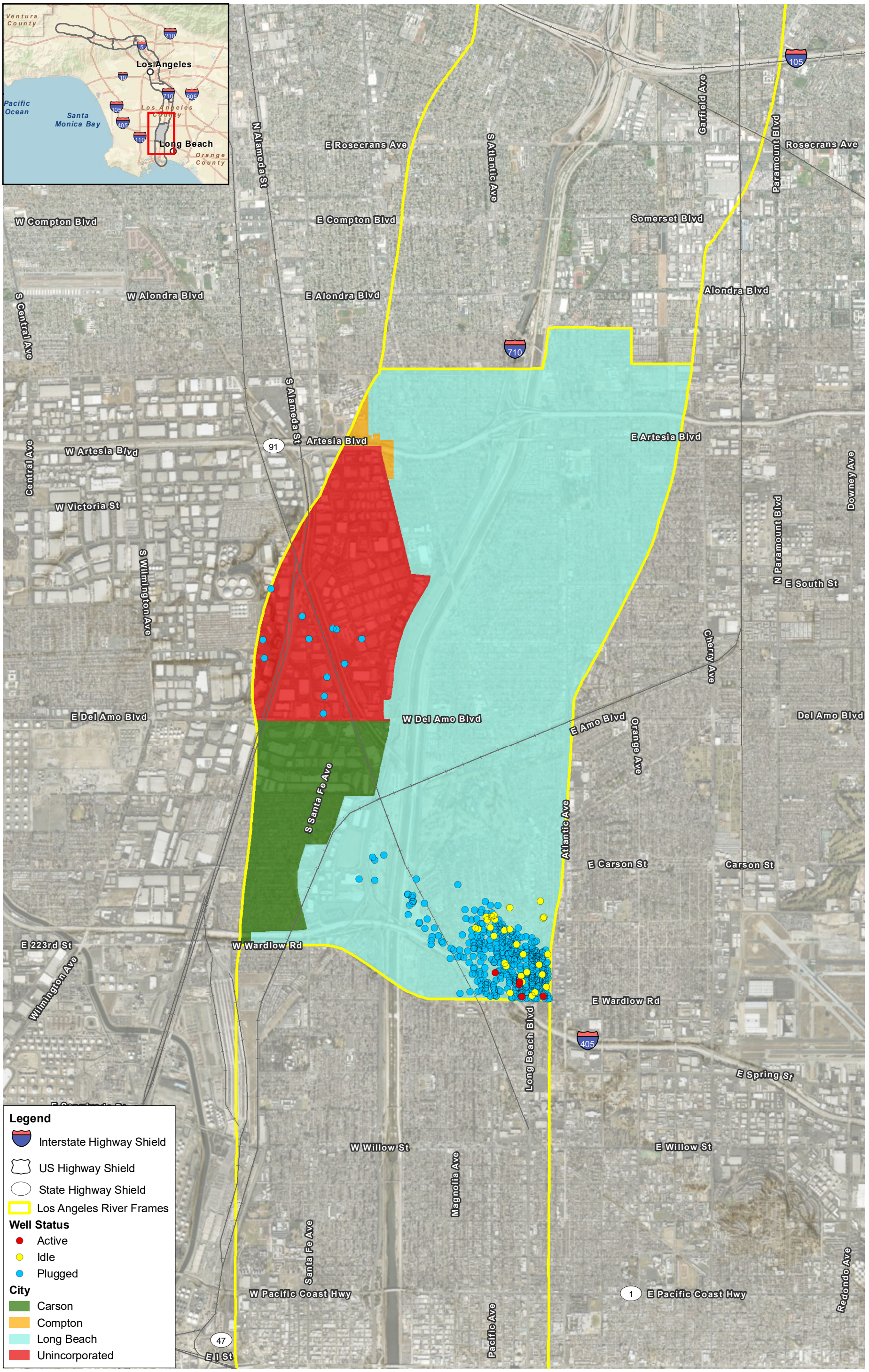
N 0 1 2 4
Miles

Figure 3.11-3
Active Wells in the Project Study Area



Source: County of Los Angeles; ESRI

Figure 3.11-4
Oil and Gas Wells within Frame 1



0 1,625 3,250 Feet
1:39,000

N

Source: County of Los Angeles; ESRI

Figure 3.11-5
Oil and Gas Wells within Frame 2

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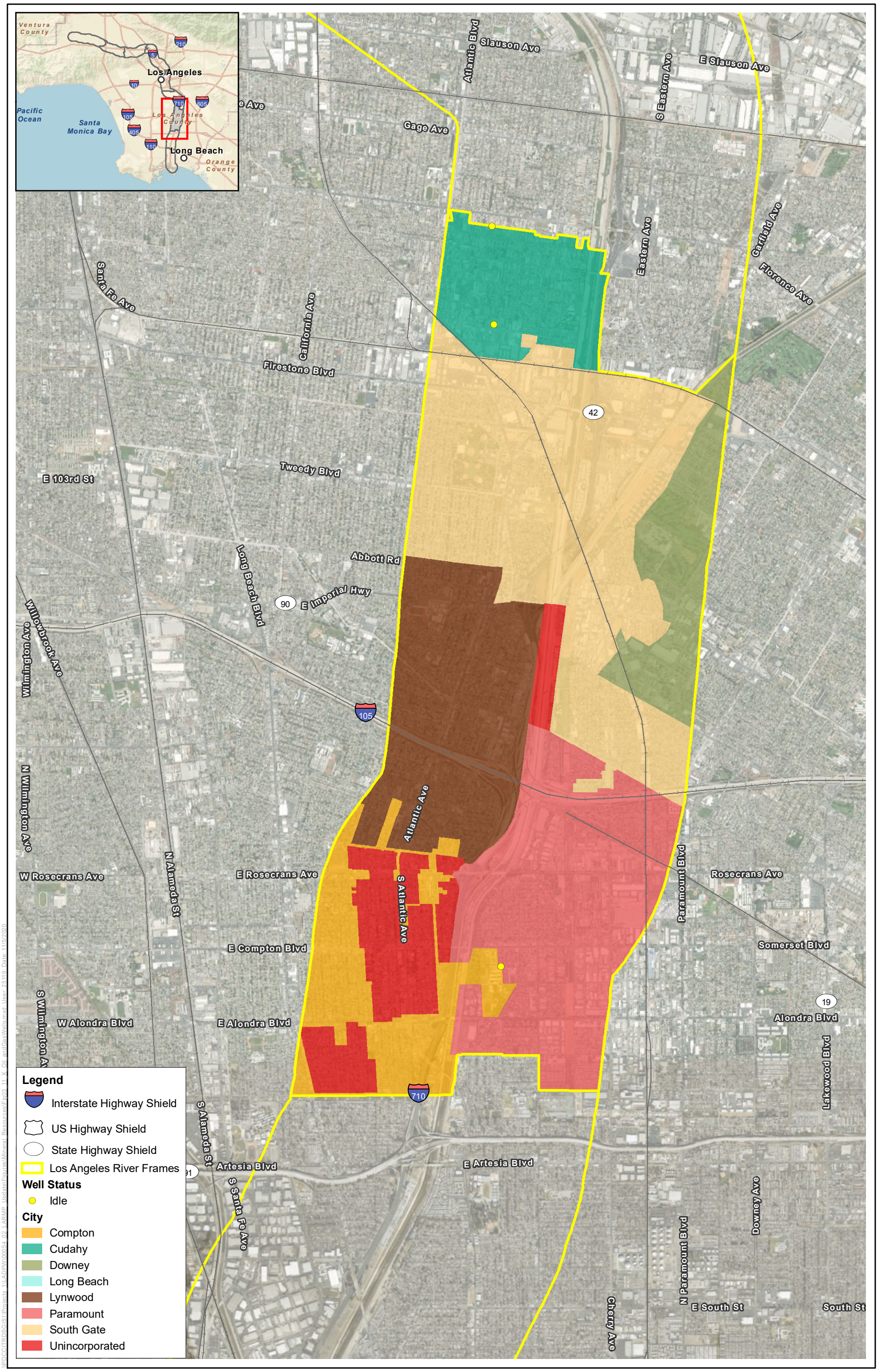
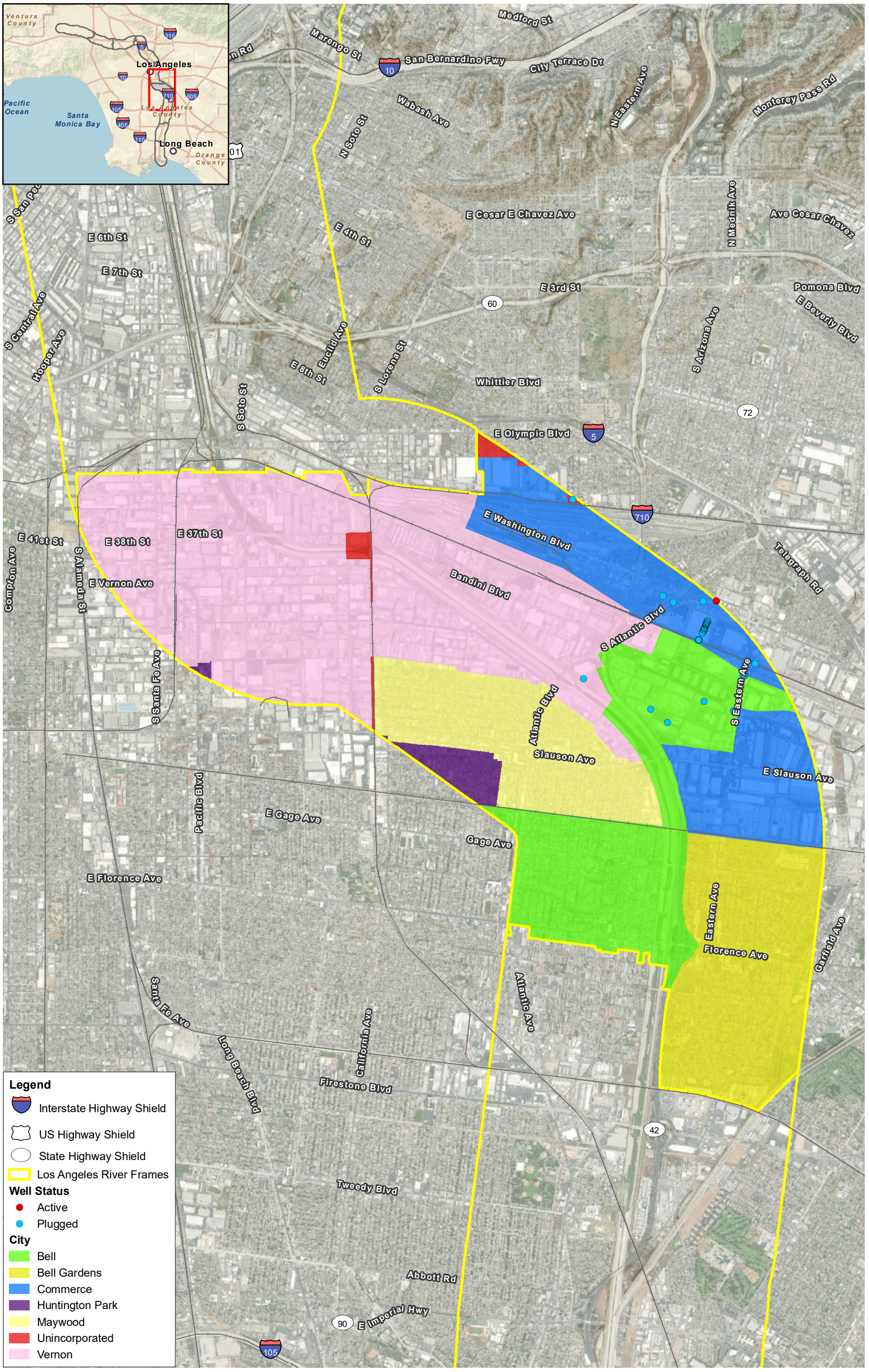


Source: County of Los Angeles; ESRI

Figure 3.11-6
Oil and Gas Wells within Frame 3



0 1,625 3,250 Feet

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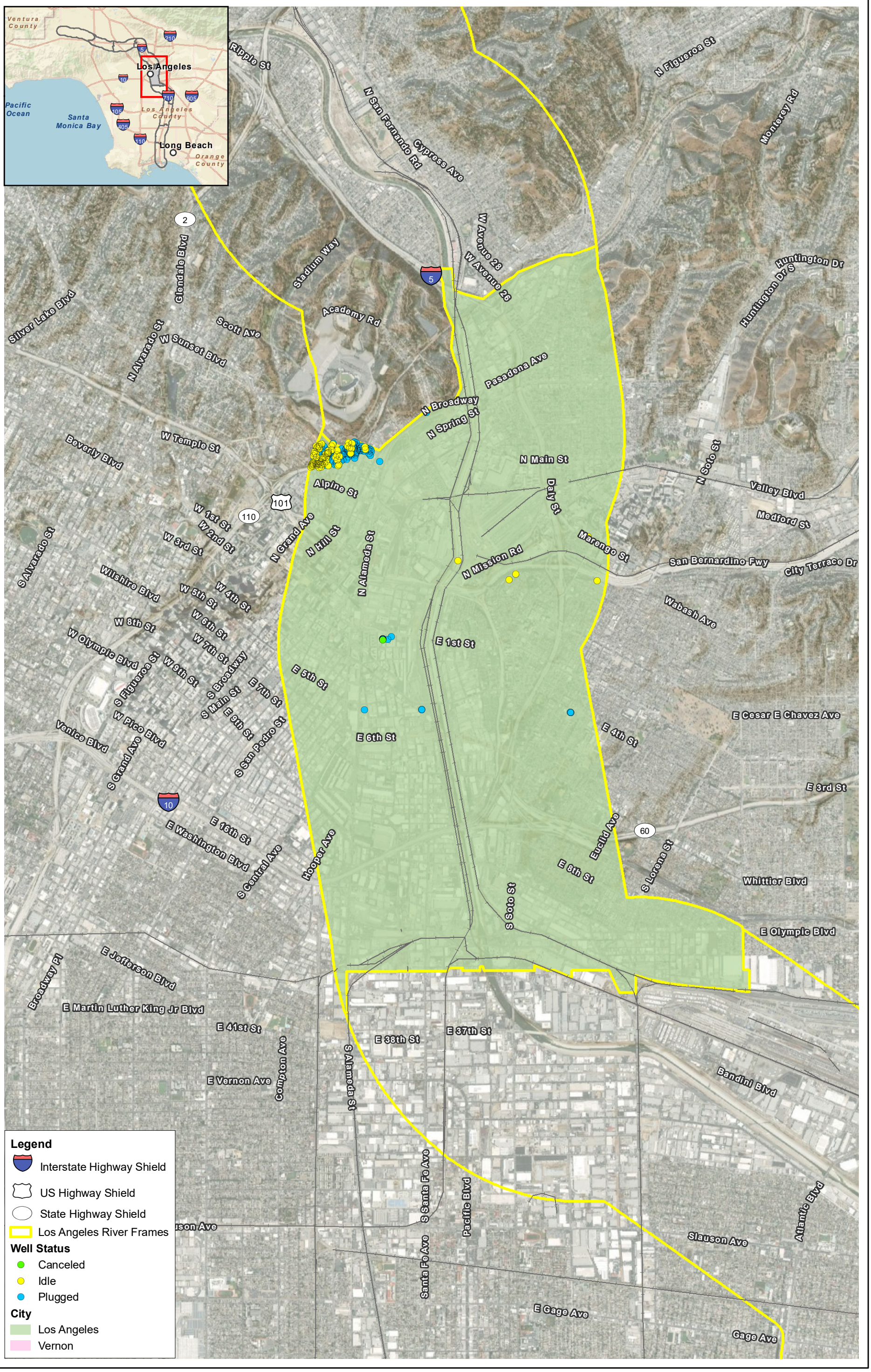
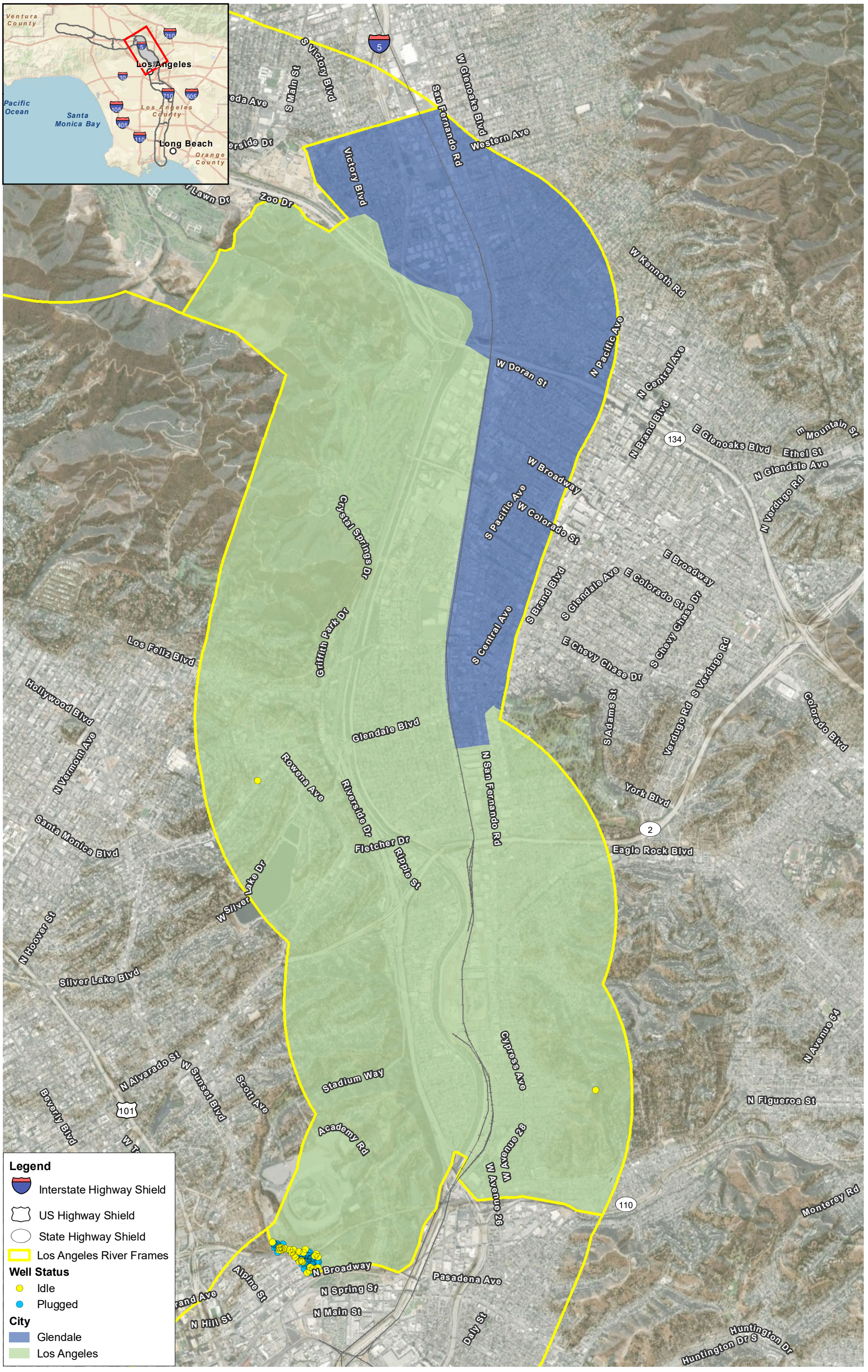
Source: County of Los Angeles; ESRI

Figure 3.11-7
Oil and Gas Wells within Frame 4



Source: County of Los Angeles; ESRI

Figure 3.11-8
Oil and Gas Wells within Frame 5



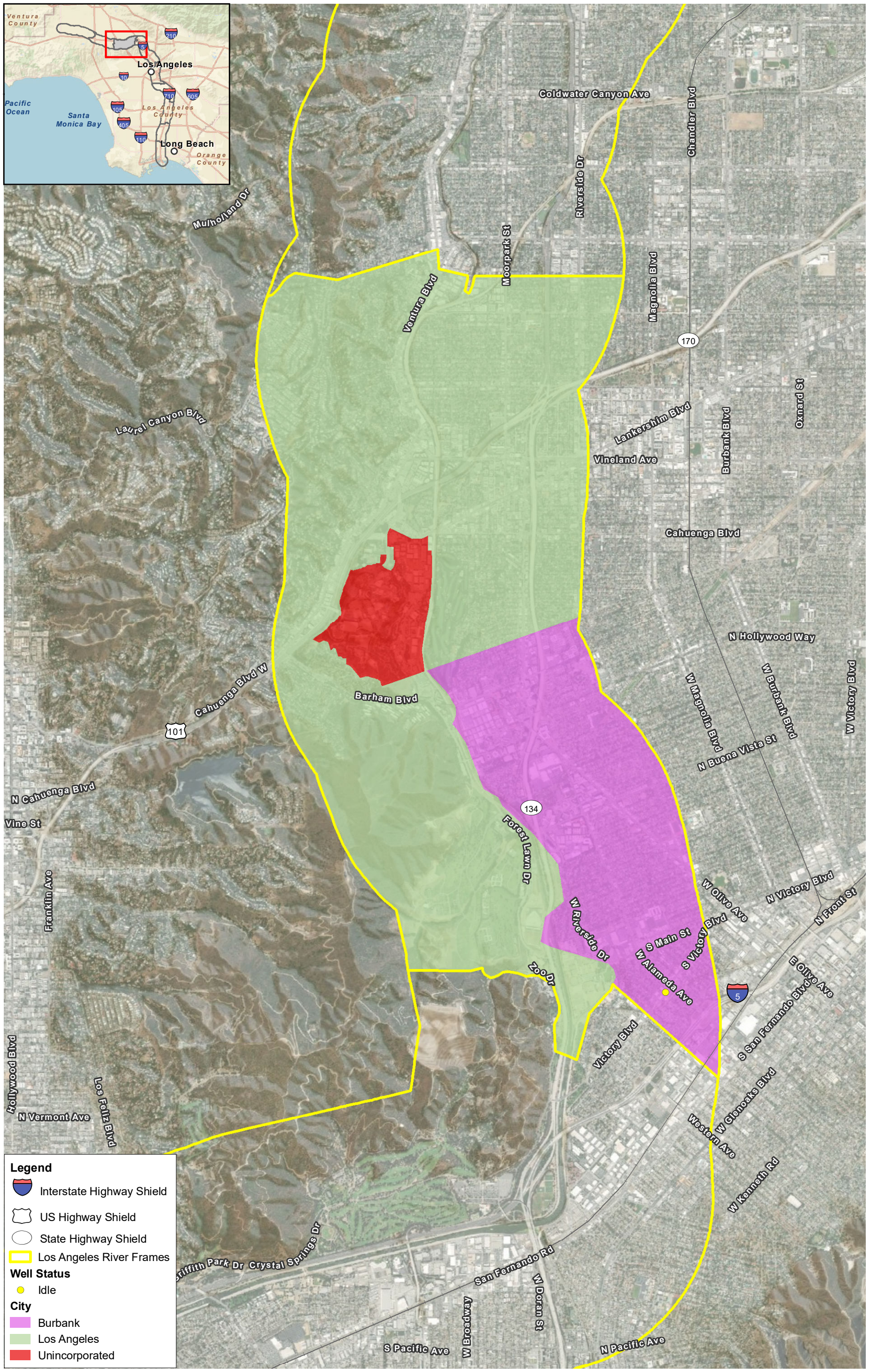
0 1,625 3,250 Feet

1:39,000

N

Source: County of Los Angeles; ESRI

Figure 3.11-9
Oil and Gas Wells within Frame 6



0 1,625 3,250 Feet

1:39,000

N

Source: County of Los Angeles; ESRI

Figure 3.11-10
Oil and Gas Wells within Frame 7

4. Division of Mine Reclamation (DMR) – provides oversight of local governments as they administer SMARA within their respective jurisdictions. The primary focus is on existing mining operations and the return of those mined lands to a usable and safe condition.
5. State Mining and Geology Board (SMGB) – develops policy direct regarding the development and conservation of mineral resources and reclamation of mined lands.

CalGem Regulations

The California Geologic Energy Management Division (CalGEM) prioritizes protecting public health, safety, and the environment in its oversight of the oil, natural gas, and geothermal industries, while working to help California achieve its climate change and clean energy goals. Formerly known as Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR), CalGem was formed in 1915 to implement regulations in the California PRC and California Code of Regulations that pertain to the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells (California PRC §§ 2710–2719 and CCR § 3704.1).

Local

Local jurisdictions and unincorporated County area regulations containing policies regarding mineral resources are discussed below.

City of Long Beach

City of Long Beach Municipal Code

The Long Beach Municipal Code (LBMC) was codified through Ordinance No. ORD-19-0001, enacted January 8, 2019, first adopted December 14, 2010 (ORD-10-0037). Title 12, Long Beach Oil Code (ORD-16-0027), regulates, "the drilling and redrilling for and the production of petroleum so that these activities may be conducted in conformance with the California Fire Code adopted in Chapter 18.48, State statutes, regulations of DOGGR, in harmony with other City land uses, and to minimize the economic effect of lessening land values in areas wherein drilling and redrilling for the production of petroleum constitutes an activity which is at variance with the predominate land use" (City of Long Beach 2019). Chapter 12.26 specifically discusses natural gas-related activities. The management of oil activities in the Port is the responsibility of the Long Beach Energy Resources Department (LBER); Port policies governing oil production within the Harbor District are set forth in the Long Beach City Charter, Sections 1203c and 1203d. The Port has an Memorandum of Understanding (MOU) with LBER, approved in 1992 and amended in 2004, that provides guidelines for ongoing oil operations within the Harbor District.

Long Beach General Plan Program

The *Long Beach General Plan Program, Conservation Element* identifies goals to preserve natural resources and areas of special interest in Long Beach (City of Long Beach 1973). According to the General Plan, oil and gas extraction are recognized as being of economic value to the City of Long Beach. Goals and policies relevant to this PEIR are listed below:

Conservation Element

Mineral Resources

Goal 1: To manage the petroleum resources of the City in a manner that will not only maximize their economic value but will enhance the quality of open space.

Goal 2: To continue good management practices in the production of petroleum including aesthetics, ecological compatibility and other environmental aspects.

Goal 3: To continue to take restorative measures to remedy and prevent subsidence associated with oil extraction.

City of Los Angeles

City of Los Angeles General Plan

The *Conservation Element of the City of Los Angeles General Plan* sets policy direction for open space resources, including mineral production, in the City of Los Angeles (City of Los Angeles 2001). According to this element, major local mineral resources consist of oil, rock deposits, and sand and gravel. The element's policies are based on the need to conserve natural amenities, protect against natural hazards, and meet the public's desire for open space experiences. Goals and policies relevant to this PEIR are listed below:

Conservation Element

Objective: conserve sand and gravel resources and enable appropriate, environmentally sensitive extraction of sand and gravel deposits.

- **Policy 1:** continue to implement the provisions of the California Surface Mining and Reclamation Act (PRC § 2710 et seq.) so as to establish extraction operations at appropriate sites; to minimize operation impacts on adjacent uses, ecologically important areas (e.g., the Tujunga Wash) and ground water; to protect the public health and safety; and to require appropriate restoration, reclamation and reuse of closed sites.
    - **Program 1:** administration and periodic updating of the 'G' Surface Mining District overlay zone provisions (LAMC 13.03).
- **Policy 2:** continue to encourage the reuse of sand and gravel products, such as concrete, and of alternative materials use in order to reduce the demand for extraction of natural sand and gravel.
    - **Program:** recycling of construction materials.

City of Commerce

City of Commerce General Plan

The Resource Management Element of the *City of Commerce 2020 General Plan* focuses on four key issue areas: cultural resources (historic and archaeological), ecological resources (plant and animal life), natural resources (water and minerals), and open space resources used for recreation. The following goals and policies are applicable to this PEIR

Resource Element

Policy 2.3. The city of Commerce will contact appropriate State agencies to determine whether or not the depletion of oil resources in the Bandini oilfield will create local ground subsidence problems.

City of Maywood

City of Maywood General Plan

The Conservation Element of the *City of Maywood General Plan* focuses on the protection and maintenance of the State's natural resources and prevents their wasteful exploitation and destruction (City of Maywood 2008). The following goals and polices are applicable to this PEIR.

Conservation Element

Goal 3: Provide for the proper management of natural resources both in the city and region are so that they may be protected for the benefit of present and future residents.

City of Glendale

City of Glendale General Plan

The following policies, goals and objectives located in the Open Space and Conservation Element of the *City of Glendale General Plan* are applicable to mineral resources (City of Glendale 1993).

Open Space and Conservation Element

Goal 6: Preserve and protect valuable water and mineral resources.

- **Objective 6:** Maintain current prohibition of rock, sand, gravel, and mineral extraction in designated open space areas.

Unincorporated County

Los Angeles County Code

Los Angeles County Code, Chapter 22.190 of Title 22 states:

A. The Surface Mining Permit is established to regulate surface mining and reclamation of mined lands in compliance with the Surface Mining and Reclamation Act of 1975, Division 2, Chapter 9 of the California Public Resources Code, beginning with Section 2710.

B. It is the intent in regulating surface mining activities to ensure that:

   1. The production and conservation of minerals is encouraged while addressing concerns relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment during and after mining operations;

   2. Adverse effects on the environment, including air pollution, impedance of groundwater movement and water quality degradation, damage to wildlife habitat, flooding, erosion, and excessive noise are prevented or mitigated;

   3. Mined lands are returned to a usable condition readily adaptable for alternative land uses, with no residual hazards to public health or safety; and

   4. Consistency is achieved with the mineral resources management policies of the General Plan.

Los Angeles County Building Code Section 110.4 also states that permits shall not be issued for buildings or structures regulated by this code, adjacent to or within 300 feet (91.44 m) of active, abandoned, or idle oil or gas well(s) unless provided with a methane gas protection system project sites containing or lying within 300 feet of active, abandoned or idle oil or gas wells should provide mitigation measures.

In addition, permits shall not be issued for a building or structure regulated by this code located between 25 feet and 200 feet from active, abandoned, or idle oil or gas well(s) unless designed according to the recommendations contained in a report prepared by a licensed civil engineer and approved by the building official. Permits could also be issued if all active, abandoned, or idle oil or gas well(s) between 25 feet and 200 feet from said building or structure are examined by a licensed petroleum engineer to evaluate whether, in accordance with the current rules and regulations of CalGEM, such wells are being properly operated or maintained, or are abandoned. No permits shall be issued until certification of proper operation, maintenance, or abandonment or re-abandonment, as determined by CalGEM, is submitted to the building official.

Los Angeles County General Plan

The Conservation and Open Space Element of the *Los Angeles County General Plan* sets policy direction for open space resources, including mineral production, in unincorporated County areas (County of Los Angeles 2015). According to the *Los Angeles County General Plan*, major local mineral resources consist of oil, rock deposits, and sand and gravel. The element's policies are based on the need to conserve natural amenities, protect against natural hazards, and meet the public's desire for open space experiences. Goals and policies relevant to the *2020 LA River Master Plan* are listed below:

Conservation and Open Space Element

Goal C/NR 10: Locally available mineral resources to meet the needs of construction, transportation, and industry.

Policy C/NR 10.1: Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.

Policy C/NR 10.2: Prior to permitting a use that threatens the potential to extract minerals in an identified Mineral Resource Zone, the County shall prepare a statement specifying its reasons for permitting the proposed use, and shall forward a copy to the State Geologist and the State Mining and Geology Board for review, in accordance with the PRC, as applicable.

Policy C/NR 10.3: Recognize newly identified MRZ-2s within 12 months of transmittal of information by the State Mining and Geology Board.

Policy C/NR 10.4: Work collaboratively with agencies to identify Mineral Resource Zones and to prioritize mineral land use classifications in regional efforts.

Policy C/NR 10.5: Manage mineral resources in a manner that effectively plans for access to, development, and conservation of, mineral resources for existing and future generations.

Policy C/NR 10.6: Require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality.

Policy C/NR 11.1: Require mineral resource extraction and production activities and drilling for and production of oil and natural gas to comply with County regulations and State requirements, such as SMARA, and DOGGR[1] regulations.

[1] Housed within the Department of Conservation, CalGEM replaces the Division of Oil, Gas, and Geothermal Resources (DOGGR). The changes came as a result of AB 1057 which was signed by Governor Newsom in October 2019.

Other Local Jurisdictions

Other local jurisdictions located within the frames where MRZ-2 occurs (Cities of Compton, Carson, Paramount, Lynwood, Downey, South Gate, Cudahy, Bell, Bell Gardens, Commerce, Huntington Park, Vernon, Glendale, and Burbank) do not have any regulations or general plan goals and policies related to mineral resources.

3.11.3 Impact Analysis

3.11.3.1 Methods

This section describes the methods used to analyze impacts on mineral resources from implementation of the *2020 LA River Master Plan*. The 51-mile-long and 2-mile-wide study area is used to analyze impacts extending belowground to the maximum depth of disturbance that could be encountered during construction or operation. Impacts were based on the potential for the proposed project components to limit access to important mineral resources, as identified in MRZs or oil fields, thereby resulting in the loss of or inability to recover such resources for economic purposes. Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories, and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.11.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.11(a) and (b) Result in the loss of availability of a known mineral resource or mineral resource recovery delineated on a local general plan, specific plan, or other land use plan site that would be of value to the region and the residents of the State.

3.11.3.3 Impacts and Mitigation Measures

Impact 3.11(a) and (b): Would the proposed Project result in the loss of availability of a known mineral resource or mineral resource recovery delineated on a local general plan, specific plan, or other land use plan site that would be of value to the region and the residents of the State?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways Typical Projects

Construction and Operation

Non-fuel Mineral Resources—Frames 1, 2, 3, 8, and 9

No regionally or statewide significant non-fuel mineral resources are located within Frames 1, 2, 3, 8, or 9. Construction and operation of Common Elements and Multi-Use Trails and Access Gateways Typical Projects in these frames would not result in the loss of availability of a significant non-fuel mineral resource, and no impact to non-fuel mineral resources would occur in these frames.

Non-fuel Mineral Resources—Frames 4, 5, 6, and 7

As discussed in Section 3.11.2, *Setting*, the project study area contains areas identified as MRZ-2, which are zones that include known mineral deposits or where there is a high likelihood for their presence. As shown on Figure 3.11-1, identified mineral resources located in the project study area are only found in Frames 4, 5, 6, and 7.

The primary cause for loss of availability of mineral resources in the County is by placement of incompatible land uses that either directly or indirectly make the resource inaccessible for future extraction. Mining operations require an adequate setback from these land uses due to a variety of environmental issues associated with mining activities, which include, but are not limited to, noise, traffic, air quality, and visual resources impacts. At the State level, SMARA establishes policies for conservation and development of mineral-containing lands. SMARA requires all cities and counties to incorporate their policies and mapped MRZ into their general plans.

At the local level, the County screens development projects for the potential loss of availability of mineral resources using MRZ classification data within the County GIS mapping applications. Mineral resource potential is evaluated for project sites, and land use compatibility is reviewed for sites on or near an important MRZ.

Construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would include site preparation and grading. Depending on where Common Elements and Multi-Use Trails and Access Gateways Typical Projects are sited, ground-disturbing activities could uncover or affect mineral resources. Much of the MRZ-2 mapped area for sand and gravel in the County was developed prior to the MRZ-2 classification and mapping, so it is already unavailable for future extraction. Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be predominately constructed within areas that are already urbanized and disturbed and would therefore not be available for mineral resource activities. Operations of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would involve general recreational uses, as well as operational uses of pavilions, cafes, hygiene facilities, restrooms, benches, emergency call

boxes, water fountains, trash and recycling, bike racks, and trails. Consequently, the likelihood of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects resulting in the loss of non-fuel mineral resources classified MRZ-2 is minimal, and less than significant impacts on non-fuel mineral resources are expected.

Oil Resources—Frames 4 through 9

No regionally or statewide significant fuel mineral resources are located within Frames 4 through 9. Construction and operation of Common Elements and Multi-Use Trails and Access Gateways Typical Projects would not result in the loss of availability of a significant fuel mineral resource in these frames, and no significant impact to fuel mineral resources would occur.

Oil Resources—Frame 1, 2, and 3

As shown on Figure 3.11-3 and Figure 3.11-4, active wells are located in Frames 1, 2, and 3 of the project study area, within the Cities of Los Angeles, Long Beach, and Commerce. Construction and operations of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be required to comply with the County of Los Angeles Building Code, if located on County owned land, which does not allow development to be constructed adjacent to or within 300 feet of active, abandoned, or idle oil or gas well(s). In any case, the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would need to comply with local and County general plan zoning restrictions. Compliance with local general plans and the *Los Angeles County General Plan* would ensure that impacts on mineral resources would be less than significant. Jurisdictions that do not contain policies regarding mineral resources in their general plan have determined these areas are fully built-up (i.e. land is fully developed with no potential for extraction), and the applicable general plans do not provide for extraction. There are limited available natural resources within built-out urban communities. Compliance with local general plans and the *Los Angeles County General Plan* would ensure that impacts on mineral resources would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction and Operation

Under the *2020 LA River Master Plan*, the multi-benefit design components of the KOP can be implemented individually or in combination with other design components as subsequent projects under the *2020 LA River Master Plan*. The specific location (e.g., in-channel/off-channel, frame, etc.), configuration, and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing agency, community needs, policy

decisions, and availability of funding. Once site-specific and project-specific details are available for the subsequent projects informed by the multi-benefit design components of the six KOP categories, additional CEQA analysis would be required before subsequent projects can be implemented.

Potential impacts from construction of the design components under KOP Category 1 through KOP Category 6 would vary depending on the specific design component and its intended function. Projects under the KOPs would likely be larger than Typical Projects.

Non-fuel Mineral Resources—Frames 1, 2, 3, 8, and 9

No regionally or statewide significant non-fuel mineral resources are located within Frames 1, 2, 3, 8, or 9. Construction and operation of KOP categories would not result in the loss of availability of a significant non-fuel mineral resource in these frames, and no significant impact to non-fuel mineral resources would occur.

Non-fuel Mineral Resources—Frames 4, 5, 6, and 7

KOP design components that could affect significant mineral resources, depending on where they are sited, include construction of channel modification facilities and associated facilities from the Channel Modification KOP; new structures associated with water diversion from the Diversion KOP; new wells and associated infrastructure and, new solar projects from the Off-Channel Land Assets KOP; and grading and excavation associated with habitat enhancement, management and monitoring. These activities could result in a loss of availability by limiting access to or preventing future development of mineral resources.

As stated above, much of the MRZ-2 mapped area for sand and gravel in Los Angeles County was developed prior to the MRZ-2 classification and mapping, so it is already unavailable for future extraction. Subsequent projects under the KOP categories would be predominately constructed within areas that are already urbanized and disturbed and would therefore not be available for mineral resource activities. For construction and operation of subsequent projects located in-channel (bank to bank), in light of the existing predominately concrete lined river channel, the loss of aggregate in the MRZ-2 area is remote. Although the abundance of similar materials in the County of Los Angeles and the surrounding vicinity, there is a potential for the KOP categories to be implemented within MRZ-2 and potentially result in the loss of availability of a known and/or locally important mineral resource.

Construction and operation of KOP categories are required to comply with the SMARA policies for conservation and development of mineral-containing land, *Los Angeles County General Plan* in unincorporated County areas, and local jurisdiction's general plans in incorporated cities, which requires maintained access to mineral deposits for extraction. However, because the exact locations of project sites are unknown at this time, mitigation is required to ensure impacts are less than significant.

Oil Resources—Frames 4 through 9

No regionally or statewide significant fuel mineral resources are located within Frames 4 through 9. Construction and operation of KOP categories would not result in the loss of availability of a significant fuel mineral resource in these frames, and no significant impact to fuel mineral resources would occur.

Oil Resources—Frame 1, 2, and 3

As shown on Figure 3.11-3 and Figure 3.11-4, 830 active oil and gas wells are located within Frames 1, 2, and 3 of the project study area. As seen in the detailed figures, active oil and gas wells in the 2-mile-wide study area are found in Long Beach and Commerce. Construction and operations of the KOP categories would be required to comply with the County of Los Angeles Building Code when constructed on County-owned land, which does not allow development to be constructed adjacent to or within 300 feet of active, abandoned, or idle oil or gas well(s). Construction and operation of KOP categories would be required to comply with the *Los Angeles County General Plan* in unincorporated County areas and local general plans when located in incorporated cities, which require maintained access to mineral deposits for extraction and preservation of mineral resources. Compliance with local general plans and the *Los Angeles County General Plan* would ensure that impacts on mineral resources would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

The *2020 LA River Master Plan* would involve construction of 107 projects, including recreational facilities, that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel), configuration, and design for these components have not been determined yet and would depend on numerous factors, including the project proponent(s) and availability of funding. Construction and operation of projects under the *2020 LA River Master Plan* could result in impacts similar to those described above for the Typical Projects and KOP categories.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on mineral resources is the County, which contains the 51-mile long and 2-mile wide Project study area. As noted, major local mineral

resources in the County consist of oil, rock deposits, and sand and gravel. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on mineral resources, if, in combination with other projects within the defined geographic context, it would result in the loss of availability of a known mineral resource or mineral resource recovery delineated on a local general plan, specific plan, or other land use plan site that would be of value to the region and the residents of the State.

Cumulative Condition

Important local mineral resources include construction materials and minerals of historical significance, including precious gemstones and metals. Aggregate resources include rock, sand, and gravel, which are important for the construction and manufacturing of concrete. Further urbanization in the County could result in development on lands containing aggregate resources. Significant potential deposit sites have been identified by the State Geologist along the floodplain from the San Fernando Valley through downtown Los Angeles. Development generally results in a demand for minerals, especially construction aggregate. As noted, the general plans of the Cities of Long Beach, Los Angeles, Maywood, Commerce, and Glendale contain policies that relate to mineral and gas resources. These goals and policies provide for conservation and maintenance of mineral resource lands. Development in these jurisdictions would be expected to be consistent with these goals and policies. The remaining jurisdictions have no goals and policies pertaining to mineral resources, as they do not contain significant sources of aggregate minerals or oil and gas.

California is the largest producer of sand and gravel in the nation, and the greater Los Angeles area is the nation's leading producer for its geographical size. The County has high quantities of sand and gravel, which are located close to the market. Sand and gravel deposits follow the LA River flood plain, coastal plain, and other water bodies and courses. As noted, above, the primary cause for loss of availability of mineral resources in the County is by placement of incompatible land uses that either directly or indirectly make the resource inaccessible for future extraction. Mining operations require an adequate setback from these land uses due to a variety of environmental issues associated with mining activities, which include, but are not limited to, noise, traffic, air quality, and visual resources impacts. Future development in areas containing mineral and oil and gas resources would be consistent with applicable general plan policies concerning conservation of these natural resources. At the local level, the County screens development projects for the potential loss of availability of mineral resources using MRZ classification data within the County GIS mapping applications. Existing policies would prevent incompatible development adjacent to mineral resource sites that could impair extraction or redevelopment of productive mineral resource sites. Because of these policies and screening procedures, there is no cumulative condition relative to mineral resources in the County.

Contribution of the Project to Cumulative Impacts

The proposed Project would result in less-than-significant impacts with regard to mineral resources. As there is no cumulative condition relative to mineral resources, the proposed Project would not make a cumulatively considerable contribution to mineral resource impacts.

Section 3.12
Noise

3.12.1 Introduction

This section describes the geographic and regulatory setting for noise, discusses noise impacts that would result from the *2020 LA River Master Plan* and its elements, determines the significance of impacts, and identifies mitigation measures that would reduce or avoid significant impacts, where feasible.

As described in Chapter 2, *Project Description,* the study area passes through the jurisdiction of the unincorporated County and 17 different cities along the LA River's 51-mile journey from the Santa Susana Mountains to the Pacific Ocean in Long Beach and is divided into a series of nine distinct geographical sections, or planning frames, related to jurisdictional, hydraulic, and ecological zones. Each of these 18 jurisdictions has promulgated guidance (discussed below) to regulate noise within its specific jurisdiction. The existing noise environment and project-related noise contributions are discussed as they relate to land uses located within these frames and jurisdictions.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.12.1.1 Noise Fundamentals

Noise is commonly defined as unwanted sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is often defined as sound that is objectionable because it is disturbing or annoying.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor.

Technical acoustical terms used in this section are defined in Table 3.12-1.

Table 3.12-1. Definitions of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound equal to 20 times the logarithm to base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micropascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals in air). Sound pressure level is the quantity that is measured directly by a sound level meter.
Frequency (Hertz [Hz])	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz, and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA L_{eq}[h].
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, which is obtained by adding 5 dB to sound levels in the evening from 7 p.m. to 10 p.m. and 10 dB to sound levels between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, which is obtained by adding 10 dB to sound levels measured at night between 10 p.m. and 7 a.m.
L_2, L_8, L_{25}. L_{50}, $L_{90,}$ L_{99}	A-weighted noise levels that are exceeded 2%, 8%, 25%, 50%,90%, and 99% of the time during the measurement period.
Maximum Sound Level (L_{max})	The maximum sound level measured during the measurement period.
Minimum Sound Level (L_{min})	The minimum sound level measured during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.

Sound Descriptors

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micropascals (µPa). One µPa is approximately one hundred-billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this large range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe the sound pressure level (also referred to simply as the sound level) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on human sensitivity to those frequencies. The A-weighted sound level (expressed in units of dBA) can be computed on the basis of this information.

The A-weighting scale approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Table 3.12-2 describes typical A-weighted sound levels for various noise sources.

Table 3.12-2. Typical A-Weighted Sound Levels

Common Outdoor Noise Source	Sound Level (dBA)	Common Indoor Noise Source
	— 110 —	Rock band
Jet flying at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library

Common Outdoor Noise Source	Sound Level (dBA)	Common Indoor Noise Source
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013a.

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one excavator produces a sound pressure level of 80 dBA, two excavators would not produce 160 dBA. Rather, they would combine to produce 83 dBA. The cumulative sound level of any number of sources, such as excavators, can be determined using decibel addition.

Noise Descriptors

Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations is utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. A common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration. The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within approximately plus or minus 1 dBA. Two metrics describe the 24-hour average: day/night noise level (L_{dn}) and Community Noise Equivalent Level (CNEL) (defined in Table 3.12-1). Both include penalties for noise during nighttime hours; CNEL also penalizes noise during the evening. CNEL and L_{dn} are normally within 1 dBA of each other and used interchangeably in this section.

Human Response to Noise

Studies have shown that under controlled conditions in an acoustics laboratory, a healthy human ear is able to discern changes in sound levels of 1 dBA. In the normal environment, the healthy human ear can detect changes of about 2 dBA; however, it is widely accepted that changes of 3 dBA in the normal environment are considered just noticeable to most people. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud. Accordingly, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) resulting in a 3-dB increase in sound would generally be barely detectable.

Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the following important factors.

Geometric Spreading

Sound from a single source (i.e., a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a "line" source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The change in sound level (i.e., attenuation) from a line source is 3 dBA per doubling of distance.

Ground Absorption

Usually the noise path between the source and the observer is very close to the ground. The excess noise attenuation from ground absorption occurs due to acoustic energy losses on sound wave reflection. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 200 feet, prediction results based on this scheme are sufficiently accurate. For acoustically "hard" sites (i.e., sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receptor), no excess ground attenuation is assumed because the sound wave is reflected without energy losses. For acoustically absorptive or "soft" sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric Effects

Research by the California Department of Transportation (Caltrans) and others has shown that atmospheric conditions can have a major effect on noise levels. Wind has been shown to be the single most important meteorological factor within approximately 500 feet, whereas vertical air temperature gradients are more important over longer distances. Other factors, such as air temperature, humidity, and turbulence, also have major effects. Receptors downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur because of temperature inversion conditions (i.e., increasing temperature with elevation, with cooler air near the surface, where the sound source tends to be and the warmer air above which acts as a cap, causing a reflection of ground level–generated sound).

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receptor, surface weight, solidity, and frequency of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor with the specific purpose of reducing noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

3.12.1.2 Groundborne Vibration Fundamentals

Groundborne vibration is an oscillatory motion of the soil with respect to the equilibrium position and can be quantified in terms of velocity or acceleration. Groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment (such as blasting and pile driving), steel-wheeled trains, and heavy trucks on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Groundborne vibration can be described in terms of peak particle velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second (in/s). For transient vibration sources (single isolated vibration events such as blasting), the human response to vibration varies from barely perceptible at a PPV of 0.04 in/s, to distinctly perceptible at a PPV of 0.25 in/s, and severe at a PPV of 2.0 in/s. For continuous or frequent intermittent vibration sources (such as impact pile driving or vibratory compaction equipment), the human response to vibration varies from barely perceptible at a PPV of 0.01 in/s, to distinctly perceptible at a PPV of 0.04 in/s, and severe at a PPV of 0.4 in/s (Caltrans 2013b). If a person is engaged in any type of physical activity, vibration tolerance increases considerably.

3.12.2 Setting

The study area is a 2-mile-wide, 51-mile-long corridor following the LA River from its headwaters in Canoga Park to the Pacific Ocean in Long Beach. The LA River is generally a concrete channel that is below grade of the surrounding land uses. The land uses within the jurisdictions along the study area range from locations that are noise sensitive such as residential, recreational, and institutional (such as schools) to non-noise sensitive such as industrial and commercial land uses. The existing measured noise environment was quantified via short- and long-term field measurements (discussed below).

3.12.2.1 Geographic

Regional Setting

The study area is regionally diverse and varied with respect to the type of land uses. Land uses along the study area range from residential (single-family and multi-family residences) land uses in the north and south to commercial, industrial, and open space throughout the middle portion of the study area. A more detailed discussion is included below. Primary existing noise sources within the study area include traffic along the local and regional roadway network, including Interstate (I-) 710, I-10, and I-5. Other existing noise sources are commercial/industrial activities and ambient noise, such as birds, trees rustling, aircraft overflights, and general neighborhood noise (e.g., children playing).

In order to quantify the existing ambient noise conditions throughout the project area, noise monitoring was conducted at 29 locations in the vicinity and along the LA River on May 13 through May 15, 2020, and June 10, 2020. Long-term (LT) noise monitoring was conducted at five locations,

designated LT1 through LT5, and short-term (ST) noise monitoring was conducted at 24 locations, designated ST1 through ST24. Ambient field measurements were taken at representative land uses with consideration given to locations that would be considered noise sensitive. All measurement locations are indicated on Figure 3.12-1. These locations were selected to document the existing noise environment. Field measurement locations were chosen to represent noise-sensitive land uses within the study area and within individual jurisdictions. The sound-level meters used for both the LT and ST noise monitoring were field calibrated, using a Larson Davis CAL200 acoustical calibrator, prior to each measurement to ensure accuracy; the calibration was also rechecked at the conclusion of each measurement. Field noise survey sheets and measurement location photos are provided in Appendix H.

Long-Term Noise Measurements

LT ambient noise measurements were conducted between May 13 and 15, 2020, at five locations near the project sites using Type 2 sound-level meters. LT measurement sites were selected to capture daily noise level patterns and statistics continuously over 1-hour intervals. Approximately 3 days of continuous data were recorded at each location. Table 3.12-3 summarizes the results of the LT noise measurements in terms of the range of daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) average (L_{eq}) and maximum noise levels (L_{max}).

Table 3.12-3. Summary of Noise Measurement Results (Long Term)[1]

Site#	Location/Frame	Start Date	Range of CNEL (dBA)	Range of Hourly L_{eq} Values (average), dBA	Range of L_{max} Values, dBA
LT1	Intersection of Valley Heart Dr and Columbus Ave/8	05/13/20	66–64	50–69	44–85
LT2	Bike path off Riverdale Ave/6	05/13/20	66	56–69	54–93
LT3	Maywood Riverfront Park/4	05/13/20	74–76	61–75	52–103
LT4	Hollydale Regional Park/3	05/13/20	63–65	51–68	59–94
LT5	Bike Path North of Ocean Blvd/1	05/13/20	71	57–72	69–99

Source: ICF field noise measurements (see Appendix H).

[1] It should be noted that field measurements were conducted during the time frame when the COVID-19 Stay-at-Home Order (Executive Order N-33-20) was in effect throughout Los Angeles County. Therefore, traffic volumes along local roadways may have been depressed.

Short-Term Noise Measurements

ST measurement locations were selected to supplement LT measurements at surrounding land uses. ST noise measurements were taken at 24 locations on Wednesday, May 13, through Friday, May 15, 2020, and June 10, 2020. All field measurements were taken with a Larson Davis Model 831 Type 1 sound-level meter. Each measurement lasted approximately 20 minutes and was conducted with the meter mounted on a tripod at a height of 5 feet above the ground, with a wind screen installed over the measurement microphone to reduce the effects of wind-related interference. Noise metrics—including L_{eq}, L_{min}, L_{max}, $L_{1.67}$, $L_{8.33}$, L_{25}, L_{50}, L_{90}, and L_{99} noise descriptors, defined in Table 3.12-1—

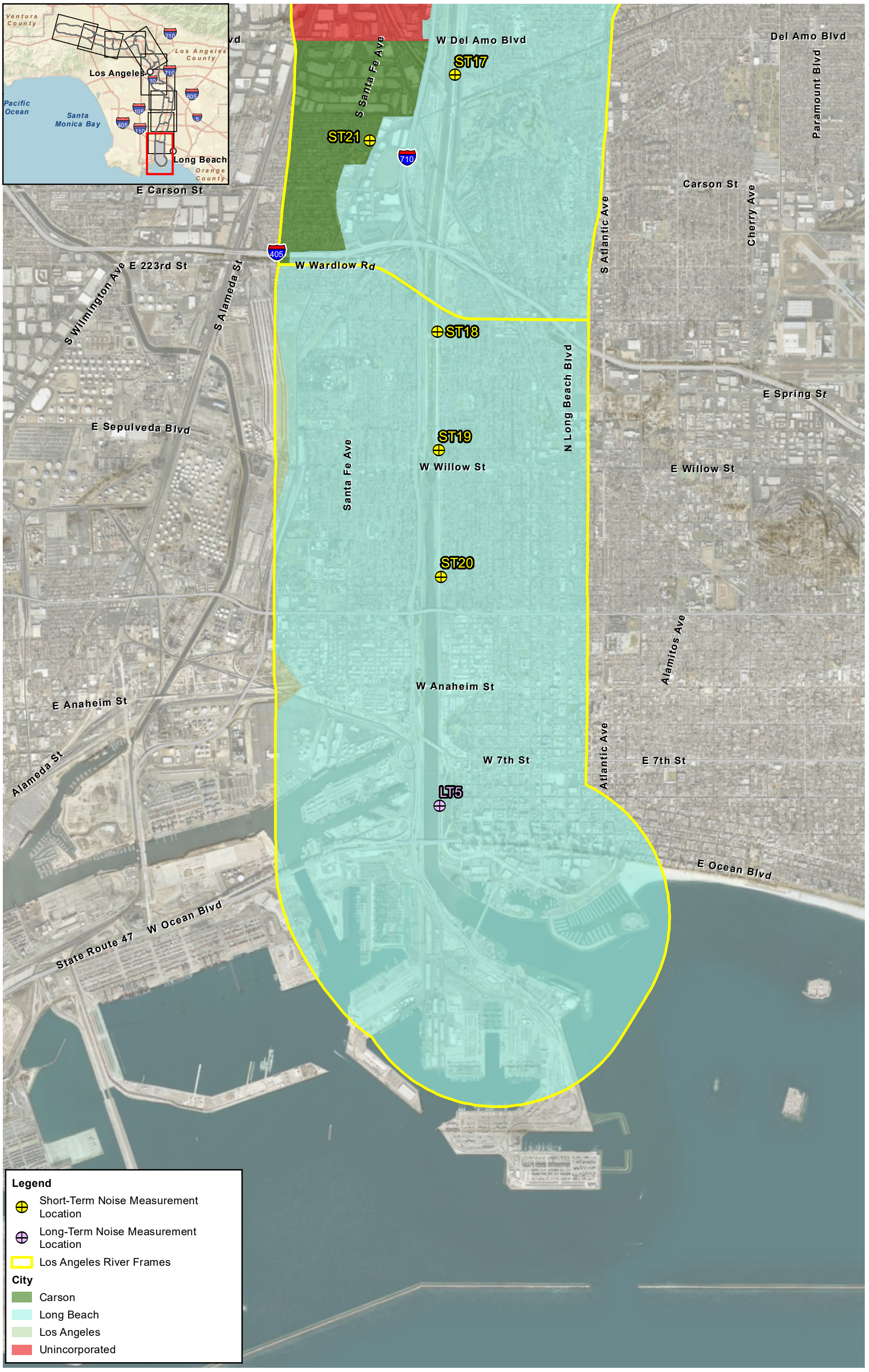
were recorded subsequent to the conclusion of each measurement. Data from the measurements are shown in Table 3.12-4.

Table 3.12-4. Summary of Noise Measurement Results (Short Term)[1]

Site#	Location/Frame	Date	Time of Day	Hourly L_{eq} Values (average), dBA	L_{max} Values, dBA
ST1	Near 6801 Delvo Avenue/9	05/14/20	08:43	57.9	68.8
ST2	Intersection of White Oak Avenue and Erwin Street/9	05/14/20	09:31	58.0	66.0
ST3	Near 4700 Tyrone Avenue/8	05/14/20	10:15	60.7	69.5
ST4	13236 Valleyheart Drive/8	05/14/20	10:58	47.4	58.1
ST5	12067 Guerin Street/8	05/14/20	12:11	54.7	70.7
ST6	Smoke House Restaurant 4420 Lakeside Dr/7	05/14/20	12:42	54.3	67.4
ST7	Betty Davis Picnic Area/6	05/14/20	13:24	64.1	68.8
ST8	Los Feliz Golf Course/6	05/14/20	14:30	64.3	73.3
ST9	Elysian Park/6	05/14/20	15:25	58.6	71.8
ST10	837 Commercial Street/5	05/14/20	16:06	56.3	71.4
ST11	5119 South Atlantic Boulevard/4	05/14/20	16:52	63.6	72.5
ST12	6303 River Drive/4	05/15/20	10:14	58.2	73.3
ST13	Thunderbird Villa Mobile Home Park/3	05/15/20	11:05	53.7	69.5
ST14	Ralph C Dills Park/3	05/15/20	12:44	51.4	60.3
ST15	E 72nd Street Parking Lot/3	05/15/20	13:33	52.2	58.6
ST16	Trail off Deforest Avenue/2	05/13/20	16:25	51.1	59.4
ST17	Bike Path off 48th Street/2	05/15/20	14:15	58.8	68.4
ST18	Bike Path near Wrigley Greenbelt/1	05/13/20	15:04	60.5	65.6
ST19	Bike Path near Deforest Avenue/1	05/13/20	14:00	60.3	69.3
ST20	End of road near 930 W 20th Street/1	05/13/20	13:06	52.2	66.5
ST21	Near Dominguez Park/2	06/10/20	10:15	53.2	70.1
ST22	Near 4827 E. Rose Street/3	06/10/20	09:33	64.6	70.8
ST23	Near 5532 Olanda Street/3	06/10/20	09:00	65.2	75.2
ST24	Near 10975 Wright Road/3	06/10/20	08:25	68.9	81.7

Source: ICF field noise measurements (see Appendix H).

[1] It should be noted that field measurements were conducted during the time frame when the COVID-19 Stay-at-Home Order (Executive Order N-33-20) was in effect throughout Los Angeles County. Therefore, traffic volumes along local roadways may have been depressed.



Source: County of Los Angeles; ESRI

Figure 3.12-1 - Frame 1
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

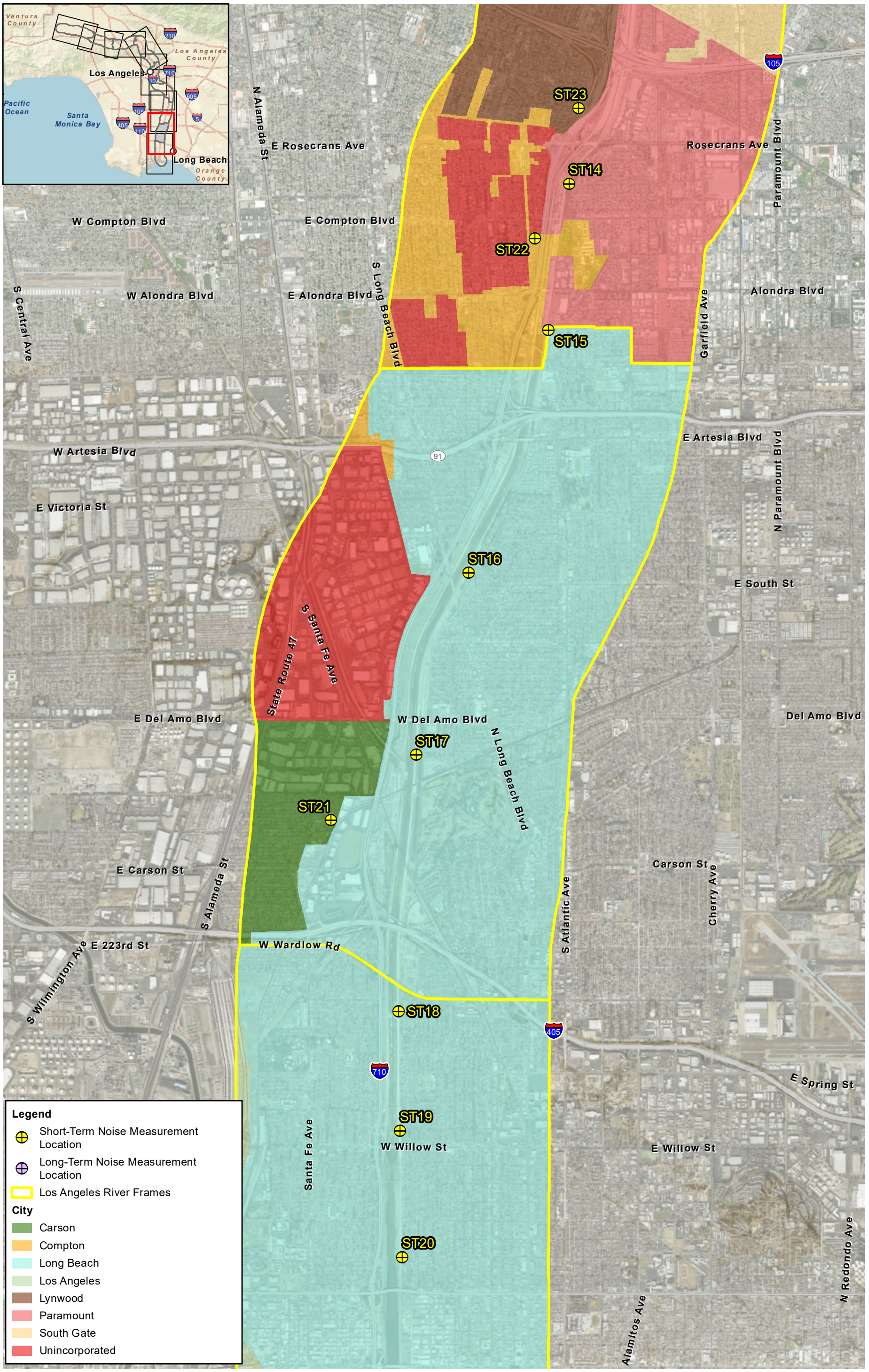


Figure 3.12-1 - Frame 2
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

Source: County of Los Angeles; ESRI

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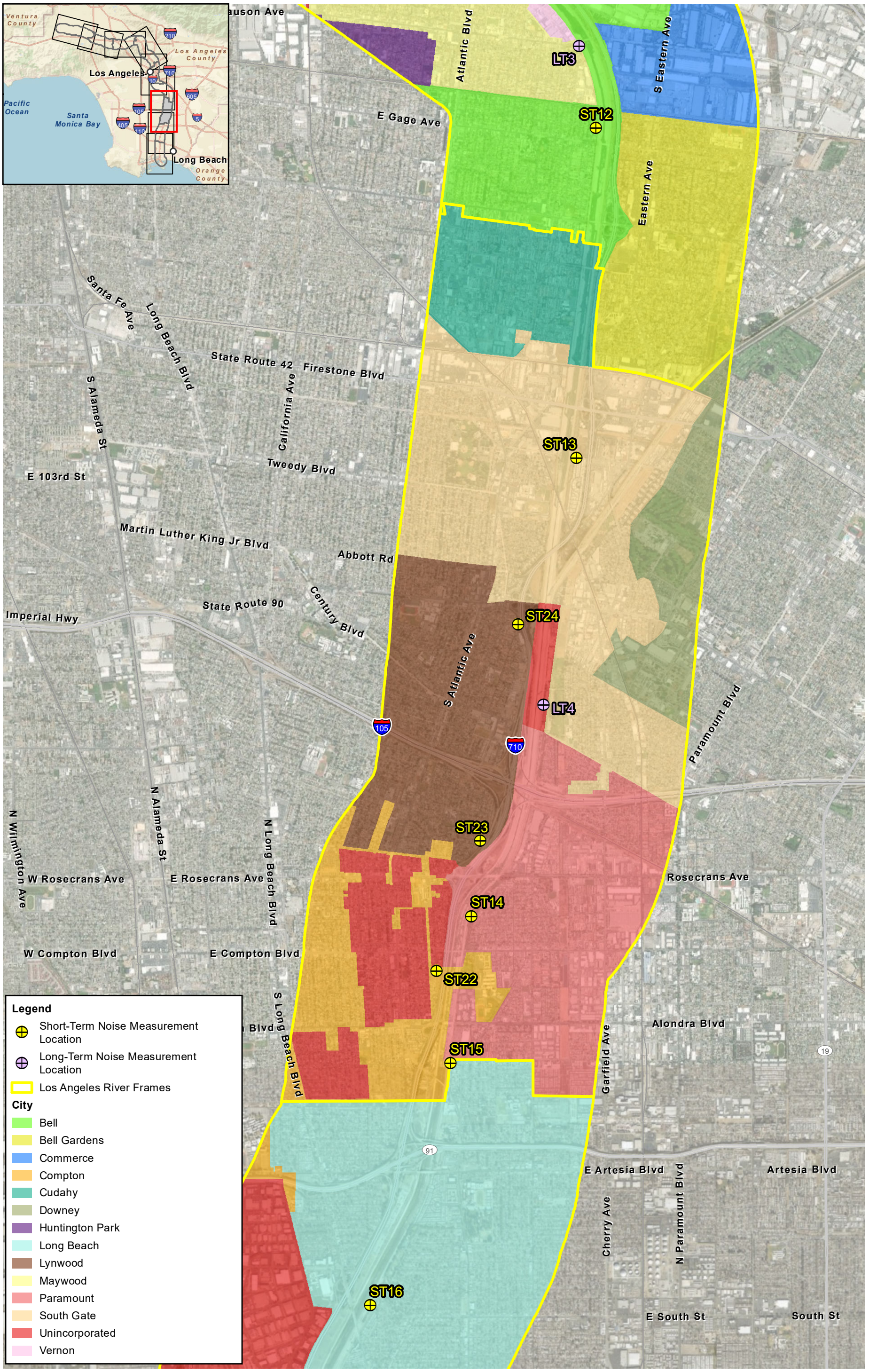

Figure 3.12-1 - Frame 3
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

Source: County of Los Angeles; ESRI

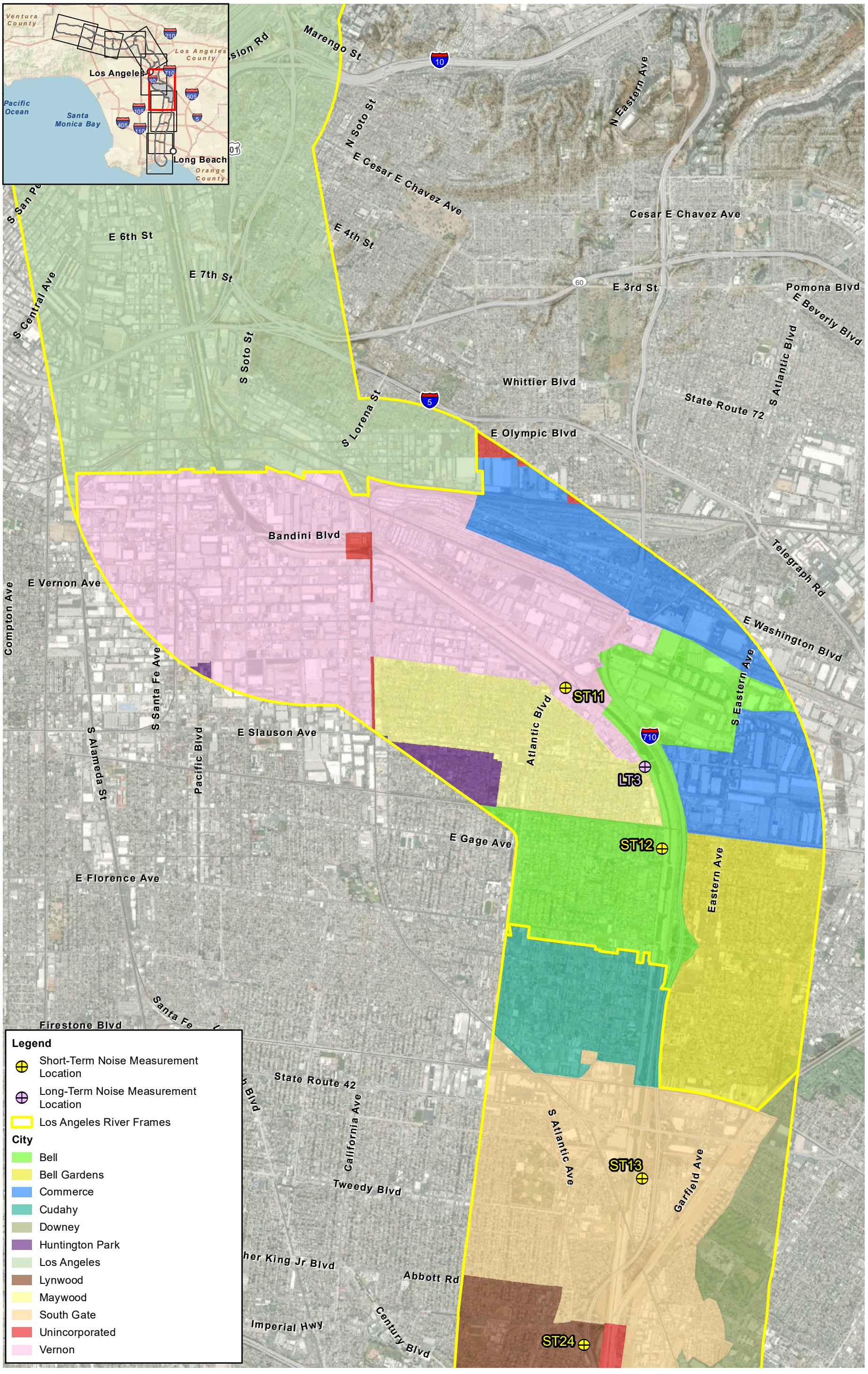

Figure 3.12-1 - Frame 4
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

Source: County of Los Angeles; ESRI

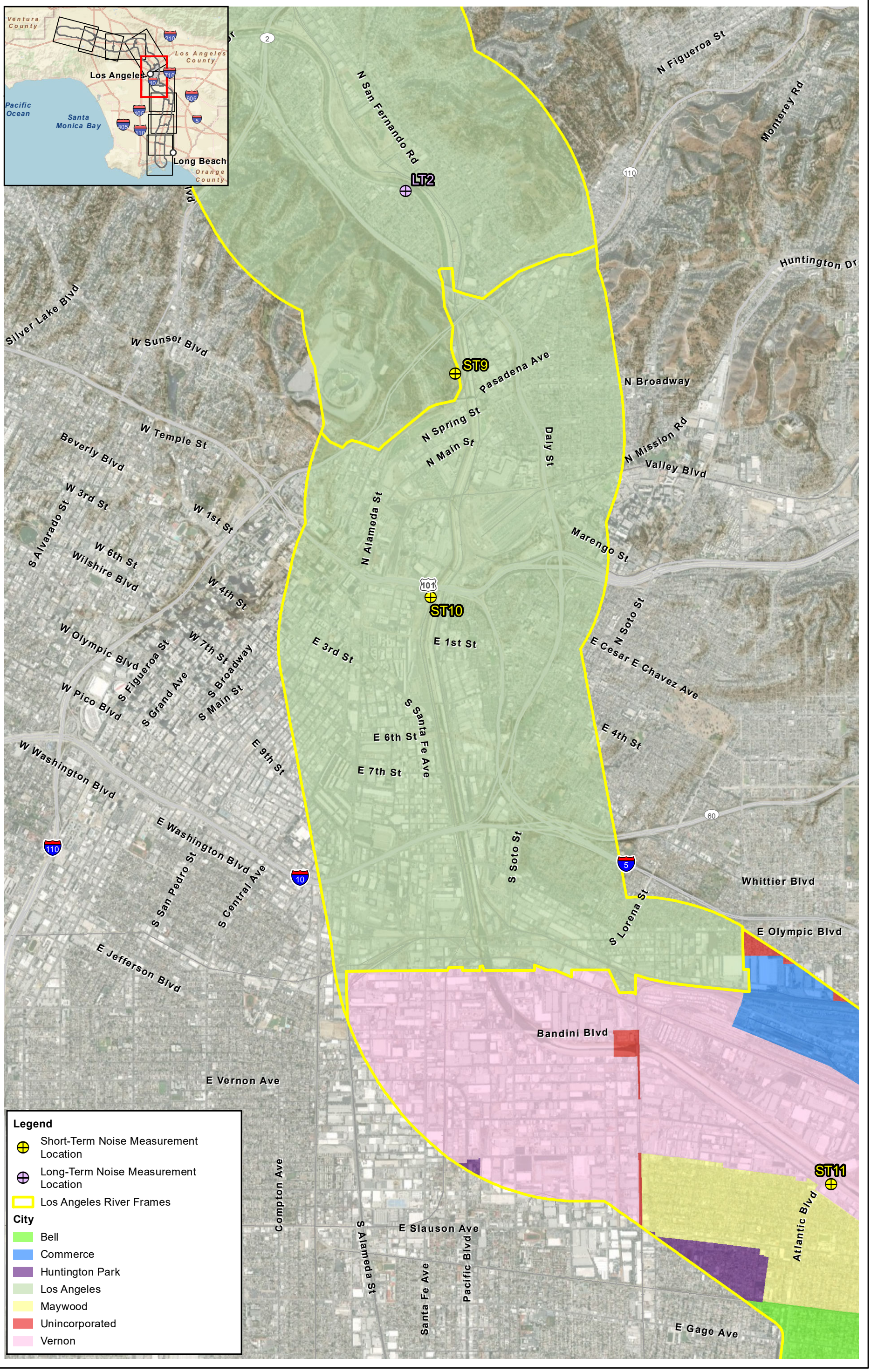

Figure 3.12-1 - Frame 5
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

Source: County of Los Angeles; ESRI

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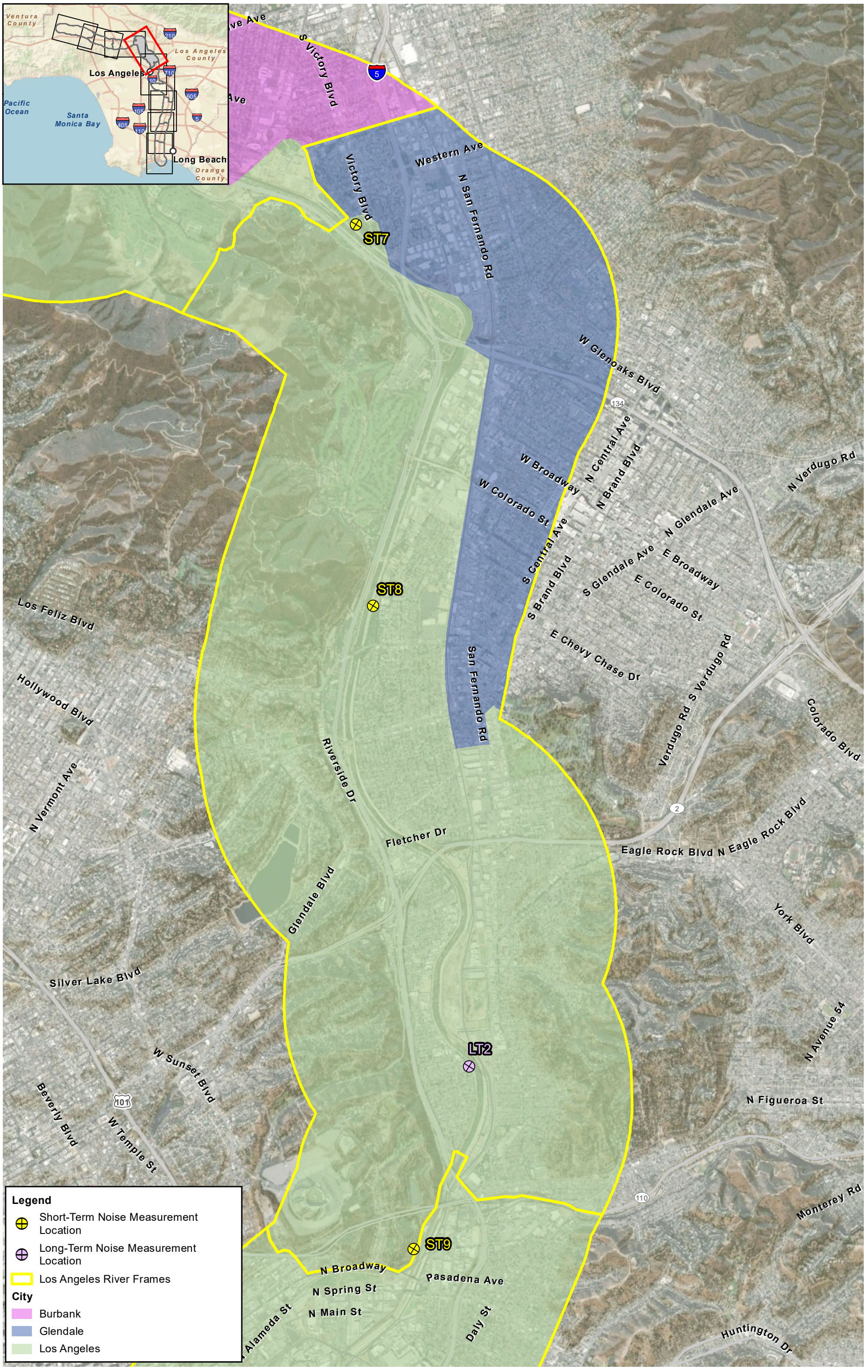
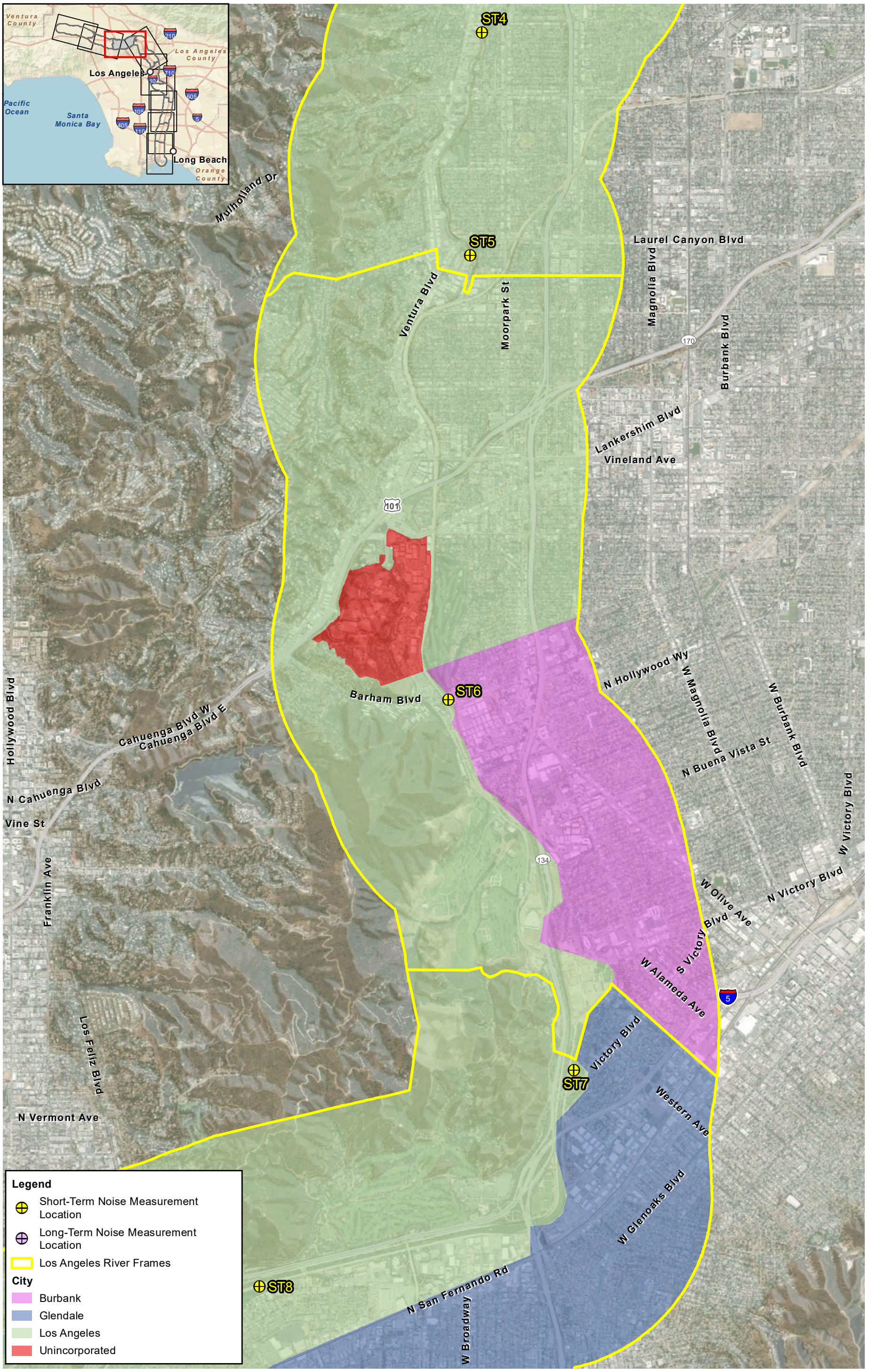


Figure 3.12-1 - Frame 6
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

Source: County of Los Angeles; ESRI



0 1,625 3,250 Feet

1:39,000

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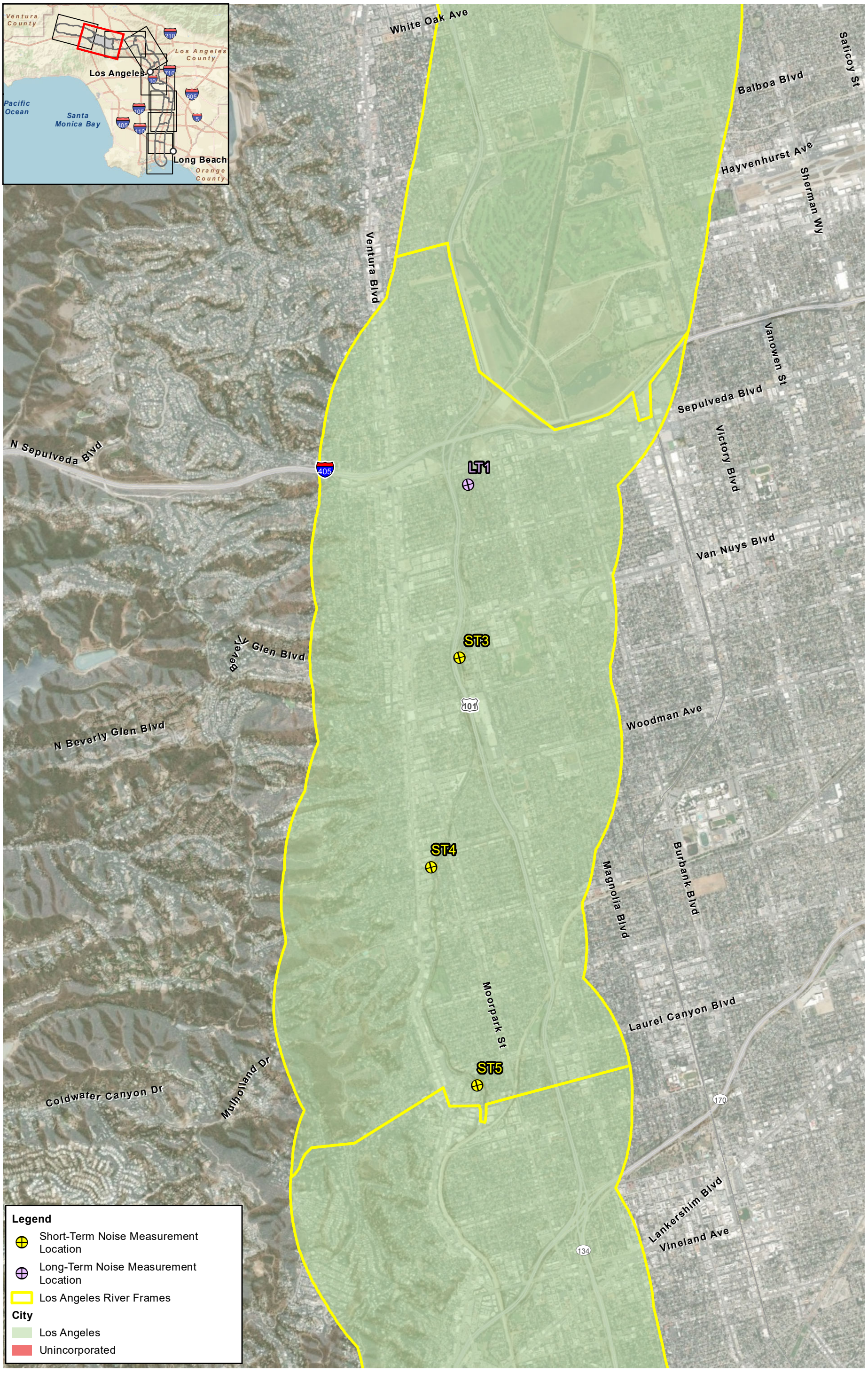
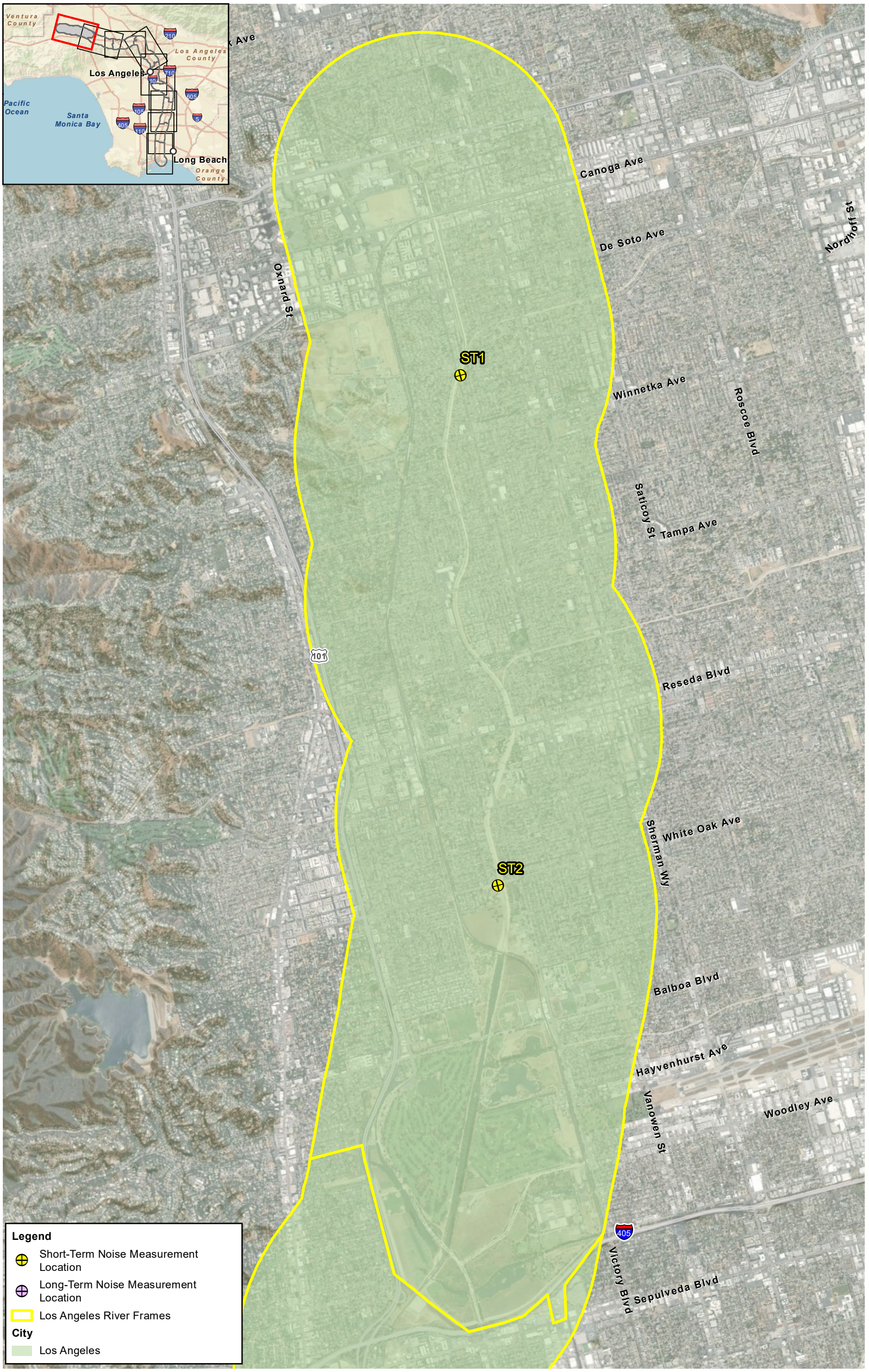
Source: County of Los Angeles; ESRI

Figure 3.12-1 - Frame 7
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area



Source: County of Los Angeles; ESRI

Figure 3.12-1 - Frame 8
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area



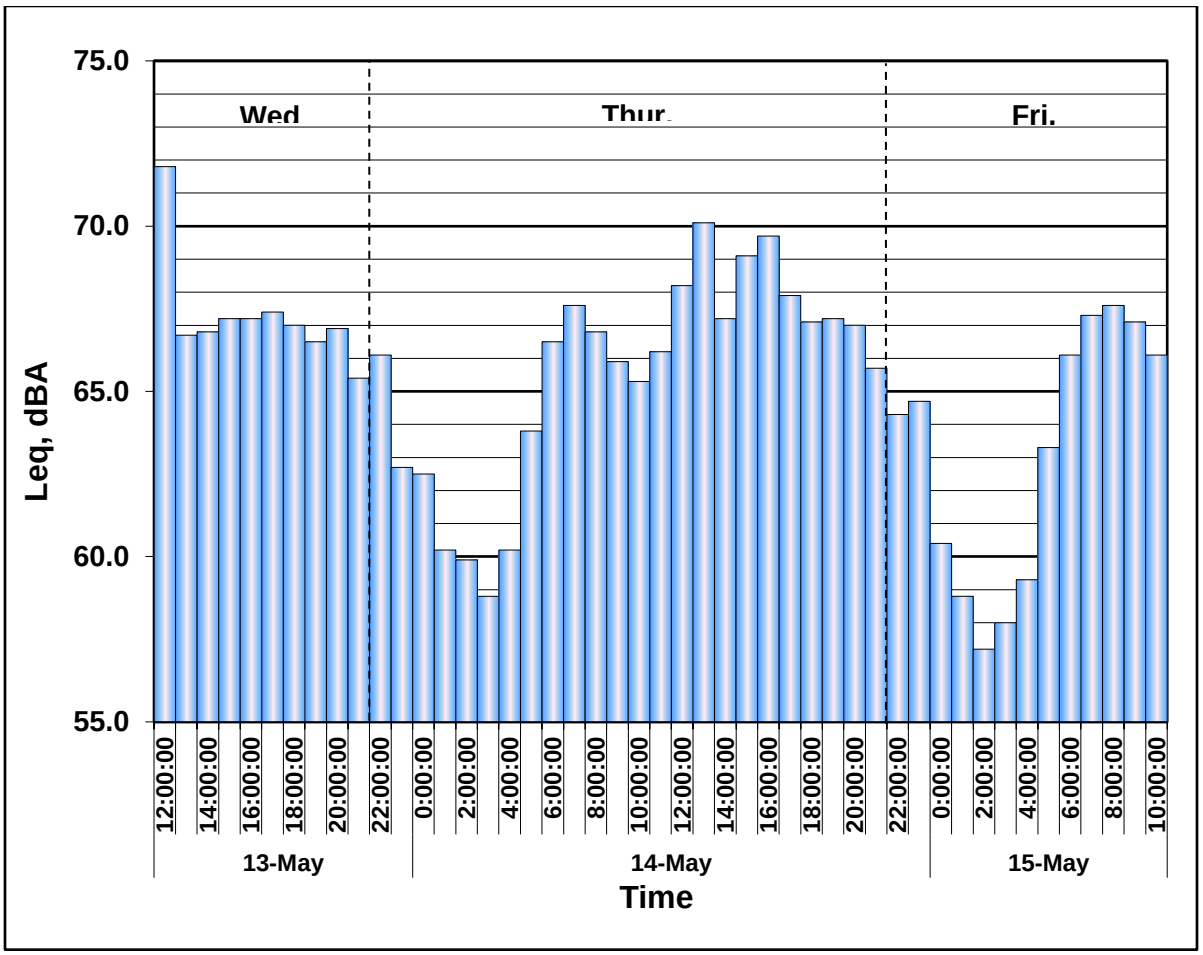
Source: County of Los Angeles; ESRI

Figure 3.12-1 - Frame 9
Noise Measurement Locations
Los Angeles River Master Plan Update Program EIR Study Area

Frames 1 and 2

Frames 1 and 2 include the Cities of Long Beach and Los Angeles. Land uses along the study area fall completely within the City of Long Beach. The City of Carson and unincorporated Los Angeles County are within the study area but do not directly fall along the river. Land uses are generally a mix of residential, commercial, and industrial. Seven field measurements (six ST measurements and one LT measurement) were conducted within these frames: ST16 through ST20 and ST24, and LT5. Measured ST results, as presented in Table 3.12-4, ranged from 51.1 dBA L_{eq} to 60.5 dBA L_{eq}. Field measurements conducted were generally representative of noise-sensitive land uses along the study area, including residential and recreational land uses. Figure 3.12-2 shows the 24-hour noise pattern associated with LT5.

Figure 3.12-2. Long-Term Measurement LT5



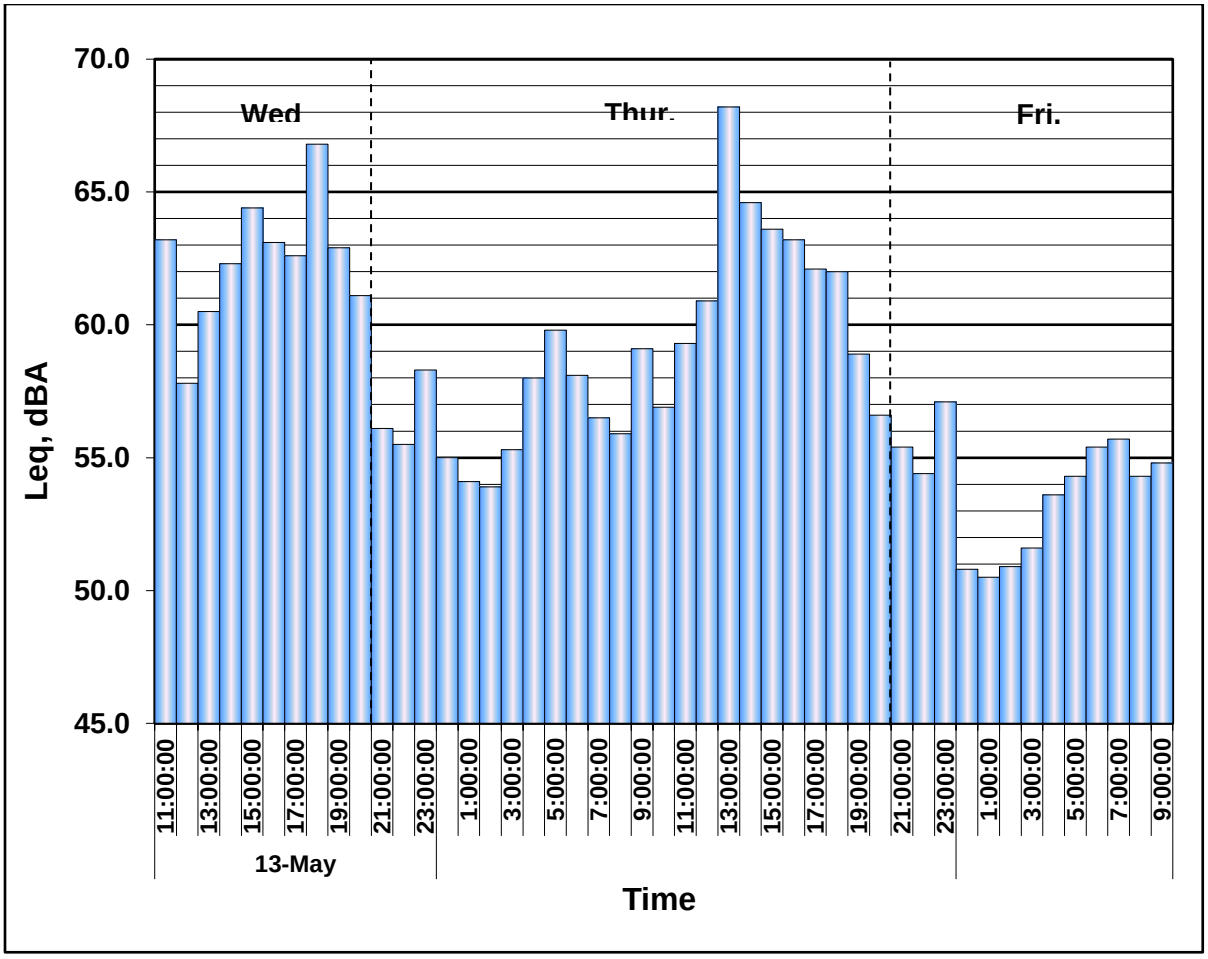
Source: ICF field noise measurements (see Appendix H).

Frame 3

Frame 3 includes the Cities of Compton, Paramount, Lynwood, South Gate, and Cudahy, and portions of unincorporated Los Angeles County. Land uses along the study area fall completely within these municipalities. Land uses within these municipalities are generally residential with some commercial and recreational uses throughout the study area. Seven field measurements (six ST measurements and one LT measurement) were conducted within these frames: ST13 through ST15,

ST22 through ST24, and LT4. Measured ST results, as presented in Table 3.12-4, ranged from 51.4 dBA L_{eq} to 53.7 dBA L_{eq}. Field measurements conducted were generally representative of noise-sensitive land uses along the study area including residential and recreational land uses. Figure 3.12-3 shows the diurnal pattern associated with LT4.

Figure 3.12-3. Long-Term Measurement LT4

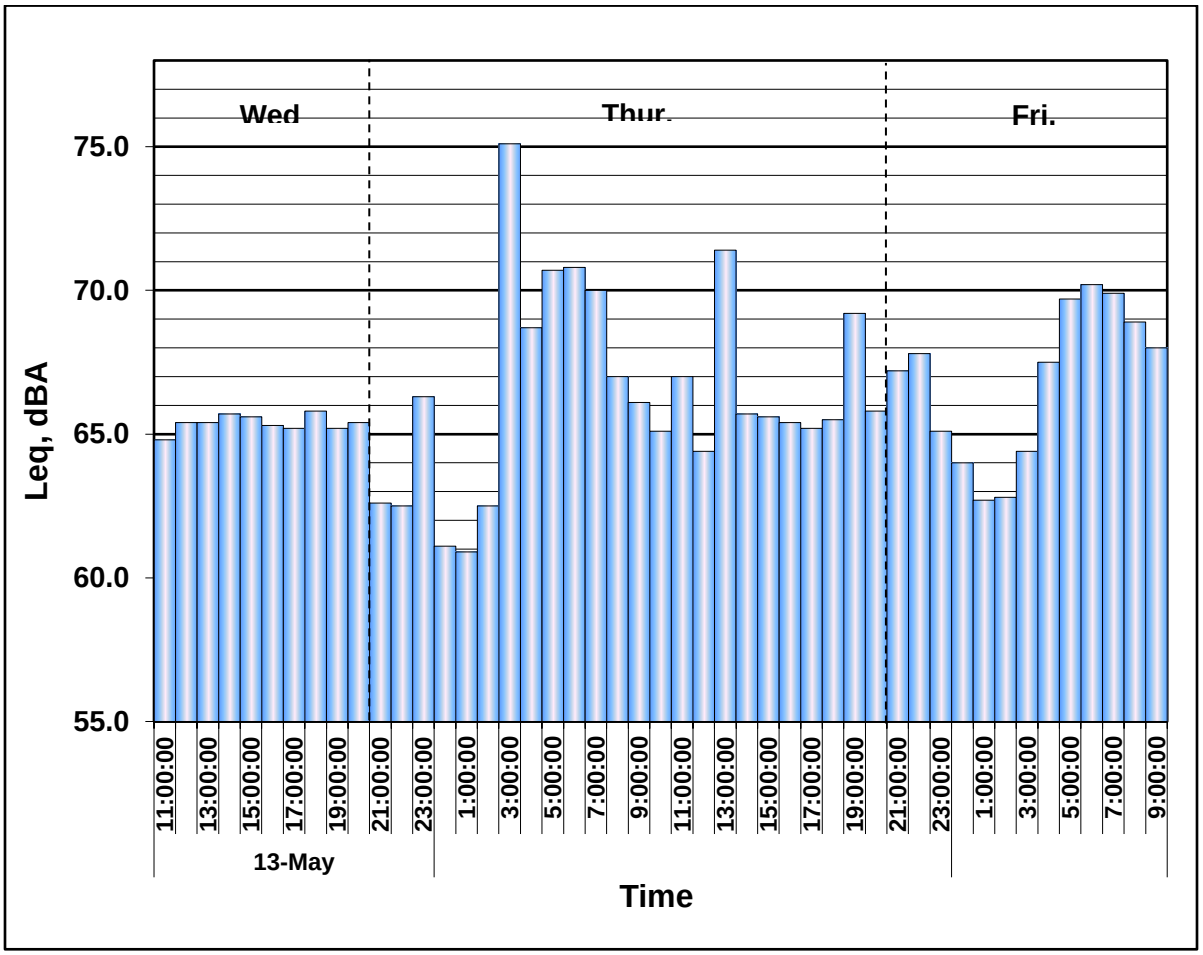


Source: ICF field noise measurements (see Appendix H).

Frame 4

Frame 4 includes the Cities of Bell Garden, Bell, Maywood, Commerce, and Vernon, and portions of unincorporated Los Angeles County. Land uses along the study area fall completely within these municipalities. The City of Huntington Park is within the study area but does not directly fall along the LA River. Land uses within these municipalities are generally industrial/commercial with some residential at the southern terminus of Frame 4. Three field measurements (two ST measurements and one LT measurement) were conducted within these frames: ST11 and ST12 and LT3. Measured ST results, as presented in Table 3.12-4, ranged from 58.2 dBA L_{eq} to 63.6 dBA L_{eq}. Field measurements conducted were generally representative of noise-sensitive land uses along the study area, including residential and commercial land uses. Figure 3.12-4 shows the diurnal pattern associated with LT3.

Figure 3.12-4. Long-Term Measurement LT3

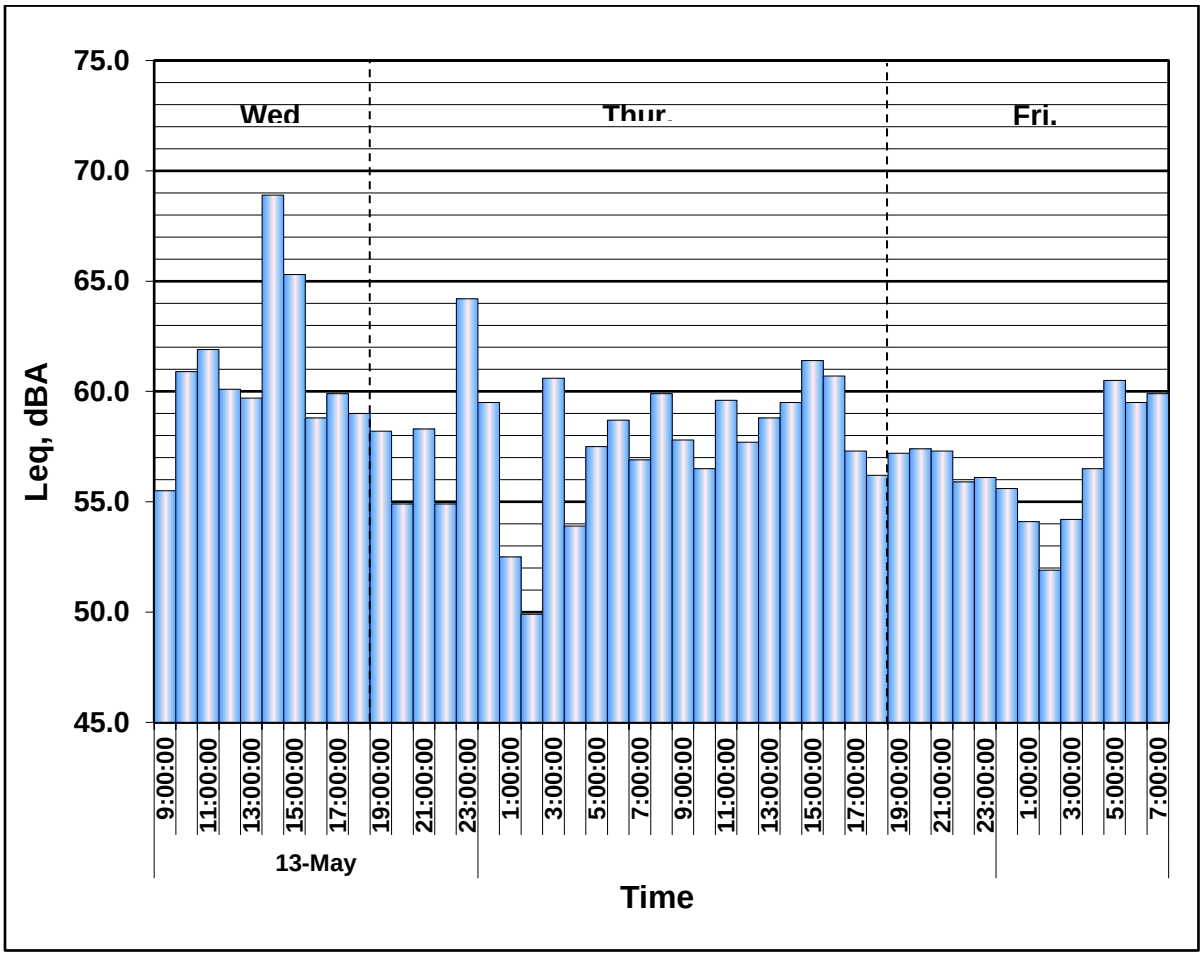


Source: ICF field noise measurements (see Appendix H).

Frames 5 through 9

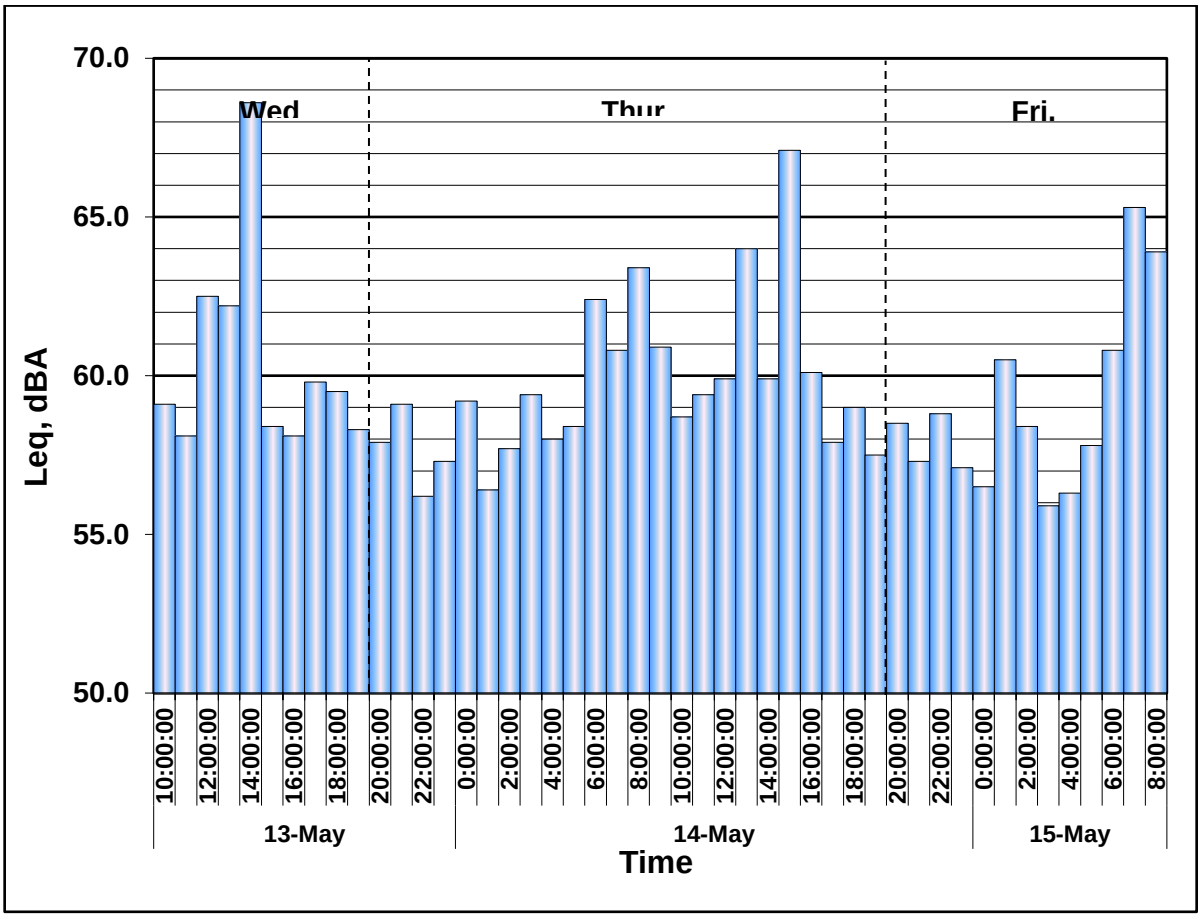
Frames 5 through 9 include the Cities of Los Angeles, Burbank, and Glendale, and portions of unincorporated Los Angeles County. Land uses along the study area fall completely within these municipalities. Land uses within these municipalities are generally industrial/commercial (within Frame 5) and transition into a general mix of residential and commercial with some institutional and recreational land uses peppered throughout the study area. Twelve field measurements (10 ST measurements and 2 LT measurement) were conducted within these frames: ST1 through ST10, and LT1 and LT2. Measured ST results, as presented in Table 3.12-4, ranged from 54.3 dBA L_{eq} to 64.3 dBA L_{eq}. Field measurements conducted were generally representative of noise-sensitive land uses along the study area, including commercial, recreational, and residential land uses. Figure 3.12-5 and Figure 3.12-6 show the diurnal pattern associated with LT1 and LT2.

Figure 3.12-5. Long-Term Measurement LT1



Source: ICF field noise measurements (see Appendix H).

Figure 3.12-6. Long-Term Measurement LT2



Source: ICF field noise measurements (see Appendix H).

3.12.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of noise in this PEIR.

Federal

There are no federal noise standards that specifically apply to the proposed Project.

The Federal Transit Administration (FTA) has adopted vibration standards that evaluate the damage potential of vibration sources that may be present during construction. The vibration standards are included in the FTA's *Transit Noise and Vibration Assessment Manual* (FTA 2018) and are presented in Table 3.12-5.

Table 3.12-5. Construction Vibration Damage Criteria

Building and Structural Category	PPV (in/sec)	Approximate L_v[1]
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018.
[1] RMS velocity in decibels, VdB re 1 micro-in/sec
RMS = root-mean-square; VdB = vibration velocity in decibels

State

California Department of Health Services Noise Standards

The California Department of Health Services (DHS) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. These guidelines for land use and noise exposure compatibility are shown in Table 3.12-6. In addition, Section 65302(f) of the California Government Code requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community, (2) recognize Office of Noise Control guidelines, and (3) analyze and quantify current and projected noise levels.

Table 3.12-6. DHS Community Noise Exposure (L_{dn} or CNEL)

Land Use	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Residential- Low Density, Single-family, Duplex, Mobile Homes	50–60	55–70	70–75	above 75
Residential- Multi. Family	50–65	60–70	70–75	above 75
Transient Lodging –Motels, Hotels	50–65	60–70	70–80	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Auditoriums, Concert Halls, Amphitheaters	--	50–70	--	above 70
Sports Arena, Outdoor Spectator Sports	--	50–75	--	above 75
Playgrounds, Neighborhood Parks	50–70	--	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	--	70–80	above 80
Office Buildings, Business and Professional Commercial	50–70	67–77	above 75	--

Land Use	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	above 75	---

Source: State of California, Governor's Office of Planning and Research 2017.

1 Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

2 Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

3 Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

4 Clearly Unacceptable: New construction or development should generally not be undertaken.

California Department of Transportation

Many jurisdictions in the study area do not set a basic criterion for limiting ground-borne vibration. Although this is sensible for the evaluation of operational vibration sources, it does not fully address the range of potential vibration impacts that might occur as a result of construction activities. Caltrans provides suggested criteria to address potential building damage as well as human annoyance as a result of construction-related ground-borne vibration. Therefore, although the proposed Project would not be subject to Caltrans oversight, guidance published by the agency nonetheless provides criteria that could be useful in establishing vibration thresholds for the Project. Guideline criteria from Caltrans' widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013b) are provided in Table 3.12-7 and Table 3.12-8.

Table 3.12-7. Caltrans Guideline Vibration Damage Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013b, as cited in LACFCD 2015.

Note: Transient sources create a single isolated vibration event, such as blasting or the use of drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 3.12-8. Caltrans Guideline Vibration Annoyance Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2013b, as cited in LACFCD 2015.
Note: Transient sources create a single isolated vibration event, such as blasting or the use of drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Local

As described in Chapter 2, *Project Description,* the study area is divided into series of nine distinct planning frames. Each individual jurisdiction includes guidance documentation in the form of general plans and regulatory thresholds and requirements that set thresholds for noise. These are described by frame below.

Frame 1

City of Long Beach

City of Long Beach Municipal Code

Construction

Section 8.80.202 regulates construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter. The regulations state:

A. Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. and seven a.m. the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.

B. Saturdays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. on Friday and nine a.m. on Saturday and after six p.m. on Saturday, except for emergency work authorized by the Building Official.

C. Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.

D. Owner's/employer's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.

E. Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between nine a.m. and six p.m., and it shall designate the specific dates when it is allowed.

Operations

The City of Long Beach has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. Long Beach Municipal Code Section 8.80.150 presents the following exterior noise limits (sound levels by receiving land use district):

A. The noise standards for the various land use districts identified by the noise control office as presented in Table A in Section 8.80.160 shall, unless otherwise specifically indicated, apply to all such property within a designated district.

B. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:

1. The noise standard for that land use district as specified in Table A in Section 8.80.160 for a cumulative period of more than thirty (30) minutes in any hour; or

2. The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or

3. The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or

4. The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or

5. The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.

C. If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories in Subsection B of this Section, the allowable noise exposure standard shall be increased in five (5) decibels increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category in Subsection B of this Section, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. If the measurement location is on a boundary between two (2) different districts, the noise level limit applicable shall be the arithmetic mean of the two (2) districts.

E. If possible, the ambient noise shall be measured at the same location along the property line utilized in Subsection B of this Section, with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the offending noise from the source is inaudible. If the difference

between the noise levels with noise source operating and not operating is six (6) decibels or greater, then the noise measurement of the alleged source can be considered valid with a small correction applied to account for the contribution of the ambient noise. The correction is to be applied in accordance with data shown in Table B in Section 8.80.160.

Long Beach Municipal Code Section 8.80.160 presents the following exterior noise limits guidance regarding correction for character of sound:

In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth in Table A shall be reduced by five (5) decibels.

Table A: Exterior Noise Limits at Receiving Land Uses

Receiving Land Use District*	Time Period	Noise Level** (dBA)
District One	Night: 10:00 p.m.–7:00 a.m. Day: 7:00 a.m.–10:00 p.m.	45 50
District Two	Night: 10:00 p.m.–7:00 a.m. Day: 7:00 a.m.–10:00 p.m.	55 60
District Three	Any time	65
District Four	Any time	70
District Five	Regulated by other agencies and laws	NA

* District One: Predominantly residential with other land use types also present
District Two: Predominantly commercial with other land use types also present
Districts Three and Four: Predominantly industrial with other land types use also present
District Five: Airport, freeways and waterways regulated by other agencies

** Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.

City of Long Beach General Plan

The *City of Long Beach General Plan* is in the process of being updated. As such, the information included is from the Draft 2019 Noise Section (City of Long Beach 2019). The Noise Element includes a table displaying vibration damage criteria (Table N-1) and a land use compatibility matrix for noise exposure and construction vibration criteria (Table N-2) and sets forth strategies and policies related to land use compatibility, construction noise, and noise management designed to guide to reduce noise and ensure noise compatibility with existing land uses.

Table N-1: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate L_V (VdB)[1]
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: able 12-3, Transit Noise and Vibration Impact Assessment (FTA 2006).
[1] RMS VdB re 1 microinches per second (µin/sec).
µin/sec = microinches per second; FTA = Federal Transit Administration; in/sec = inches per second; LV = velocity in decibels; PPV = peak particle velocity; RMS = root-mean=square; VdB = vibration velocity in decibels

Table N-2: Land Use Compatibility Matrix for Noise Exposure

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB						
	55	60	65	70	75	80	85
Residential – Low Density Single Family Duplex, Mobile Homes							
Residential – Multi-Family							
Transient Lodging – Hotels, Motels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings – Business, Commercial & Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB						
	55	60	65	70	75	80	85
Normally Acceptable	*Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.*						
Conditionally Unacceptable	*New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.*						
Normally Unacceptable	*New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.*						
Clearly Unacceptable	*New construction or development should generally not be undertaken.*						
Source: California Office of Planning and Research, General Plan Guidelines (2017), Appendix D.							

Strategy No. 1: Apply site planning and other design strategies to reduce noise impacts, especially within the Founding and Contemporary Neighborhoods, Multifamily Residential—Low and Moderate, and Neighborhood Serving Centers and Corridors – Low and Moderate Place Types.

- **Policy N 1-1:** Integrate noise considerations into the land use planning process in order to prevent new land use noise conflicts.
- **Policy N 1-2:** Require noise attenuation measures to be incorporated into all development and redevelopment of noise sensitive uses, including residential, health care facilities, schools, libraries, senior facilities, and churches in close proximity to existing or known planned rail lines.
- **Policy N 1-3:** Ensure development and redevelopment is considerate of the natural topography of a site in order to reduce noise impacts.
- **Policy N 1-4:** Encourage developers or landowners to incorporate noise reduction features in the site planning process.
- **Policy N 1-5:** Incorporate urban design strategies such as courtyards, paseos, alleys, plazas and open space areas to provide a buffer to noise sensitive uses.
- **Policy N 1-6:** Ensure that project site planning, design, and function minimize the potential adverse impacts of noise.
- **Policy N 1-7:** Encourage educational facilities to locate playgrounds, sports fields, and other outdoor activity areas away from residential areas.
- **Policy N 1-8:** Require new development to provide facilities which support the use of alternative transportation modes, including, walking, bicycling, carpooling and, transit.
- **Policy N 1-9:** Utilize noise barriers after all practical design-related noise measures have been integrated into the project. In instances where sound walls are necessary, they should be incorporated into the architectural and site character of the development and pedestrian access should be integrated.

Strategy No. 12: Minimize construction noise and vibration levels in residential areas and in other locations near noise sensitive uses, where possible.

- **Policy N 12-1:** Reduce construction, maintenance, and nuisance noise at the source, when possible, to reduce noise conflicts.

- **Policy N 12-2:** Continue to limit the allowable hours for construction activities and maintenance operations near sensitive uses.
- **Policy N 12-3:** As part of the City's Municipal Code, establish noise levels standards based on Place, Type and time of day, to which construction noise shall conform.
- **Policy N 12-4:** Encourage off-site fabrication to reduce needed onsite construction activities and corresponding noise levels and duration.
- **Policy N 12-5:** Require that all construction activities incorporate best business practices, such as:
    - Schedule high-noise and vibration-producing activities to a shorter window of time during the day outside early morning hours to minimize disruption to sensitive uses.
    - Grading and construction contractors should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment.
    - Construction haul truck and materials delivery traffic should avoid residential areas whenever feasible.
    - The construction contractor should place noise- and vibration-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible.
    - The construction contractor should use on-site electrical sources to power equipment rather than diesel generators, where feasible.
    - All residential units located within 500 ft of a construction site should be sent a notice regarding the construction schedule. A sign legible at a distance of 50 ft should also be posted at the construction site. All notices and the signs should indicate the dates and durations of construction activities, as well as provide a telephone number for a "noise disturbance coordinator."
    - A "noise disturbance coordinator" should be established by the project developer. The disturbance coordinator should be responsible for responding to any local complaints about construction noise. The disturbance coordinator should determine the cause of the noise complaint (e.g., starting too early, bad muffler) and should be required to implement reasonable measures to reduce noise levels.
- **Policy N 12-6:** Continue to provide information bulletins dispersing information on municipal code requirements and recommended best practices.
- **Policy N 12-7:** Work together with the AQMD to encourage the retirement of older construction equipment in favor of newer, quieter, and less polluting equipment.

City of Los Angeles

City of Los Angeles Municipal Code (2020)

Construction

Section 41.40, Noise Due to Construction, Excavation Work, prohibits construction and excavation activities:

(a) No person shall, between the hours of 9:00 P.M. and 7:00 A.M. of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power driven drill, riveting

machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited during the hours herein specified….

(b) The provisions of Subsection (a) shall not apply to any person who performs the construction, repair or excavation work involved pursuant to the express written permission of the Board of Police Commissioners through its Executive Director….

(c) No person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling shall perform any construction or repair work of any kind upon, or any earth grading for, any building or structure located on land developed with residential buildings under the provisions of Chapter I of this Code, or perform such work within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday nor at any time on any Sunday. In addition, the operation, repair or servicing of construction equipment and the jobsite delivering of construction materials in such areas shall be prohibited on Saturdays and on Sundays during the hours herein specified. The provisions of this subsection shall not apply to persons engaged in the emergency repair of:

1. Any building or structure,
2. Earth supporting or endangering any building or structure,
3. Any public utility, or
4. Any public way or adjacent earth.

Operations

Section 112.02 regulates noise from stationary noise sources such as air conditioning/heating, refrigeration, and pumps:

(a) It shall be unlawful for any person, within any zone of the city to operate any air conditioning, refrigeration or heating equipment for any residence or other structure or to operate any pumping, filtering or heating equipment for any pool or reservoir in such manner as to create any noise which would cause the noise level on the premises of any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit.to exceed the ambient noise level by more than five (5) decibels

Section 116.01 regulates loud, unnecessary, or unusual noise:

Notwithstanding any other provisions of this chapter and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

(a) The level of noise;

(b) Whether the nature of the noise is usual or unusual;

(c) Whether the origin of the noise is natural or unnatural;

(d) The level and intensity of the background noise, if any;

(e) The proximity of the noise to residential sleeping facilities;

(f) The nature and zoning of the area within which the noise emanates;

(g) The density of the inhabitation of the area within which the noise emanates;

(h) The time of the day and night the noise occurs;

(i) The duration of the noise;

(j) Whether the noise is recurrent, intermittent, or constant; and

(k) Whether the noise is produced by a commercial or noncommercial activity.

Section 112.05 defines the maximum noise level of powered equipment or powered hand tools.

Between the hours of 7:00 a.m. and 10:00 p.m., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

(a) 75dB(A) for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;

(b) 75dB(A) for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;

(c) 65dB(A) for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors;

The noise limits for particular equipment listed above in (a), (b) and (c) shall be deemed to be superseded and replaced by noise limits for such equipment from and after their establishment by final regulations adopted by the Federal Environmental Protection Agency and published in the Federal Register.

Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

City of Los Angeles CEQA Threshold Guide

The City of Los Angeles CEQA Threshold Guide (2006) includes screening processes for project construction and operations.

Construction

1. INITIAL STUDY SCREENING PROCESS

C. Screening Criteria

- Would construction activities occur within 500 feet of a noise sensitive use?
- For projects located within the City of Los Angeles, would construction occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at anytime on Sunday?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Construction Noise and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, including information on construction activities. Consult a map showing the location of noise sensitive uses within 500 feet of the project site. Noise sensitive uses include residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. Determine whether construction activities would occur within 500 feet of a noise sensitive use or during the hours specified in the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use;
- Construction activities lasting more than 10 days in a three month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Operations

1. INITIAL STUDY SCREENING PROCESS

C. Screening Criteria

- Would the proposed project introduce a stationary noise source likely to be audible beyond the property line of the project site?
- Would the project include 75 or more dwelling units, 100,000 square feet (sf) or greater of nonresidential development or have the potential to generate 1,000 or more average daily vehicle trips?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Operational Noise, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from Operational Noise from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and the project traffic study to determine the size of each land use involved, information on stationary noise sources such as machinery or motorized equipment, and the vehicle trips that would be generated by the project. L.1. INTERSECTION CAPACITY explains how to calculate the number of average daily vehicle trips.

Determine the noise level from stationary sources at the property line by evaluating the decibel output of each source, the distance to the property line and the path over which the sound travels. Use an applicable noise model, as needed. In general, at a distance of 50 feet from the source over a hard surface, the decibel level decreases by 3 dBA, and over a soft surface (such as grass) the

decibel level decreases by 4.5 dBA. For every doubling of distance thereafter, noise levels drop another 3 dBA over a hard surface and 4.5 dBA over a soft surface.

2. DETERMINATION OF SIGNIFICANCE

A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase (see the chart below).

	Community Noise Exposure (CNEL, dB)			
Land Use	**Normally Acceptable**	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	above 70
Multi-Family Homes	50–65	60–70	70–75	above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging – Motels, Hotels	50–65	60–70	70–80	above 80
Auditoriums, Concert Halls, Amphitheaters	--	50–70	--	above 65
Sports Arena, Outdoor Spectator Sports	--	50–75	--	above 70
Playgrounds, Neighborhood Parks	50–70	--	67–75	above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	--	70–80	above 80
Office Buildings, Business and Professional Commercial	50–70	67–77	above 75	--
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	--

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable: New construction or development should generally not be undertaken.
Source: California Department of Health Services (DHS).

City of Los Angeles General Plan

The *City of Los Angeles General Plan* includes two objectives and policies (Chapter III) related to non-airport noise and land use compatibility as well as 14 implementation processes (Chapter IV) related to land use combability and reducing noise (City of Los Angeles 1999).

Objective 2 (Nonairport)

Reduce or eliminate nonairport related intrusive noise, especially relative to noise sensitive uses.

Policy

2.2 Enforce and/or implement applicable city, state and federal regulations intended to mitigate proposed noise producing activities, re-duce intrusive noise and alleviate noise that is deemed a public nuisance. (**P5** through **P10**)

P5 Continue to enforce, as applicable, city, state and federal regulations intended to abate or eliminate disturbances of the peace and other intrusive noise.

P8 Continue to periodically update guidelines for California Environmental Quality Act-required land development project review by city agencies.

Objective 3 (Land Use Development)

Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.

Policy

3.1 Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts. (**P11** through **P18**)

P11 For a proposed development project that is deemed to have a potentially significant noise impact on noise sensitive uses, as defined by this chapter, require mitigation measures, as appropriate, in accordance with California Environmental Quality Act and city procedures. Examples of mitigation measures to consider:

(a) increase the distance from the noise source and the receptor by providing land use buffers, e.g., parking lots, landscaped setbacks or open areas, utility yards, maintenance facilities, etc.;

(b) orient structures, use berms or sound walls, utilize terrain or use other means to block or deflect noise, provided it is not deflected to other noise-sensitive uses and that the barrier does not create a hiding place for potential criminal activity;

(c) require projects with noise generating components (e.g., auto repair and maintenance facilities) to have no openings in building walls that face sensitive uses;

(d) limit the hours of operation of a noise generating use;

(e) limit the use of the site to prohibit potential noise generating uses that otherwise are allowed by right within the zone classification of the project site;

(f) require that potential noise impacts associated with project construction be minimized by such measures as designating haul routes, re-quiring less noisy equipment, enclosing or orienting noisy equipment (e.g., electrical generators) away from noise sensitive uses, imposing construction hours that are more re-strictive than those set forth in the Los Angeles Municipal Code, requiring vehicle parking and deployment activities to be separated and buffered from sensitive uses; or

(g) determine impacts on noise sensitive uses, such as public school classrooms, which are active primarily during the daytime and evening hours, by weighting the impact measurement to the potential interior noise level (or for exterior uses, e.g., outdoor theaters, to the exterior noise level) over the typical hours of use, in-stead of using a 24-hour measurement.

(h) other appropriate measures.

P13 Continue to plan, design and construct or oversee construction of public projects, and projects on city owned properties, so as to minimize potential noise impacts on noise

sensitive uses and to maintain or reduce existing ambient noise levels. Examples of noise management strategies to consider:

(a) site or alignment selection to minimize potential noise incompatibility;

(b) orientation of noise sources away from noise sensitive uses;

(c) placement of structures between noise generators and noise sensitive receptors;

(d) enclosure of noise sources;

(e) erection of sound walls, berms or other noise buffers or deflectors, providing that they do not deflect sound to other noise sensitive uses and that the barrier does not create a hiding place for potential criminal activity;

(f) restricted hours of operation;

(g) modification of noise sources (e.g., utilizing less noisy equipment); or

(h) determine impacts on noise sensitive uses, such as public school classrooms, which are active primarily during the daytime and evening hours, by weighting the impact measurement to the potential interior noise level (or for exterior uses, e.g., outdoor theaters, to the exterior noise level) over the typical hours of use, in-stead of using a 24-hour measurement.

(i) other appropriate measures.

P14 Continue to periodically update general plan public facilities and utilities elements, taking into account existing and potential noise impacts.

P15 Continue to take into consideration, during updating/revision of the city's general plan community plans, noise impacts from freeways, highways, outdoor theaters and other significant noise sources and to incorporate appropriate policies and programs into the plans that will enhance land use compatibility.

P16 Use, as appropriate, the "Guidelines for Noise Compatible Land Use" (Exhibit I),1 or other measures that are acceptable to the city, to guide land use and zoning reclassification, subdivision, conditional use and use variance determinations and environmental assessment considerations, especially relative to sensitive uses, as defined by this chapter, within a CNEL of 65 dB airport noise exposure areas and within a line-of-sight of freeways, major high-ways, railroads or truck haul routes.

Exhibit I: Guidelines for Noise Compatible Land Use[1]

	Day-Night Average Exterior Sound Level (CNEL dB)						
Land Use Category	**50**	**55**	**60**	**65**	**70**	**75**	**80**
Residential Single Family, Duplex, Mobile Home	A	C	C	C	N	U	U
Residential Multi-Family	A	A	C	C	N	U	U
Transient Lodging, Motel, Hotel	A	A	C	C	N	U	U
School, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	U
Auditorium, Concert Hall, Amphitheater	C	C	C	C/N	U	U	U
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	U	U

	Day-Night Average Exterior Sound Level (CNEL dB)						
Land Use Category	**50**	**55**	**60**	**65**	**70**	**75**	**80**
Playground, Neighborhood Park	A	A	A	A/N	N	N/U	U
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	U
Office Building, Business, Commercial, Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N

[1] Based on the Governor's Office of Planning and Research, *General Plan Guidelines*, 1990. To help guide determination of appropriate land use and mitigation measures vis- a-vis existing or anticipated ambient noise levels.
A = Normally acceptable. Specified land use is satisfactory, based upon assumption buildings involved are conventional construction, without any special noise insulation.
C = Conditionally acceptable. New construction or development only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally will suffice.
N = Normally unacceptable. New construction or development generally should be discouraged. A detailed analysis of noise reduction requirements must be made and noise insulation features included in the design of a project.
U = Clearly unacceptable. New construction or development generally should not be undertaken.

Frame 2

City of Long Beach

Applicable regulations are described above.

City of Los Angeles

Applicable regulations are described above.

City of Carson

City of Carson Municipal Code

Construction

The City of Carson (2007) has adopted the Los Angeles County Code (Section 12.08.440 Construction Noise) included below. However, the County's Code has been amended by the City of Carson as follows:

Section 5502 Amendments to Noise Control Ordinance

(c) By amending subsection B1 of Section 12.08.440 to read:

12.08.440B1. Noise Restrictions at Affected Structures. The contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in the following schedule:

1. At Residential Structures.

a. Mobile Equipment. Maximum noise levels for Non-scheduled, intermittent, short-term operation of twenty (20) days or less for construction equipment:

a) Maximum noise levels for non-scheduled, intermittent, short-term operations of twenty (20) days or less for construction equipment:

	Single-Family Residential	**Multi-Family Residential**
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA

b) Maximum noise level for repetitively scheduled and relatively long-term operation of twenty-one (21) days or more for construction equipment:

	Single-Family Residential	**Multi-Family Residential**
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	55 dBA	60 dBA

Operation

The City of Carson (2007) has adopted the Los Angeles County Code for operations included below. However, the County Code (Section 12.08.390 - Exterior noise standards—Citations for violations authorized when) has been amended as follows:

12.08.390B. Unless otherwise herein provided, no person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

Standard No. 1 – shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any 30-minute period. Standard No. 1 shall be the applicable noise level from subsection A of this Section; or, if the ambient L50 exceeds the foregoing level, then the ambient L50 becomes the exterior noise level for Standard No. 1.

Standard No. 2 – shall be the exterior noise level which may not be exceeded for a cumulative period of more than 7.5 minutes in any 30-minute period. Standard No. 2 shall be the applicable noise level from subsection A of this Section plus 5dB; or, if the ambient L25 exceeds the foregoing level, then the ambient L25 becomes the exterior noise level for Standard No. 2.

Standard No. 3 – shall be the exterior noise level which may not be exceeded for a cumulative period of more than 2.5 minutes in any 30-minute period. Standard No. 3 shall be the applicable noise level from subsection A of this Section plus 20dB; or, if the ambient L8.3 exceeds the foregoing level, then the ambient L8.3 becomes the exterior noise level for Standard No. 3.

Standard No. 4 – shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 seconds in any 30-minute period. Standard No. 4 shall be the applicable noise level from subsection A of this Section plus 15dB; or, if the ambient L1.7 exceeds the foregoing level, then the ambient L1.7 becomes the exterior noise level for Standard No. 4.

Standard No. 5 – shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from subsection A of this Section plus 20dB; or, if

the ambient L0 exceeds the foregoing level then the ambient L0 becomes the exterior noise level for Standard No. 5.

City of Carson General Plan

The *Carson General Plan* includes the City of Carson's Noise and Land Use Compatibility Matrix, Interior and Exterior Noise Standards, and Noise Ordinance Standards (included below), as well as goals, objectives, and policies included in Chapter 4 (City of Carson 2004).

Table N-2
Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Residential-Low Density	50–60	60–65	65–75	75–85
Residential-Multiple Family	50–60	60–65	65–75	75–85
Transient Lodging-Motel, Hotels	50–65	65–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–60	60–65	65–80	80–85
Auditoriums, Concert Halls, Amphitheaters	NA	50–65	NA	65–85
Sports Arenas, Outdoor Spectator Sports	NA	50–70	NA	70–85
Playgrounds, Neighborhood Parks	50–70	NA	70–75	75–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–70	NA	70–80	80–85
Office Buildings, Business Commercial and Professional	50–67.5	67.5–75	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–70	70–75	75–85	NA

Source: Modified from U.S. Department of Housing and Urban Development Guidelines and State of California Standards.

NOTES: NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
NORMALLY UNACCEPTABLE
New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.
NA: Not Applicable

Table N-3
Interior and Exterior Noise Standards

Land Use Categories		CNEL	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single family Duplex, Multiple Family	45–55	50–60
	Mobile Home	45	65
Commercial Industrial Institutional	Hotel, Motel, Transient Lodging	45	--
	Commercial Retail, Bank, Restaurant	55	--
	Office Building, Research and Development, Professional Offices, City Office Building	50	--
	Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	--
	Gymnasium (Multipurpose)	50	--
	Sports Club	55	--
	Manufacturing, Warehousing, Wholesale, Utilities	65	--
	Movie Theaters	45	--
Institutional	Hospital, Schools' Classrooms	45	65
	Church, Library	45	--
Open Space	Parks	--	65

NOTES:
[1] Indoor environmental including: Bedrooms, living areas, bathrooms, toilets, closets, corridors.
[2] Outdoor environment limited to: Private yard of single family
Multi-family private patio or balcony which is served by a means of exit from inside the dwelling
Balconies 6 feet deep or less are exempt Mobile home park
Park's picnic area School's playground
[3] Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
[4] Exterior noise levels should be such that interior noise levels will not exceed 45 CNEL.

Table N-4
Noise Ordinance Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval (dB)	Exterior Noise Level	Interior Noise Level
I	Noise Sensitive-Area	Anytime	45	--
II	Residential Properties	10:00 p.m. to 7:00 a.m. (nighttime)	45	--
		7:00 a.m. to 10:00 p.m. (daytime)	50	--

III	Commercial Properties	10:00 p.m. to 7:00 a.m. (nighttime)	55	--
		7:00 a.m. to 10:00 p.m. (daytime)	60	--
IV	Industrial Properties	Anytime	70	--
All Zones	Multi-family	10:00 p.m.–7:00 a.m.	--	40
	Residential	7:00 a.m.–10:00 p.m.	--	45

Source: Section 12.08.490 and 12.08.400 in County of County of Los Angeles County Code. Nov. 2001.

- **Goal N-1:** Maximize efficiency in noise abatement efforts through clear and effective policies, plans and ordinances
    - **Policy N-1.1:** Continue to implement the City's Noise Ordinance and Noise Control Program.
- **Goal N-2:** Minimize noise impacts on residential uses and noise sensitive receptors along the City's streets, ensuring that the City's interior and exterior noise levels are not exceeded.
    - **Policy N-2.1:** Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.
    - **Policy N-2.5:** Discourage through traffic in residential neighborhoods.
- **Goal N-7:** Incorporate noise considerations into land use planning decisions.
    - **Policy N-7.1:** Incorporate noise considerations into land use planning decisions by establishing acceptable limits of noise for various land uses throughout the community.
    - **Policy N-7.2:** Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.
    - **Policy N-7.4:** Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-2. To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.
    - **Policy N-IM-7.1:** Adopt the noise standards presented in Table N-2, Noise and Land Use Compatibility Matrix, which identify interior and exterior noise standards in relation to specific land uses.
    - **Policy N-IM-7.2:** Ensure that the noise standards fully integrate noise considerations into land use planning decisions to prevent new noise/land use conflicts. Use the criteria of Table N-2.

City of Compton

City of Compton Municipal Code

Construction

The Compton Municipal Code Section 7-12.22 (City of Compton 1985) restricts construction, including the use of pile drivers, hoists, steam shovels, etc., such that,

> No person shall cause or permit any work to be done or do any work on the erection (including excavation), unless the noise caused thereby is confined within a building, or use any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, unless the noise caused thereby is confined within a building, other than between the hours of 7:00 a.m. and 7:00 p.m. on Monday through Saturday, except in cases of urgent necessity in the interest of public health and safety and then only with a permit from the Building Official. No such permit shall be granted for a period of more than three (3) days but may be renewed from time to time so long as the emergency exists.

Operation

The Compton Municipal Code Section 7-12.4, Presumed Ambient Noise Level, provides the following.

> When "ambient noise level is referred to in this section, it shall mean the higher of the following (1) actual ambient noise level, or (2) presumed ambient noise level as determined from the chart below.

		Sound Level A, Decibels Community Environment Classification				
		Very Quiet		**Quiet**	**Slightly Noisy**	
Zone	**Time**	**Rural**	**Suburban**	**Suburban**	**Suburban**	**Urban**
R1 and R2	10:00 p.m. to 7:00 a.m.	35	50	40	55	45
R1 and R2	7:00 p.m. to 10:00 p.m.	40	55	45	60	50
R1 and R2	7:00 a.m. to 7:00 p.m.	45	65	50	65	55
R3 and R4	10:00 p.m. to 7:00 a.m.	40	70	45	70	50
R3 and R4	7:00 a.m. to 10:00 p.m.	45		50		55
Commercial	10:00 p.m. to 7:00 a.m.					
Commercial	7:00 a.m. to 10:00 p.m.					
M1	Anytime					
M2	Anytime					

The Compton Municipal Code Section 7-12.11 (City of Compton 1985) restricts machinery, equipment, fans, and air conditioners.

> It shall be unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any noise which

would cause the noise level at the property line of any property to exceed the ambient noise level by more than five (5) decibels. For the purposes of this section, 'noise level' shall mean measured sound level with the following values added as corrections for time duration and character of the noise:

a. Add one and only one of the following corrections for time duration:

    1. Noise persists for more than five minutes out of any one hour.

    2. Noise persists for more than one minute but not more than five minutes out of any one hour.

    3. Noise persists for one minute or less out of any one hour.

b. Add one and only one of the following corrections for unusual character:

    1. Noise has no unusual character.

    2. Noise contains a piercing pure tone.

    3. Noise is impulsive or rattling in nature.

    4. Noise carries speech, music or other information content.

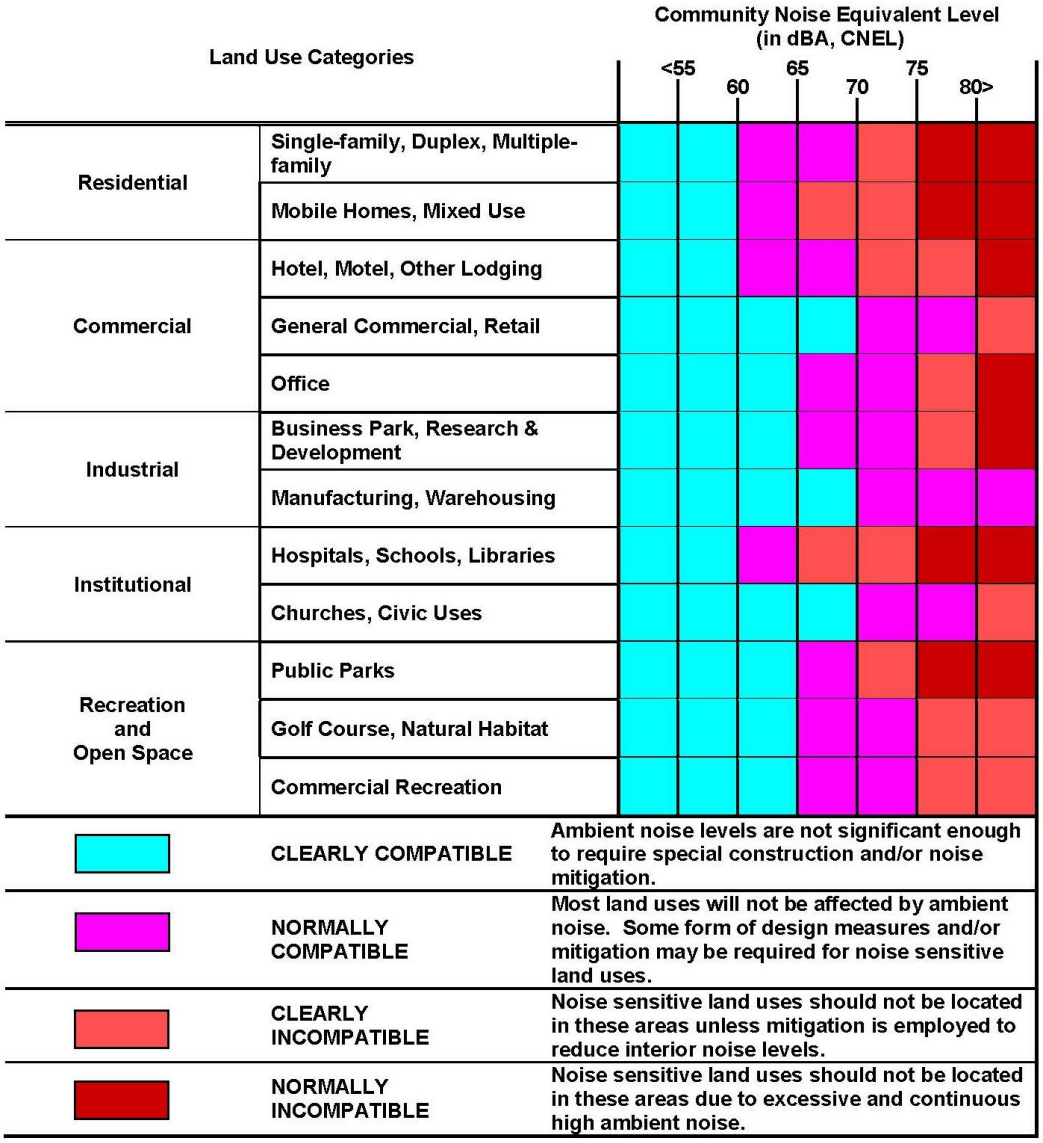
City of Compton General Plan

The *Draft Compton General Plan 2030* includes the City of Compton's Noise and Land Use Compatibility Matrix, Interior and Exterior Noise Standards, and Noise Ordinance Standards (included below), as well as goals and policies (City of Compton 2011).

- **Noise Goal 2.** Incorporate noise considerations into land use planning decisions.
    - **Noise Policy 2.1.** The City of Compton will require noise studies for new development projects and expansion of existing developments that will result in construction activities in excess of 30 days or projects that are 5,000 square feet or more of building or structure area or fifteen units or more, to measure and propose mitigation measures for noise impacts on the nearby community, especially on existing noise-sensitive land uses.
- **Noise Goal 3.** Control non-transportation noise impacts.
    - **Noise Policy 3.1.** The City of Compton will enforce the State standard of 65 dbA for exterior noise levels for all commercial uses.
    - **Noise Policy 3.3.** The City of Compton will require sound attenuation devices on construction equipment.
- **Noise Goal 3.** Control non-transportation noise impacts.
    - **Noise Policy 3.1.** The City of Compton will enforce the State standard of 65 dbA for exterior noise levels for all commercial uses.
    - **Noise Policy 3.3.** The City of Compton will require sound attenuation devices on construction equipment.

Exhibit 7-3 from the *Draft Compton General Plan 2030* presents the city's land use compatibility standards for community noise environments.

EXHIBIT 7-3
STATE OF CALIFORNIA RECOMMENDED LAND USE COMPATIBILITY STANDARDS
SOURCE: STATE OF CALIFORNIA



The Compton Municipal Code (City of Compton 1985) regulates noise levels in the city by referencing the Los Angeles County Noise Control Ordinance. The code makes it unlawful for any person to make or cause any loud, unnecessary, and unusual noise that disturbs the peace or quiet of any neighborhood or causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard that may be referred to in determining whether a violation exists may include, but not be limited to, the following: the level of noise; whether the nature of the noise is usual or unusual; the level and intensity of any background noise; the proximity of the noise to residential sleeping facilities; the nature and zoning of the area within which the noise emanates; the time of the day or night the noise occurs; the duration of the noise; and whether the noise is recurrent, intermittent, or constant.

Unincorporated County

Los Angeles County Code

Construction

The Los Angeles County Code Part 4 section 12.08.440 restricts construction noise (Los Angeles County 1978).

12.08.440 - Construction noise.

A. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer is prohibited.

B. Noise Restrictions at Affected Structures. The contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in the following schedule:

i. At Residential Structures.

a. Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short- term operation (less than 10 days) of mobile equipment:

	Single-family residential	**Multi-family residential**	**Semiresidential/ Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA

b. Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

	Single-family residential	**Multi-family residential**	**Semiresidential/ Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

C. All mobile or stationary internal-combustion-engine powered equipment or machinery to be equipped with suitable exhaust and air-intake silencers in proper working order.

Part 5 – EXEMPTIONS, Section 12.08.570 – Activities exempt from chapter restrictions, exemption H, Public Health and Safety Activities, states that:

All transportation, flood control, and utility company maintenance and construction operations at any time on public right-of-way, and those situations which may occur on private real property deemed necessary to serve the best interest of the public and to protect the public's health and well

being, including but not limited to street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, snow removal, house moving, vacuuming catchbasins, removal of damaged poles and vehicles, repair of water hydrants and mains, gas lines, oil lines, sewers, etc.

The Los Angeles County Code (Los Angeles County 1978) also specifies operating or permitting the operation of any device that creates vibration, which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hz (Los Angeles County Code, Section 12.08.560 Vibration (Ord. 11778 § 2 (Art. 5 § 501[d]), 1978: Ord. 11773 § 2 (Art. 5 § 501[d]), 1978).

Operation

12.08.390 - Exterior noise standards—Citations for violations authorized when.

A. Unless otherwise herein provided, the following exterior noise levels shall apply to all receptor properties within a designated noise zone:

Noise Zone	Designated Noise Zone Land Use (Receptor property)	Time Interval	Exterior Noise Level (dB)
I	Noise- sensitive area	Anytime	45
II	Residential properties	10:00 p.m. to 7:00 a.m. (nighttime)	45
		7:00 a.m. to 10:00 p.m. (daytime)	50
III	Commercial properties	10:00 p.m. to 7:00 a.m. (nighttime)	55
		7:00 a.m. to 10:00 p.m. (daytime)	60
IV	Industrial properties	Anytime	70

B. Unless otherwise herein provided, no person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

- Standard No. 1 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level from subsection A of this section; or, if the ambient L50 exceeds the foregoing level, then the ambient L50 becomes the exterior noise level for Standard No. 1.
- Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from subsection A of this section plus 5dB; or, if the ambient L25 exceeds the foregoing level, then the ambient L25 becomes the exterior noise level for Standard No. 2.
- Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from subsection A of this section plus 20dB; or, if the ambient L8.3 exceeds the foregoing level, then the ambient L8.3 becomes exterior noise level for Standard No. 3.
- Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from subsection A of this section plus 15dB; or, if the ambient L1.7 exceeds the foregoing level, then the ambient L1.7 becomes the exterior noise level for Standard No. 4.

- Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from subsection A of this section plus 20dB; or, if the ambient L0 exceeds the foregoing level then the ambient L0 becomes the exterior noise level for Standard No. 5.

C. If the measurement location is on a boundary property between two different zones, the exterior noise level utilized in subsection B of this section to determine the exterior standard shall be the arithmetic mean of the exterior noise levels in subsection A of the subject zones. Except as provided for above in this subsection C, when an intruding noise source originates on an industrial property and is impacting another noise zone, the applicable exterior noise level as designated in subsection A shall be the daytime exterior noise level for the subject receptor property.

D. The ambient noise histogram shall be measured at the same location along the property line utilized in subsection B of this section, with the alleged intruding noise source inoperative. If for any reason the alleged intruding noise source cannot be turned off, the ambient noise histogram will be estimated by performing a measurement in the same general area of the alleged intruding noise source but at a sufficient distance such that the noise from the alleged intruding noise source is at least 10dB below the ambient noise histogram in order that only the actual ambient noise histogram be measured. If the difference between the ambient noise histogram and the alleged intruding noise source is 5 to 10dB, then the level of the ambient noise histogram itself can be reasonably determined by subtracting a one- decibel correction to account for the contribution of the alleged intruding noise source.

E. In the event the intrusive exceeds the exterior noise standards as set forth in subsections B and C of this section at a specific receptor property and the health officer has reason to believe that this violation at said specific receptor property was unanticipated and due to abnormal atmospheric conditions, the health officer shall issue an abatement notice in lieu of a citation. If the specific violation is abated, no citation shall be issued therefor. If, however, the specific violation is not abated, the health officer may issue a citation.

Frame 3

City of Compton

Applicable regulations are described above.

Unincorporated County

Applicable regulations are described above.

City of Cudahy

City of Cudahy Municipal Code

Operation

20.60.070 Noise.

C. *Exterior noise standards.*

1. No person shall create or allow the creation of noise that causes the exterior noise level to exceed the noise standards set forth in Table 20.60-1.

Table 20.60-1. Maximum Exterior Noise Standards

Noise Level (dBA L_{max}) Receiving Land Use Category	10:00 p.m.–7:00 a.m.	7:00 a.m.–10:00 p.m.
Residential (except multi-family)	45	65
Multi-family residential and mobile home parks	50	65
Commercial and mixed-use	60	65
Industrial	70	70

2. Increases in the allowable exterior noise levels listed in Table 20.60-1 may be permitted in accordance with the standards outlined in Table 20.60-2:

Table 20.60-2. Permitted Increases in Noise Levels

Permitted Increase (dBA)	Duration (cumulative minutes per hour)
5	15
10	5
15	1
20	Less than 1 minute

D. *Interior Noise Standards.*

1. No person shall operate, or cause to be operated, any source of sound within a residential dwelling unit or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level, when measured inside a neighboring receiving dwelling unit, to exceed the environmental and/or nuisance interpretation of the applicable limits shown in Table 20.60-3:

Table 20.60-3. Maximum Interior Noise Standards

Land Use Type	Time Period	Maximum Noise Level (dBA)	
		Any time	1 min./1 hr.
Residential	10:00 p.m. to 7:00 a.m.	35	40
	7:00 a.m. to 10:00 p.m.	45	50
Mixed-use residential	All hours	45	50

20.60.090 Vibration.

A. *No Detectable Vibration*. No vibration shall be detectable beyond the property line of the site from which the vibration is emanating. The ground vibration caused by moving vehicles, trains, aircraft, or temporary construction/demolition activity is exempted.

City of Cudahy General Plan

Operations

The *Cudahy 2040 General Plan* includes the City of Cudahy's Noise and Land Use Compatibility Matrix (included below), goals, policies, and implementation measures used to reduce noise impacts within the city (City of Cudahy 2018).

Table NE-3: Cudahy Land Use Compatibility Standards for Community Noise Environments

Land Use Category	Community Noise Equivalent (CNEL), dB						
	55	60	65	70	75	80	85
Low-Density Residential							
Medium-Density Residential							
High-Density Residential							
Mixed Use Districts (civic, commercial)							
Neighborhood Commercial							
Entertainment							
Innovation Industrial							
Light Industrial							
Schools and Public Facilities (outside of Mixed-Use Civic)							
Open Space/Parks/ Recreation							

Key	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Specified land use is satisfactory, assuming buildings are of conventional construction	New development should be undertaken only after detailed analysis of noise reduction requirements are made	New development should be generally discouraged, if not, a detailed analysis of noise reduction requirements must be made	New development should generally not be undertaken

- **Goal NE-1.** Protect noise sensitive uses.
  - **Policy NE 1.1:** Limit hours of operation at all noise generation sources adjacent to noise sensitive areas or uses.
  - **Policy NE 1.2:** Require all exterior noise sources (construction operations air compressors, pumps, fans, and leaf blowers) to use available noise suppression techniques and devices to lower exterior noise to acceptable levels which are compatible with adjacent land uses.
- **Goal NE-2.** Clear and enforced noise regulations.
  - **Policy NE 2.5:** Require noise created by new non-transportation noise sources to be mitigated so as not to exceed acceptable interion and exterior noise level standards.
  - **Policy NE 2.6:** Implement appropriate standard construction noise controls for all construction projects.

City of Downey

City of Downey Municipal Code

Construction

The Downey Municipal Code Section 4606.5 exempts construction noise from the noise requirements of the municipal code (City of Downey 2020):

> Construction, repair or remodeling equipment and devices and other related construction noise sources shall be exempted from the provisions of this chapter provided a valid permit for such construction, repair, or remodeling shall have been obtained from the City. In any circumstance other than emergency work, no repair or remodeling shall take place between the hours of 9:00 p.m. of one day and 7:00 a.m. of the following day, and no repair or remodeling shall exceed eighty-five (85) db(A) across any property boundary at any time during the course of a twenty-four (24) hour day.

Operation

The Downey Municipal Code Section 4606.2 restricts noise from equipment and machinery (City of Downey 2020):

(a) No person shall use, operate, or permit to be used or operated within any R-1, R-2, or R-3 Zone, as defined in Chapter 1 of Article IX of this code, any power tool, machine, or equipment, or any other tool, machine, or equipment, between the hours of 10:00 p.m. and 7:00 a.m. in such a manner that the noise therefrom disturbs or interferes with the peace, comfort, or welfare of the neighboring inhabitants.

(b) No person shall use, operate, or permit to be used or operated within any commercial (C) or manufacturing (M) Zone, as defined in Chapter 1 of Article IX of this code, which is within three hundred (300') feet of a residential use, any power tool, machine, or equipment, or any other tool, machine, or equipment, between the hours of 10:00 p.m. and 7:00 a.m. in such a manner that the noise therefrom disturbs or interferes with the peace, comfort, or welfare of the neighboring residential inhabitants. (Added by Ord. 323, adopted 12-12-66; renumbered by Ord. 393, adopted 4-12-71; amended by Ord. 508, adopted 6-22-76; amended by Ord. 08-1225, adopted 2-12-08)

City of Downey General Plan

The *Downey Vision 2025 General Plan* includes the City of Downey's Noise and Land Use Compatibility Matrix and acceptable noise levels for land uses (included below), goals, policies, and programs designed to reduce noise within the city (City of Downey 2005).

FIGURE 6-1.2
NOISE/LAND USE COMPATIBILITY MATRIX

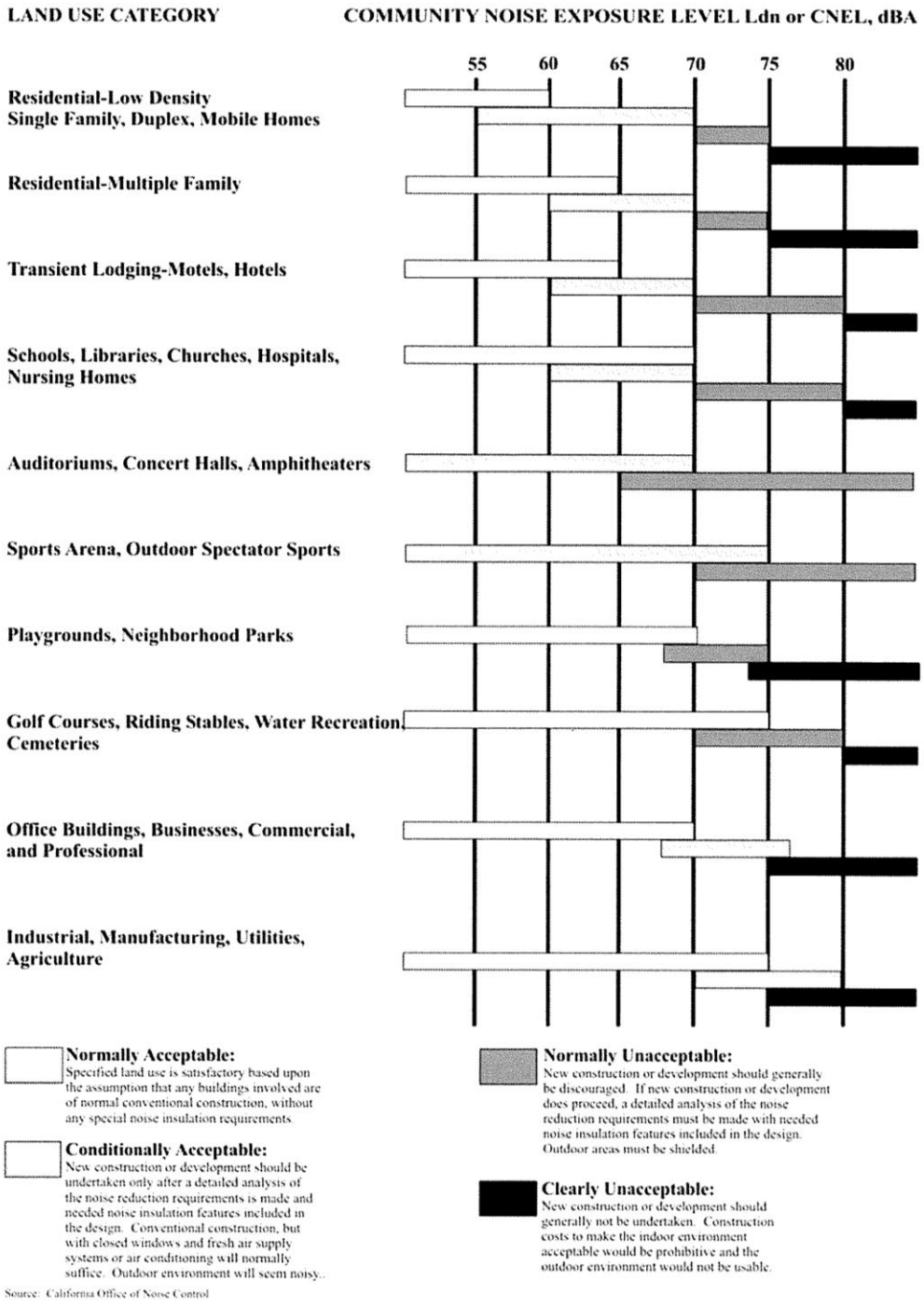


FIGURE 6-1.3
ACCEPTABLE NOISE LEVELS FOR LAND USES

Land Use	Interior	Exterior
Residential	45 dB (A) and below	60 dB (A) and below
Schools, parks, and other non-residential noise-sensitive land uses	45 dB (A) and below	60 dB (A) and below
Commercial	65 dB (A) and below	--
Industrial	70 dB (A) and below	--

NOTES:
All noise levels are CNEL, Community Noise Equivalent Level.
Interior noise levels based on windows closed.
Exterior areas for residential limited to rear yards of single-family uses, and patios/balconies and common recreational areas of multiple-family uses. Exterior areas for schools limited to playgrounds areas, picnic areas, and other areas of frequent human use.

- **Goal 6.1:** Protect persons from exposure to excessive noise:
    - **Policy 6.1.1:** Minimize noise impacts onto noise-sensitive uses
- **Program 6.1.1.2:** Ensure that new developments within areas with exterior noise at unacceptable levels are designed to maintain interior noise levels at acceptable levels.
- **Program 6.1.1.3:** Continue to enforce provisions prohibiting construction activities during noise-sensitive hours.

City of Lynwood

City of Lynwood Municipal Code

Construction

The Lynwood Municipal Code Section 3-12.13, Construction of Buildings and Projects, limits noise from the noise requirements of the municipal code (City of Lynwood 2018):

> It shall be unlawful for any person within a residential zone, or within a radius of five hundred feet'(500') therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten o'clock (10:00) P.M. of one day and seven o'clock (7:00) A.M. of the next day in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the director of development services or his or her designee. No permit shall be required to perform "emergency work" as defined in subsection 3-12.2 of this section.

Operation

The Lynwood Municipal Code Section 3-12.5, Ambient Noise Level, states (City of Lynwood 2018):

(a) It is unlawful for any person within the city to make, cause, or allow to be produced noise which is received on property occupied by another person within the designated zone in excess of the following levels, except as expressly provided otherwise in this section:

Standards

Zone	Day 7:00 a.m. to 7:00 p.m.	Evening 7:00 p.m. to 10:00 p.m.	Night 10:00 p.m. to 7:00 a.m.
R-1 and R-2	60	60	60
R-3	60	60	55
Commercial	65	65	60
Manufacturing	75	75	75

(b) At the boundary line between two (2) different zones, the noise level of the quieter zone shall be used. (Ord. #1570, §2)

City of Lynwood General Plan

The *City of Lynwood General Plan* includes goals, policies, and implementation measures to manage noise within the city (City of Lynwood 2003).

- **Goal NOI-1.** Protect those living, working, and visiting the community from exposure to excessive noise.
    - **Policy NOI-1.3:** Protect Residential Areas: Ensure that exterior noise levels for dwellings in residential areas do not exceed exterior noise level of 65 dBA CNEL and interior noise levels of 45 dBA CNEL.
    - **Policy NOI-1.5:** Construction Noise: Provide guidelines to contractors for reducing potential noise impacts on surrounding land uses.

City of Paramount

City of Paramount Municipal Code

Construction

The Paramount Municipal Code Section 45-7, Same – Sources of noise, states (City of Paramount 2004):

> The provisions of this chapter shall apply to, but shall not be limited to, the control, use and operation of the following noise sources whose use, operation, work, employment or other action creates, maintains, permits or causes to be created or maintained, any excessive, unnecessary, unwanted or annoying noise, sound, cry or behavior which exceeds the noise standards as set forth in section 45-4, unless specifically exempted.
>
> (a) Construction equipment or work including but not limited to the operation, use or employment of pile drivers, hammers, saws, steam shovels, pneumatic hammers, drills, derricks, steam or electric hoists, motorized mechanical equipment or other similar construction equipment.
>
> (1) Exemption: Construction, repair or remodeling equipment and devices and other related construction noise sources shall be exempted from the provisions of this chapter provided a permit for such construction, repair or remodeling shall have been obtained for such construction, repair or remodeling from the building department of the city and the construction, repair or remodeling does not take place between the hours of 8:00 P.M. and 7:00 A.M.
>
> (2) Exemption: Any construction, repair or remodeling necessary as defined as emergency work, machinery or vehicles. (Ord. No. 317)

Operation

The Paramount Municipal Code 45-4, Noise Performance Standards, states (City of Paramount 2004):

> The following noise standards, unless otherwise specifically indicated, shall apply to all property within their assigned noise zones and such standards shall constitute the maximum permissible noise level within the respective zones.
>
> **NOISE STANDARD**
>
Noise Zone	Day (maximum) 6:00 a.m. to 10:00 p.m.	Night (maximum) 10:00 p.m. to 6:00 a.m.
Industrial and Commercial	82 decibels	77 decibels
R1 and R2	62	57
R3 and R4	67	62
>
> Sec. 45-7. Same--Sources of noise.
>
> The provisions of this chapter shall apply to, but shall not be limited to, the control, use and operation of the following noise sources whose use, operation, work, employment or other action creates, maintains, permits or causes to be created or maintained, any excessive, unnecessary, unwanted or annoying noise, sound, cry or behavior which exceeds the noise standards as set forth in section 45-4, unless specifically exempted.
>
> (a) Radios, televisions, musical instruments, drums or other percussion instruments, tape recorders, sound trucks or vehicles, whether mobile or stationary, public address systems, loudspeakers, bull horns, sound equipment or other devices or machines used for producing, reproduction or amplification of music, instructions, talks, speeches, addresses or lectures, or for attracting attention by persons selling merchandise, food or beverage or other similar purposes.
>
> (1) No person shall operate a loudspeaker or sound amplifying equipment for the purpose of transmitting sound to any assemblage of persons in the city without first filing a registration statement and obtaining approval from the city manager, and as otherwise required by chapter 37 of this Code as related to sound and advertising vehicles….
>
> (c) Air conditioning units, refrigeration equipment, fans, blowers, pumps, engines, turbines, compressors, generators, saws, grinders, motors or other similar devices, equipment or apparatus.

City of Paramount General Plan

The *Paramount General Plan* includes the City of Paramount's Noise and Land Use Compatibility Matrix (included below) (City of Paramount 2007).

Table 5-1
Noise and Land Use Compatibility Guidelines

Land Use	Maximum Desirable Noise Level	Maximum Acceptable Noise Level
Low Density Residential	55 dBA	65 dBA
Medium Density Residential	60 dBA	65 dBA
High Density Residential	65 dBA	70 dBA
Schools	60 dBA	70 dBA
Office and Commercial	65 dBA	75 dBA
Industrial	70 dBA	75 dBA

City of South Gate

City of South Gate Municipal Code

Construction

The South Gate Municipal Code Section 11.34.110 states the following (City of South Gate 2020):

> The owner or operator of a noise source that violates any of the provisions of this chapter may file a variance application, consistent with the procedures of Chapter 11.51, Permits and Procedures.
>
> A variance application shall detail the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations, the NCO shall consider the following:
>
> 3. The magnitude of nuisance caused by the offensive noise.
> 4. The uses of property within the area of impingement by the noise.
> 5. The time factors related to study, design, financing, and construction of remedial work.

Operation

The South Gate Municipal Code Section 11.34.080 sets maximum sound levels by noise zone (City of South Gate 2020):

A. Noise Zone Standards. Table 11.34-1, Noise Zone Standards, establishes noise-level standards and temporary maximum standards applicable to land use categories by noise zone. No person shall make, cause, or allow noise that exceeds the standards of Table 11.34-1, inclusive of ambient noise. These standards are inclusive of all noise sources, including ambient noise, animals, equipment, firearms, people gatherings or parties, tools, vehicles, or other noise source resulting in temporary or sustained noise levels in excess of the standards of Table 11.34-1 and 11.34-2, Permitted Temporary Noise Level Increase.

Table 11.34-1
Noise Zone Standards

Noise Zone	Land Use Category	Noise Standard	
		Standard	Time Period
I	Noise-Sensitive Area	45 dBA	Anytime
II	Residential Properties (in any zone)	50 dBA	7 a.m. to 10 p.m.
		40 dBA	10 p.m. to 7 a.m.
III	Commercial Properties	55 dBA	Anytime
IV	Industrial Properties	65 dBA	Anytime

This table is consistent with Table N-5 of the South Gate general plan noise element.
dBA = A-weighted decibel L_{eq} standard.

B. Noise-Sensitive Zones. Creating or causing the creation of any noise disturbance within any noise-sensitive zone; provided, that conspicuous signs are displayed indicating the presence of the zone; shall be prohibited.

1. Noise-sensitive zones shall be indicated by the display of conspicuous signs in at least three separate locations within six hundred feet of the institution or facility.

C. Permitted Temporary Increase. Table 11.34-2 establishes the maximum temporary noise level increases permitted in any noise zone based on the duration of noise.

Table 11.34-2
City of South Gate Permitted Temporary Noise Level Increase

Permitted Maximum Increase	Noise Duration
+ 5 dBA	30 mins. per hour
+ 10 dBA	15 mins. per hour
+ 12 dBA	10 mins. per hour
+ 15 dBA	5 mins. per hour
+ 20 dBA	2 mins. per hour

dBA = A-weighted decibel L_{eq} standard.
mins. = minutes.

D. Measurement of Noise. All noise standards shall be based on the actual measured ambient noise level, as measured at the closest adjoining property line between habitable parcels or at the nearest public right-of-way.

E. Unit of Measure. The unit of measure shall be designated as an A-weighted decibel (dBA), equivalent continuous sound level (Leq) standard. Noise shall be measured with a sound level meter that meets the standards of the American National Standards Institute (Section S1.4-1979, Type 1 or Type 2). A calibration check shall be made of the instrument at the time any noise measure is made.

F. Location of Measure.

1. Exterior Noise. Noise levels shall be measured in decibels at the property line of the receptor property, and at least four feet above the ground and ten feet from the nearest structure or wall, where possible.

2. Interior Noise. Interior noise shall be measured within the building or structure, and at least four feet from any wall, ceiling, or floor nearest the noise source.

The South Gate Municipal Code Section 11.34.090, Noise activity standards, identifies thresholds for vibration (City of South Gate 2020):

Noise generated by the following acts is considered to be in violation of the noise standards of this chapter.

B. Vibration produced from the operation of any device or equipment shall not exceed a motion velocity of 0.01 inches per second over a range of one to one hundred Hertz.

City of South Gate General Plan

The *South Gate General Plan 2035* includes the City of South Gate's Noise and Land Use Compatibility Matrix and applicable noise standards by noise zone (included below), as well as Goals, Objectives, and Policies meant to reduce noise within the city (City of South Gate 2009).

Table N-4: Noise and Land Use Compatibility Matrix

	Community Noise Exposure (Ldn or CNEL, dBA)			
Land Use Category	**Normally Acceptable**	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	75–85
Residential - Multiple Family	50–65	60–70	70–75	70–85
Transient Lodging - Motel, Hotels	50–65	60–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	80–85
Auditoriums, Concert Halls, Amphitheaters	NA	50–70	NA	65–85
Sports Arenas, Outdoor Spectator Sports	NA	50–75	NA	70–85
Playgrounds, Neighborhood Parks	50–70	NA	67.5–75	72.5–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–70	NA	70–80	80–85
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	NA

NA: Not Applicable

Source: Office of Planning and Research, California, General Plan Guidelines, October 2003.

Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable – New construction or development should generally not be undertaken.

Table N-5: South Gate Noise Ordinance Standards

Noise Zone	Noise Standards	
	Noise Level	**Time Period**
1 – Noise Sensitive Area	45 dBA	Anytime
2 – Residential Properties	50 dBA	7:00 a.m.–10:00 p.m.
	40 dBA	10:00 p.m.–7:00 a.m.
3 – Commercial Properties	55 dBA	Anytime
4 – Industrial Properties	65 dBA	Anytime

- **Goal N 1.** A reduction in noise levels created by construction and maintenance activities.
    - **Objective N 1.1:** Minimize noise levels from construction and maintenance equipment, vehicles, and activities.

    Policies

    - **P.1:** Construction activities will be prohibited between the hours of 7:00 pm to 8:00 am Monday through Saturday and on Sundays and Federal Holidays.
    - **P.2:** Construction noise reduction methods will be employed to the maximum extent feasible. These measures may include, but not limited to, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric air compressors and similar power tools, rather than diesel equipment.
    - **P.3:** Prior to approval of project plans and specification by the City, project applicants and/or construction contractors will identify construction equipment and noise reducing measures, and the anticipated noise reduction.
- **Goal N 2.** An effective land use planning and development review process to ensure noise impacts are addressed.
    - **Objective N 2.1:** Ensure noise impacts are considered in land use planning decisions.
        - **P.1:** The City will adhere to the noise standards identified in Table N-4.
        - **P.6:** The City will require that all new non-residential development will demonstrate that ambient noise levels will not exceed an exterior noise level of 65 dBA CNEL.
        - **P.7:** New development projects will provide buffers and/or appropriate mitigation measures to reduce potential noise sources on noise sensitive land uses.
        - **P.9:** The City will work to ensure acceptable noise levels are maintained near residential areas, schools, hospitals, convalescent homes, churches, and other noise sensitive areas.
        - **P.11:** The City should work with adjacent jurisdictions to minimize noise impacts to South Gate from projects that occur outside of the City.

Frame 4

Unincorporated County

Applicable regulations are described above.

City of Bell

City of Bell Municipal Code

The Bell Municipal Code Section 8.28.020, Loud or unusual noise prohibited, states (City of Bell 2020):

> Notwithstanding any other provisions of this chapter, it is unlawful for any person to make, cause or permit any loud or unusual noise to emanate from any activity taking place on real property owned or occupied by such person, which has the effect of disturbing the peace and quiet of the neighborhood, or which directly causes an unreasonable interference with the use, enjoyment and/or possession of any real property owned or occupied by any other person.

City of Bell General Plan

The *City of Bell 2030 General Plan* includes policies meant to reduce noise within the city (City of Bell 2018).

- **Health and Safety Element Policy 18**. The City of Bell shall consider planning guidelines which include noise control for all new residential developments and condominium conversion projects. The City shall promote design measures that will be effective in reducing noise reduction in the review of new development projects.
- **Health and Safety Element Policy 19**. The City of Bell shall require that future development projects and existing land uses reduce unnecessary noise near noise-sensitive areas such as residences, parks, hospitals, libraries, convalescent homes, etc. The City shall enforce the existing noise control regulations such as those included in the Bell Municipal Code.
- **Health and Safety Element Policy 20.** The City of Bell shall encourage the reduction of noise throughout the City in the review of new development. New development projects will undergo review to ensure that noise impacts from such developments are reduced as much as possible.
- **Health and Safety Element Policy 21**. The City of Bell shall promote the development of a compatible noise environment throughout the City. The City shall consider noise and land use compatibility in the review of new development projects.

City of Bell Gardens

City of Bell Gardens Municipal Code

Construction

The Bell Gardens Municipal Code Section 16.24.120, Construction of buildings and projects – Restriction, states (City of Bell Gardens 2020):

> Between the hours of 7:00 p.m. of one day and 8:00 a.m. of the next day, it is unlawful for any person within a residential zone, or within a radius of 500 feet therefrom, to operate equipment, or perform any outside construction or repair work on buildings, structures, or projects, or operate any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other construction device in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance, unless beforehand a permit therefor has been duly obtained from the officer or body of the city having the function to issue permits of this kind. No permit shall be required to perform emergency work as defined in BGMC 16.24.020.

Operations

Section 16.24.110, Machinery, pumps, air conditioners, and similar mechanical devices – Restriction. states:

> It is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five decibels based on a reference sound pressure of 0.0002 microbars as measured in any octave band center frequency, in cycles per second, as follows: 63, 125, 250, 500, 1,000, 2,000, 4,000, and 8,000, and for the combined frequency bands ("A" band). (Ord. 276, 1971; prior code § 5409).

City of Bell Gardens General Plan

The *City of Bell Gardens General Plan 2010* includes the City of Bell Gardens' Noise and Land Use Compatibility Matrix (included below), as well as Policies meant to reduce noise within the city (City of Bell Gardens 1995).

- **Policy 1:** The City of Bell Gardens shall discourage the incompatible use of property along major transportation lines, and encourage noise reduction measures for existing uses.
- **Policy 2:** The City of Bell Gardens shall ensure that the noise cued by sources other than traffic (construction etc.) are at acceptable levels.

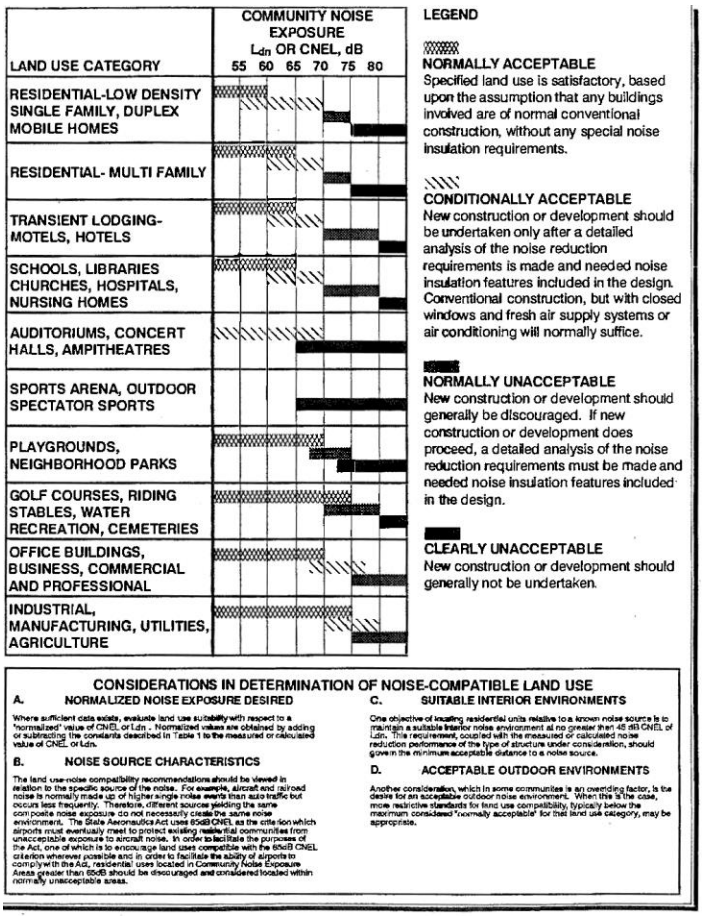


EXHIBIT 7-3
NOISE COMPATIBILITY

City of Commerce

City of Commerce Municipal Code

Construction

The Commerce Municipal Code Section 19.19.160 subsection K states (City of Commerce 2000):

K. The following acts, or the causing thereof, are declared to be in violation of this subsection:

3. No person or organization within any residential zone, or within a radius of five hundred feet of a residential zone, shall operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or operate any pile driver, steam shovel, pneumatic hammer, derrick, steam, electric hoist, or other construction type device between the hours of ten p.m. and seven a.m., unless a permit has been obtained from the city.

Commerce Municipal Code Section 19.19.180 also states (City of Commerce 2000):

Vibration may disturb the conduct of certain activities and create discomfort for some individuals. To minimize the disturbance and inconvenience from vibrations, the following performance standards shall apply to all uses:

A. No use shall cause or create ground vibration that is harmful or injurious to the use or development of surrounding properties.

B. No person or use shall create, maintain, or cause ground vibration that is perceptible without instruments to a person of normal sensitivity at any point on a property that is adjacent to the property of the vibration source.

Operation

The Commerce Municipal Code Section 19.19.160 also sets noise standards based on zone as well as permissible exterior and interior increases in noise levels (City of Commerce 2000):

E. No person shall, at any location within the city, create nor allow the creation of noise on property owned, leased, occupied, or otherwise controlled by such person, that causes the noise level when measured on any property to exceed the ambient noise level or the noise standards set forth in Table 19.19.160A, whichever is greater.

F. Increases in permitted noise levels prescribed in Table 19.19.160A may be permitted in accordance with the standards outline in Table 19.19.160B.

Table 19.19.160A
Noise Standards

Zone	Time	Allowable Noise Level - dBA
Residential	7 a.m.–7 p.m. (day)	55
Residential	7 p.m.–10 p.m. (evening)	50
Residential	10 p.m.–7 a.m. (night)	45
Commercial	7 a.m.–10 p.m. (day/evening)	65
Commercial	10 p.m.–7 a.m. (night)	55
Industrial	Anytime	70

Table 19.19.160B
Permitted Increases in Noise Levels

Permitted increase (dBA)	Duration of increase (cumulative minutes/hour)
5	15
10	5
15	1
20	Less than one minute

G. If the receptor property of a noise is located on the boundary between two different noise zones, the lower noise level standard applicable to the quieter zone shall apply.

H. If a noise source is continuous and cannot be reasonably discontinued for sufficient time in which to determine the ambient noise level, the measured noise level obtained while the source is in operation shall be compared directly to the noise level standards in Table 19.19.160B.

I. No person shall, at any location within the city, create any noise, nor shall any person allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person that causes the noise level when measured within any receptor dwelling unit to exceed the noise standards outlined in Table 19.19.160C.

Table 19.19.160C
Permitted Increases in Interior Noise Levels

Allowable (dbA)	Time (cumulative minutes per hour)
45	Anytime
+5	1 minute
10	Less than one minute

City of Commerce General Plan

The *City of Commerce 2020 General Plan* includes the City of Commerce's Noise and Land Use Compatibility Matrix (included below), as well as policies intended to reduce noise (City of Commerce 2008).

Table 7-1
Noise and Land use Compatibility Standards

Land Use	Desirable Maximum	Maximum Acceptable
Low-Density Residential	55 dBA	65 dBA
Medium-Density Residential	60 dBA	65 dBA
High-Density Residential	65 dBA	70 dBA
Schools	60 dBA	70 dBA
Office Commercial	65 dBA	75 dBA
Industrial	70 dBA	75 dBA

7.3.6 Issue: Noise Control Measures

Noise levels may be significantly reduced by employing relatively simple design measures, such as the use of sound walls, extra insulation, double-paned windows, etc. The following policies

underscore the city's continued efforts to control noise exposure through land use planning and building design.

- **Safety Policy 6.1.** The City of Commerce will ensure that residents are protected from harmful and irritating noise sources to the greatest extent possible.
- **Safety Policy 6.2.** The City of Commerce will work with businesses in the city and other public agencies to identify ways to reduce noise impacts throughout the city.
- **Safety Policy 6.3.** The City of Commerce will continue to enforce the existing city's noise control ordinance.
- **Safety Policy 6.4.** The City of Commerce will incorporate noise considerations into land use planning decisions.

City of Huntington Park

City of Huntington Park Municipal Code

Construction

The Huntington Park Municipal Code Section 9-3.506, Exceptions to provisions, states (City of Huntington Park 2001):

> The following activities shall be exempted from the provisions of this Article:
>
> 5. Noise sources associated with construction, repair, remodeling or grading of any real property, provided the activities do not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sundays or Federal holidays;
> 6. Noise sources associated with the maintenance of real property, provided the activities do not take place between 8:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or earlier than 9:00 a.m. on Sundays and Federal holidays;

Operations

The Huntington Park Municipal Code Section 9-3.504, Excessive noise prohibited, regulates noise within the city (City of Huntington Park 2001):

> It shall be unlawful for any person to willfully make or continue, or willfully cause to be made or continue, any loud, unnecessary or unusual noise that disturbs the peace or quiet of any neighborhood or constitutes a public nuisance.

City of Huntington Park General Plan

The *City of Huntington Park 2030 General Plan* includes the City of Huntington Park's goals and policies designed to reduce noise (City of Huntington Park 2017).

- **Health and Safety Element Policy 25.** The City of Huntington Park shall ensure acceptable noise levels near schools, hospitals, convalescent homes, and other noise-sensitive areas.
- **Health and Safety Element Policy 31.** The City of Huntington Park shall reduce noise generated by building activities by requiring sound attenuation devices on construction equipment.

City of Maywood

Construction

The Maywood Municipal Code Section 5-23.11, Exemptions, states (City of Maywood 2019):

The following activities shall be exempted from the provisions of this chapter:

(c) Noise sources associated with the construction, repair, remodeling, or grading of any real property or during authorized seismic surveys provided such activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sunday or a Federal holiday, and provided the noise level created by such activities does not exceed the noise standard of seventy (70) dBA plus the limits specified in Section 5-23.08 of this chapter as measured on residential property and does not endanger the public health, welfare, and safety;

(d) All mechanical devices, apparatus, and equipment associated with agricultural operations provided such operations do not take place between 8:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sunday or a Federal holiday;

(e) Noise sources associated with the maintenance of real property provided such activities take place between the hours of 7:00 a.m. and 8:00 p.m. on any day, except Sunday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sundays;

Operation

The Maywood Municipal Code Sections 5-23.06 through 5-23.08 also set noise standards based on zone as well as permissible exterior and interior increases in noise levels (City of Maywood 2019).

5-23.06 - Designated noise zones.

The following described receptor properties are hereby assigned to the following noise zones:

(a) Noise Zone I: Single-family, double-family, and multiple-family residential properties;

(b) Noise Zone II: Commercial properties; and

(c) Noise Zone III: Manufacturing and industrial properties.

5-23.07 - Exterior noise standards.

(a) The following noise standards, unless otherwise specifically indicated, shall apply to all receptor properties within the designated noise zones:

Noise Zone	Type of Land Use (Receptor Property)	Time Interval	Allowable Exterior Noise Level
I	Single-family, double-family, or multiple-family residential	10:00 p.m.–7:00 a.m.	55 dBA
		7:00 a.m.–10:00 p.m.	60 dBA
II	Commercial	10:00 p.m.–7:00 a.m.	65 dBA
		7:00 a.m.–10:00 p.m.	70 dBA
III	Manufacturing or industrial	Any time	75 dBA

(b) No person, in any location within the City, shall create any noise, or allow the creation of any noise, on property owned, leased, occupied, or otherwise controlled by such person (referred to in this chapter as "noise source") which causes the noise level when measured on any property (referred to in this chapter as "receptor property") to exceed:

(1) The applicable noise standard for a cumulative period of more than thirty (30) minutes in any hour; or

(2) The applicable noise standard plus five (5) dBA for a cumulative period of more than fifteen (15) minutes in any hour; or

(3) The applicable noise standard plus ten (10) dBA for a cumulative period of more than five (5) minutes in any hour; or

(4) The applicable noise standard plus fifteen (15) dBA for a cumulative period of more than one minute in any hour; or

(5) The noise standard plus twenty (20) dBA for any period of time.

(c) In the event the ambient noise level exceeds any of the noise limit categories set forth in subsections (l), (2), or (3) of subsection (b) of this section, the cumulative period applicable to such category shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) If the receptor property is located on a boundary between two (2) different noise zones, the noise level standard applicable to the quieter noise zone shall apply.

(e) If the noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the receptor property's designated land use and for the time of day the noise level is measured.

5-23.08 - Interior noise standards.

(a) The following noise standard, unless otherwise specifically indicated, shall apply to all residential receptor property within all noise zones:

Noise Zone	Type of Land Use (Receptor Property)	Time Interval	Allowable Noise Level
All	Residential	Any time	45 dBA

The noise limit specified in this subsection shall be reduced by five (5) dBA for noise consisting of speech or music; provided, however, if the ambient noise level exceeds the resulting standard, the ambient shall be standard.

(b) No person, at any location within the City, shall create any noise, or allow the creation of any noise, on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level when measured within any receptor residential dwelling unit in any noise zone to exceed:)

(1) The interior noise standard for a cumulative period of more than five (5) minutes in any hour; or

(2) The interior noise standard plus five (5) dBA for a cumulative period of more than one minute in any hour; or

(3) The interior noise standard plus ten (10) dBA for any period of time.

(c) In the event the ambient noise level exceeds the noise limit categories set forth in subsections (1) or (2) of subsection (b) of this section, the cumulative period applicable to such category shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) If the receptor property is located on a boundary between two (2) different noise zones, the noise level standard applicable to the quieter noise zone shall apply.

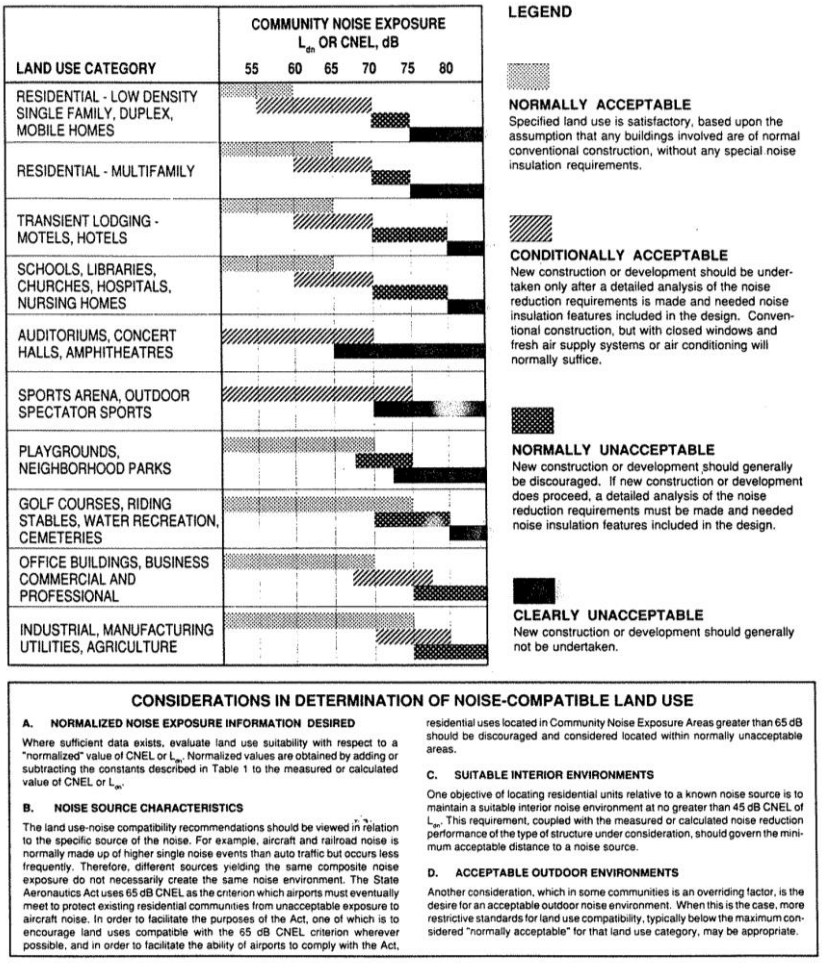
(e) If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the same procedure set forth in subsection (e) of Section 5-23.07 of this chapter shall be deemed proper to enforce the provisions of this section.

City of Maywood General Plan

The *City of Maywood General Plan* includes the City of Maywood's Noise and Land Use Compatibility Matrix (included below), as well as goals and policies designed to reduce noise (City of Maywood 2020).

- **Goal 1.** Prohibit any unnecessary, excessive, offensive noises, or increase in noise levels over acceptable levels, which are detrimental to the public health and welfare.
    - **Policy 1.1:** Implement criteria and guidelines established in this noise element for use in setting standards for the control and abatement of noise emission, transmission, and exposure as set forth in the noise element.
    - **Policy 1.2:** Control any sounds which exceed community accepted levels at their source through enforcement.
    - **Policy 1.4:** Prevent any increase in acceptable ambient levels of sound in the residential areas of the community by implementing local noise standards.

Exhibit 7-1. Noise Compatibility



Source: California Department of Health, Guidelines for the Preparation and Content of Noise Elements of The General Plan, February, 1976

City of Vernon

Operation

The Vernon Municipal Code Section 26.4.1-7 Development and Performance Standards, subsection (b) (2) states (City of Vernon 2020):

(i) The following noise standards, unless otherwise specifically indicated, shall apply to all Lots within the designated noise zones, measured cumulatively with existing noise from all businesses on the Lot.

Table 26.4.1-7(b)(2)
Noise Standards

Noise Zone	Time Interval	Allowable Exterior Noise
Lots located within one tenth (1/10) of a mile of any residence or school located in Vernon or abutting communities.	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	60 dBA 65 dBA
All other Lots	Any time	75 dBA

(ii) No Person, in any location within the City, shall create any noise, or allow the creation of noise, on any Lot owned, leased, occupied or otherwise controlled by such Person which causes the cumulative noise level when measured at any point along the Lot line of the Lot on which the source of the noise is located to exceed:

(A) The applicable noise standard for a cumulative period of more than thirty (30) minutes in any hour; or

(B) The applicable noise standard plus five (5) dBA for a cumulative period of more than fifteen (15) minutes in any one hour; or

(C) The applicable noise standard plus ten (10) dBA for a cumulative period of more than five (5) minutes in any hour; or

(D) The applicable noise standard plus fifteen (15) dBA for a cumulative period of more than one (1) minute in any hour; or

(iii) In the event the ambient noise level exceeds any of the noise limit categories set forth in subsections (A), (B), or (C) of subsection 2(ii) of this Section, the cumulative period applicable to such category shall be increased to reflect the ambient noise level, plus 5 dBA.

(iv) If a Lot is located on a boundary between two (2) different noise zones, the noise level standard applicable to the quieter noise zone shall apply.

(v) If the noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the Lot's designated noise zone for the time of day the noise level is measured.

(vi) Any noise source in excess of the standards set forth herein shall be permitted only with a Conditional Use Permit.

City of Vernon General Plan

The *City of Vernon General Plan* includes the City of Vernon's Noise and Land Use Compatibility Matrix (included below), as well as goals and policies designed to reduce noise (City of Vernon 2015).

Figure N-3: Community Noise Standards

Land Use Category	CNEL, dB						
	50	55	60	65	70	75	80
Residential - Multi-family, Duplex	A	A	B	B	B	C	C
Schools, Churches	A	A	B	C	C	C	D
Office Building, Research & Development, Professional Offices, City Office Building	A	A	A	B	B	C	C
Commercial Retail, Banks, Restaurants	A	A	A	A	B	B	C
Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

A **CLEARLY COMPATIBLE**

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional contruction without any special noise insulation requirements.

B **NORMALLY COMPATIBLE**

New construction or development should be undertaken only after detailed analysis of the noise reduction requirements is made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

C **NORMALLY INCOMPATIBLE**

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

D **CLEARLY INCOMPATIBLE**

New construction or development should generally not be undertaken.

Frame 5

City of Los Angeles

Applicable regulations are described above.

Frame 6

City of Los Angeles

Applicable regulations are described above.

City of Glendale

Construction

The Glendale Municipal Code Section 8.36.080, Construction on Buildings, Structures and Projects, states (City of Glendale 1991):

> It is unlawful for any person within a residential zone, or within a radius of five hundred feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects within the city between the hours of seven p.m. on one day and seven a.m. of the next day or from seven p.m. on Saturday to seven a.m. on Monday or from seven p.m. preceding a holiday, as designated in Chapter 3.08 of this code, to seven a.m. following such holiday unless beforehand a permit therefor has been duly obtained from the building official. No permit shall be required to perform emergency work as defined in this chapter.

Operation

The Glendale Municipal Code Section 8.36.040, Presumed noise standards, and 8.36.050, Minimum and maximum ambient noise levels, state:

8.36.040 Presumed noise standards.

A. The following exterior noise standards, unless otherwise specifically indicated, shall apply to all property within a designated zone:

Zone	Decibels	Time
Cemetery and residential (single family and duplex)	45 dBA	Nighttime
Cemetery and residential (single family and duplex)	55 dBA	Daytime
Residential (multifamily, hotels, motels and transient lodgings)	60 dBA	Anytime
Central business district and commercial	65 dBA	Anytime
Industrial	70 dBA	Anytime

B. The following interior noise standards, unless otherwise specially indicated, shall apply to all residential property within a designated zone:

Zone	Decibels	Time
Residential	45 dBA	Nighttime
Residential	55 dBA	All Other Times

C. In any overlay zones, the underlying zone shall determine the presumed ambient noise level.

8.36.050 Minimum and maximum ambient noise levels.

A. Where the actual ambient is less than the presumed ambient, the actual ambient shall control and any noise in excess of the actual ambient, plus five dbA, shall be a violation.

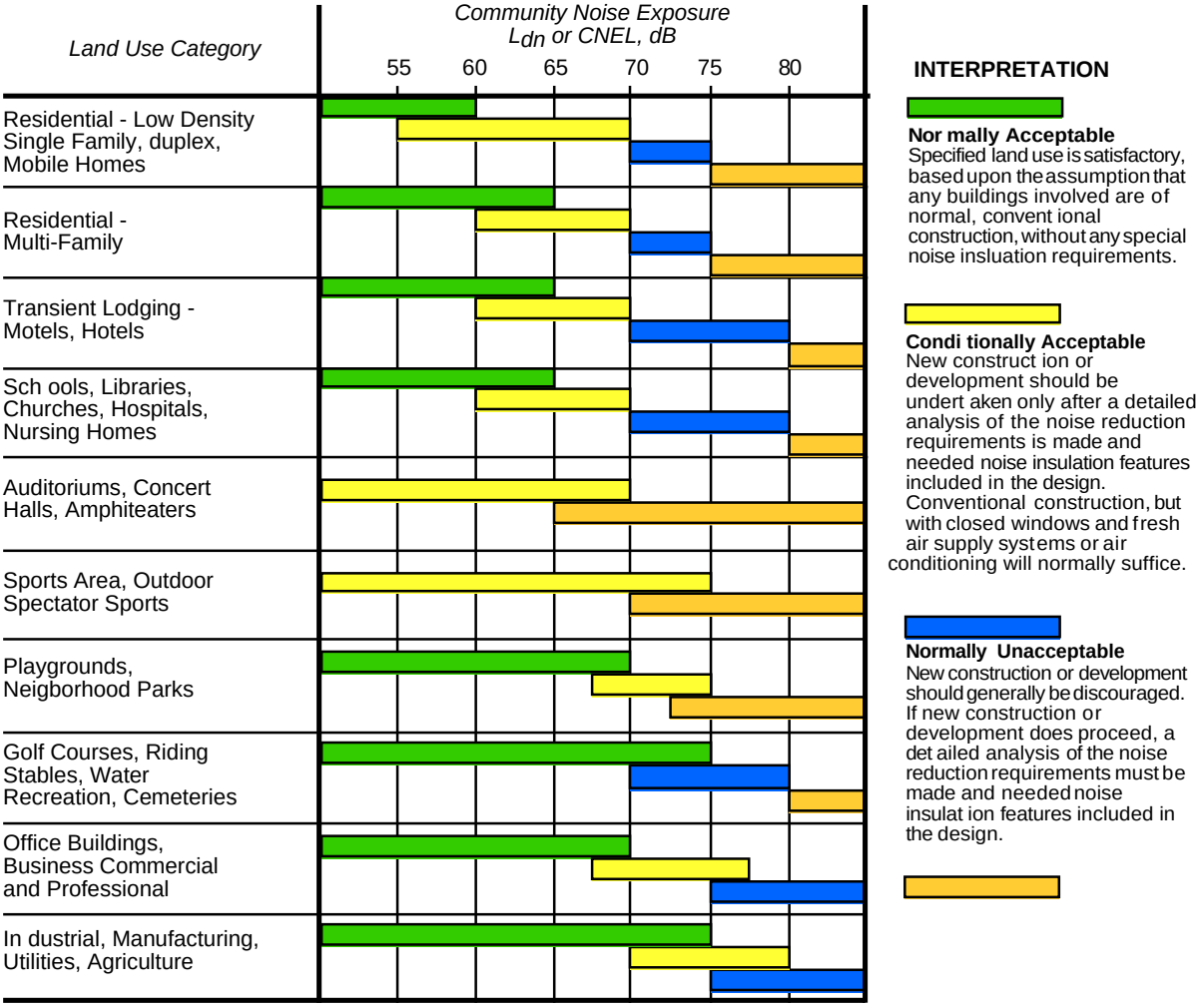
B. Where the actual ambient is equal to or more than the presumed ambient, the actual ambient shall control and any noise may not exceed the actual ambient by more than five dbA; however, in no event may the actual ambient exceed the presumed noise standards by five dbA.

C. At the boundary line between two zones, the arithmetic average of the presumed ambient noise levels shall be used.

City of Glendale General Plan

The *City of Glendale General Plan* includes the City of Glendale's Noise and Land Use Compatibility Matrix and interior/exterior noise standards (included below), as well as goals and policies included below (City of Glendale 2007).

Table 1
Noise/Land Use Compatibility Table



Source: State of California, "General Plan Guidelines," 1998.

Table 2
INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use Categories		Noise Standards	
Categories	**Uses**	**Interior CNEL**	**Exterior CNEL**
Residential	Single Family	45 (1)	65 (2)
	Multi-Family	45 (1)	65 (3)
	Residential within Mixed Use	45 (1)	--
Commercial	Hotel, Motel, Transient Lodging	45 (1)	--
Institutional	Hospital, School Classroom, Church, Library	45 (1)	--
Open Space	Parks (4)	--	65

Notes:
1. Applies to the indoor environment excluding bathrooms, toilets, closets and corridors.
2. Applies to the outdoor environment limited to the private yard of single family residences (normally the rear yard).
3. Applies to the patio area where there is an expectation of privacy (i.e., not a patio area which also serves as, or is adjacent to, the primary entrance to the unit).
4. Only applies to parks where peace and quiet are determined to be of prime importance, such as hillside open space areas open to the public. Generally, would not apply to urban parks or active- use parks.

Goal 3: Continue incorporating noise considerations into land use planning decisions

Policy 3.1 Ensure that land uses comply with adopted standards.

Program 3.1 Use the criteria in Table 1 and standards in Table 2 to assess the compatibility of proposed land uses with the noise environment. New land uses, as described in the Land Uses column of Table 2, in a 60 CNEL or higher noise contour, as shown on the map of the 2030 Noise Contours, Exhibit 2, may be subject to potentially significant environmental impacts that must be addressed by a noise study. The study, prepared by a qualified consultant (to the satisfaction of the City), shall address the noise environment and propose appropriate conditions of approval or mitigation measures to comply with the interior and exterior noise standards as shown in Table 2. Interior tenant improvements, signs, and exterior remodeling will not normally be subject to review under this Program.

Goal 4: Enhance measures to control construction noise impacts

Policy 4.1: Amend the Noise Ordinance to address construction noise problems.

Program 4.1 Change the permitted hours of construction to Monday through Friday, 7 a.m. to 7 p.m. and on Saturday from 9 a.m. to 5 p.m. Maintain the ban on construction on Sundays and Holidays. Continue to allow emergency repair work, and work to correct safety hazards, at any time.

Frame 7

City of Los Angeles

Applicable regulations are described above.

Unincorporated County

Applicable regulations are described above.

City of Burbank

Construction

The Burbank Municipal Code Section 9-1-1-105.10: Construction Hours states (City of Burbank 1990):

> The following construction hours shall apply to all construction, alteration, movement, enlargement, replacement, repair, equipment, maintenance, removal and demolition work regulated by this code:
>
> Construction Hours:
>
> Monday - Friday 7:00 a.m. to 7:00 p.m.
>
> Saturday 8:00 a.m. to 5:00 p.m.
>
> Sunday and City Holidays None
>
> EXCEPTIONS:
>
> 1. Single-family residential owner-builder permits when work is performed solely by the owner and family members:
>
>   Monday - Friday 7:00 a.m. to 7:00 p.m.
>
>   Saturday 8:00 a.m. to 5:00 p.m.
>
>   Sunday and City Holidays 8:00 a.m. to 5:00 p.m. for interior work only.
> 2. Where work must be performed in an emergency situation, as defined in Section 9-3-204 of the Burbank Municipal Code.
> 3. The Community Development Director may grant exceptions wherever there are practical difficulties involved in carrying out the provisions of this section or other specific onsite activity warrants unique consideration.
> 4. The Planning Board or City Council may grant exceptions pursuant to land use entitlements.

Operation

The Burbank Municipal Code Section 9-3-208: Machinery, Equipment, Fans, and Air Conditioning, states (City of Burbank 1990):

> A. Decibel Limit: No person shall operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in such a manner as to cause the ambient noise level to be exceeded by more than five (5) decibels. In the case of leaf blowers, as defined by Section 9-3-214 of this article, the ambient noise level may not be exceeded by more than twenty (20) decibels.
>
> B. Ambient Noise Base Level: For the purposes of this section only, all ambient noise measurements shall commence at the following ambient noise base levels in the zones and during the times shown:

Base Levels	Time	Zone
45 dBA	Nighttime	Residential
55 dBA	Daytime	Residential
65 dBA	Anytime	Commercial
70 dBA	Anytime	All other zones

> Accordingly, and by way of illustration, the ambient noise level in commercial zones shall be deemed to be sixty five (65) dBA notwithstanding a lower reading; provided, however, that when the ambient noise base level for the property on which the machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device is located is higher than the ambient noise base level for adjacent property, the ambient noise base level for the adjacent property shall apply. Properties separated by a street shall be deemed to be adjacent to one another.
>
> C. Exception For Home Air Conditioners: Air conditioning appliances and equipment installed on or before June 1, 1972, in residences in residential zones may be operated until January 1, 1974, between the hours of eight o'clock (8:00) A.M. and ten o'clock (10:00) P.M. without complying with the decibel limits prescribed in this section. [Formerly Numbered Section 21-31; Renumbered by Ord. No. 3058, eff. 2/21/87; 3122, 2383, 2361.]

The Burbank Municipal Code Section 9-3-223, Noise Sources Not Specifically Covered, states (City of Burbank 1990):

> Notwithstanding any other provision of this article and in addition thereto, it shall be unlawful for any person to willfully make or continue any loud, unnecessary or unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standards which shall be considered in determining whether a violation of this section exists shall include, but not be limited to, the following:
>
> A. The sound pressure level of the noise;
>
> B. The octave band sound pressure level of the noise;
>
> C. Whether the nature of the noise is usual or unusual;
>
> D. Whether the origin of the noise is natural or unnatural;
>
> E. The sound pressure level and octave band sound pressure level of the background noise, if any;
>
> F. The proximity of the noise to residential sleeping facilities;
>
> G. The nature and zoning of the area within which the noise emanates;
>
> H. The density of the inhabitation of the area within which the noise emanates;
>
> I. The time of the day or night when the noise occurs;
>
> J. The duration of the noise;
>
> K. Whether the noise is recurrent, intermittent or constant; and
>
> L. Whether the noise is produced by a commercial or noncommercial activity. [Formerly Numbered Section 21-51; Renumbered by Ord. No. 3058, eff. 2/21/87; 2383.]

City of Burbank General Plan

The *Burbank2035 General Plan* includes the City of Burbank's Noise and Land Use Compatibility Matrix and interior/exterior noise standards (included below), as well as goals and policies that are intended to reduce noise within the city (City of Burbank 2013).

Table N-4
Maximum Allowable Noise Exposure—Stationary Noise Sources

Noise Source	Noise Level Descriptor	Exterior Spaces[2]—Daytime (7 a.m. to 10 p.m.)	Exterior Spaces[2]—Nighttime (10 p.m. to 7 a.m.)
Typical	Hourly dBA L_{eq}	55[1]	45[1]
Tonal, impulsive, repetitive, or consisting primarily of speech or music	Hourly dBA L_{eq}	50[1]	40[1]
Any	dBA L_{max}	75	65

Notes:
1 The City may impose noise level standards that are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.
2 Where the location of exterior spaces (i.e., outdoor activity areas) is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the exterior space.

- **Goal 1.** Noise Compatible Land Uses
  - **Policy 1.1:** Ensure the noise compatibility of land uses when making land use planning decisions.
  - **Policy 1.4:** Maintain acceptable noise levels at existing noise-sensitive land uses.
- **Goal 7.** Construction Maintenance, and Nuisance Noise
  - **Policy 7.2:** Require project applicants and contractors to minimize noise in construction activities and maintenance operations.
  - **Policy 7.3:** Limit the allowable hours of construction activities and maintenance operations located adjacent to noise-sensitive land uses.

Frame 8

City of Los Angeles

Applicable regulations are described above.

Frame 9

City of Los Angeles

Applicable regulations are described above.

3.12.3 Impact Analysis

3.12.3.1 Methods

This noise impact analysis evaluates the temporary noise and groundborne vibration associated with proposed construction activities, the changes in noise levels in the study area[1] that would occur as a result of the proposed Project (including onsite operations and project-generated traffic), and the effects of noise from operation and maintenance of the proposed Project. Impacts related to the Typical Projects, six kit of parts (KOP) categories, and the overall *2020 LA River Master Plan* are identified; as are the methods used to determine impacts and the thresholds used to conclude whether an impact would be significant. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Mitigation measures to reduce or avoid identified significant impacts accompany each impact discussion, where necessary. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

Construction Noise

Construction-related noise was analyzed using data and modeling methodologies from the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM), which predicts maximum noise levels at nearby receptors by analyzing the type of equipment and number of pieces of equipment scheduled during each construction phase, the distance from source to receptor, load factor, and the presence or absence of intervening shielding between source and receptor.[2]

Construction-related noise was analyzed based on the construction assumptions developed by the County for the Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project. The construction equipment used to calculate construction noise was assumed to be a worst-case representation of construction equipment for each project type. Noise levels for each construction phase of each project type were calculated at a distance of 50 feet with no intervening shielding. The default load factor included within the RCNM model was used. The loudest phase with the noisiest combination of construction equipment was chosen to represent the worst-case noise levels within each project element. Table 3.12-9 and Table 3.12-10 provide the reference noise levels of construction equipment expected to be used by the proposed Project (broken down by phase and project type). Jurisdictions that included a maximum construction noise level standard (L_{max}) were assessed against each municipality's municipal code standards (where applicable) within the respective frames. The County is an example of a jurisdiction that uses an L_{max} standard; for all other municipalities, the equivalent sound level (L_{eq}) was used.[3]

[1] The study area is generally defined as the location surrounding the LA River, where the Common Elements Typical Projects or the Multi-Use Trails and Access Gateways Typical Projects could occur for operations-related discussions and within the 1 mile radius shown in Figure 3.12-1 for construction-related discussions.

[2] As the location of the Common Elements Typical Projects, Multi-Use Trails and Access Gateways Typical Projects, or any of the KOP categories has not been identified, the presence or absence of intervening shielding cannot be determined. Therefore no intervening shielding has been included in the model assumptions.

[3] It should be noted that where projects are developed across multiple jurisdictions, all of those jurisdictions' standards, or the more stringent standard, may apply.

Table 3.12-9. Construction Equipment Reference Noise Levels for the Common Elements Typical Project

Phases	Equipment Type	Number of Pieces of Equipment	Noise Level at 50 Feet (dBA L_{eq})	Absolute Noise Level by Phase at 50 Feet (dBA L_{eq})[3]	Maximum Noise Level at 50 Feet (dBA L_{max})[4]
Demolition	Excavator	1	81		
	Water truck[1]	1	82		
	Dump truck [2]	2	75.5		
	Backhoe[2]	2	76.6		
	Front-end loader[2]	2	78.1		
	Utility trucks[2]	2	73.3		
				86.6	85.0
Site Preparation	Haul trucks/dump trucks[2]	2	75.5		
	Water truck	1	82		
	Backhoe[2]	2	76.6		
	Front-end loader[2]	2	78.1		
				85.7	85.0
Grading	Excavator	1	76.7		
	Water truck	1	82		
	Dump trucks	1	72.5		
	Backhoe[2]	2	76.6		
	Loaders	1	75.1		
	Grader[2]	2	84		
				87.4	85.0
Building Construction	Flatbed truck	1	70.3		
	Water truck	1	82		
	Backhoe	1	73.6		
	Small crane/man lifts[2]	2	70.7		

Phases	Equipment Type	Number of Pieces of Equipment	Noise Level at 50 Feet (dBA L_{eq})	Absolute Noise Level by Phase at 50 Feet (dBA L_{eq})[3]	Maximum Noise Level at 50 Feet (dBA L_{max})[4]
	Utility trucks[2]	3	75.7		
				83.7	85.0
Paving	Paving machine	1	74.2		
	Water truck	1	82		
	Backhoe	1	73.6		
	Skip loaders[2]	2	85		
	Super-10s[2]	2	83.1		
				87.4	85.0
Architectural Coating	Water truck	1	82		
	Utility trucks[2]	3	75.1		
				82.5	85.0

[1] All other equipment > 5 horsepower (HP) used in lieu of specific equipment.
[2] Number of pieces of equipment have been added logarithmically.
[3] Represents the logarithmic total of all pieces of equipment.
[4] Maximum noise level from loudest piece of equipment.

Table 3.12-10. Construction Equipment Reference Noise Levels for the Multi-Use Trails and Access Gateways Typical Project

Phases	Equipment Type	Number of Pieces of Equipment	Noise Level at 50 Feet (dBA L_{eq})	Absolute Noise Level by Phase at 50 Feet (dBA L_{eq})[2]	Maximum Noise Level at 50 Feet (dBA L_{max})[3]
Demolition	Excavator	1	76.7		
	Dump truck[1]	2	75.5		
	Backhoe[1]	2	76.6		
	Hydraulic impact hammer	1	94.3		
	Concrete saw	1	82.6		
	Hoe ram	1	80		
	Jack hammer	1	81.9		
				95.1	101.3
Site Preparation	Skip loader	1	82		
	Backhoe	1	82		
	Water truck	1	73.6		
	Wheel loader	1	75.1		
				87.0	85.0
Grading	Motor grader	1	81		
	Skip loader	1	82		
	Water truck	1	82		
	Vibratory roller	1	73		
				86.7	85.0
Building Construction	Backhoe	1	73.6		
	Telescopic lift	1	67.7		
	Fork lift	1	82		
				82.7	85.0
AC Paving	Paving machine	1	74.2		
	Oil truck	1	82		

Phases	Equipment Type	Number of Pieces of Equipment	Noise Level at 50 Feet (dBA L_{eq})	Absolute Noise Level by Phase at 50 Feet (dBA L_{eq})[2]	Maximum Noise Level at 50 Feet (dBA L_{max})[3]
	Vibratory roller	1	73		
	Skip loader	1	82		
	Skid Steer	1	82		
				87.2	85.0
Landscaping	Wheel loader	1	75.1		
	Skip loader	1	75.1		
	Truck for mounted crane	1	82		
	Water truck	1	82		
				85.8	85.0

[1] Number of pieces of equipment have been added logarithmically.
[2] Represents the logarithmic total of all pieces of equipment.
[3] Maximum noise level from loudest piece of equipment.

Vibration

Construction-related vibration was analyzed using data and modeling methodologies provided by Caltrans' *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013b) and FTA's *Transit Noise and Vibration Impact Assessment Manual* (2018). These guidance manuals provide typical vibration source levels for various types of construction equipment, as well as methods for estimating the propagation of groundborne vibration over distance. Potential vibration impacts are assessed based on peak levels, rather than long-term average level. As the location of the Typical Projects are not known at the time of this analysis, the source-to-receptor distances have been calculated to identify the thresholds for damage and annoyance included in Table 3.12-12 and Table 3.12-13.[4]

As the subsequent projects under the six KOP categories have not been defined, a qualitative analysis is included in this PEIR.

Table 3.12-11. Construction Equipment Reference Vibration Levels

Equipment Item	Reference PPV at 25 Feet (in/s)
Vibratory roller	0.210[1]
Large bulldozer[3]	0.089[2]
Hoe ram	0.089[2]
Jack hammer	0.035[2]
Loaded trucks[2]	0.089[2]
Small bulldozer[2]	0.003[2]

[1] Caltrans 2013b.
[2] FTA 2018.
[3] Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

Table 3.12-12. Guidelines Vibration Damage Potential Threshold Criteria

	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013b

[4] Most municipalities have not promulgated thresholds for vibration; therefore, the Caltrans standards will be used in lieu of these thresholds. The Caltrans standards are well documented standards for vibration damage potential and annoyance. These standards are generally related to construction source vibration.

Table 3.12-13. Guidelines Vibration Annoyance Potential Criteria

	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2013b.

The following equations from the guidance manuals were used to estimate the change in PPV levels over distance. For pile driving, the equation is:

$$PPV_{rec} = PPV_{ref} \times (25/D)^{n} \times (E_{equip}/E_{ref})^{0.5}$$

where PPV_{rec} is the PPV at a receiver; PPV_{ref} is the reference PPV at 25 feet from the pile driver (0.65 in/s); D is the distance from the pile driver to the receiver, in feet; n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1); E_{equip} is the rated energy of the actual impact pile driver in foot-pounds; and E_{ref} is 36,000 foot-pounds (rated energy of reference pile driver). (For the purposes of the analysis, it is assumed that the pile driver would be very similar to the reference pile driver and there would, therefore, be no adjustment for E_{equip}.)

For other equipment, including heavy earthmoving equipment (such as excavators, graders, and backhoes) and vibratory rollers, the equation is:

$$PPV_{rec} = PPV_{ref} \times (25/D)^{n}$$

where PPV_{rec} is the PPV at a receptor; PPV_{ref} is the reference PPV at 25 feet from the equipment; D is the distance from the equipment to the receiver, in feet; and n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1).

Operations

Traffic

Common Elements Typical Project

The anticipated average daily patronage at the Common Elements Typical Project is up to 500 visitors. As such these visitations are assumed to be dispersed equally throughout the day (7:00 a.m. through 10:00 p.m.), which would result in 33 visitors per hour. A conservative assumption is that all 33 hourly visitors would drive vehicles to the site of the Common Elements Typical Project, resulting in an increase of 66 vehicle trips per hour (33 to and 33 away from the site).

Multi-Use Trails and Access Gateways Typical Project

Similar to the Common Elements Typical Project the visitation of a Multi-Use Trails and Access Gateways Typical Project would be up to 1,000 visitors in any 1 hour. These Multi-Use Trails and Access Gateways Typical Projects could be located anywhere along the 51-mile LA River. As discussed in Chapter 2, *Project Description*, a Multi-Use Trails and Access Gateways Typical Project

would be no more than 5 miles in total size; therefore, these visitations are assumed to be dispersed equally throughout these 5 miles. This would result in no more than 67 visitors per hour. Conservatively assuming that all 67 visitors drive in individual vehicles, this would result in a total of 134 trips per hour.

Onsite Operations

Common Elements Typical Project

The various project components will introduce a mix of new or expanded noise sources. The Common Elements Typical Project would generally encompass no more than 3 acres and could include several different types of development. A complete list of Common Element components is included in Chapter 2. The anticipated average daily patronage at the Common Elements Typical Project is up to 500 visitors. The primary noise source associated with the Common Elements Typical Project would be visitors speaking. To simplify the quantification of visitors' speech, it was assumed that 50 percent of visitors would be male and 50 percent would be female and all would be speaking with raised voices. A raised male voice at a distance of 1 meter (3.28 feet) would be 65 dBA, while a raised female voice at the same distance would be 65 dBA (Harris 1998; U.S. EPA 1977) (Table 3.12-14). To calculate the average hourly L_{eq} associated with visitors attending the developments associated with the Common Elements, it was assumed that the visitors would be dispersed equally throughout the day (7:00 a.m. through 10:00 p.m.) for a total of 33 visitors per hour. Finally, it was assumed that half the visitors (17 visitors) would be talking at the same time.

Table 3.12-14. Operational Noise Level – Common Elements

Source	L_{eq} at 3.28 Feet (dBA)	Number of Sources	Estimated Noise Level at 3.23 feet (dBA)	Combined L_{eq} at 50 Feet (dBA)
Male raised voice	65	9	75	53
Female raised voice	62	8	72	

Sources: Harris 1998; U.S. EPA 1977

Other noise sources that could be associated with the Common Elements Typical Project would be Heating, Ventilating, and Air Conditioning (HVAC) systems. At this point the location and size of these systems are not known; therefore, these are discussed qualitatively.

Multi-Use Trails and Access Gateways Typical Project

Multi-Use Trails and Access Gateways Typical Projects typically would include a continuous path for uses such as bike trails, equestrian trails, and easy to find and welcoming access gateways. It is expected that a Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 visitors within any day. It was assumed that 1,000 visitors would be equally dispersed over their approximate 5-mile area, which would equal 67 visitors during any 1 hour within a 5-mile stretch of the river. As such, this would equate to, at most, one visitor per minute at any given location.

3.12.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant impact on the environment if it would:

3.12(a) Result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. This impact will occur if:

b) Any project construction activity would take place outside the codified hours of construction specified by any city or County government codes.

c) Any project construction activity generates maximum noise levels that exceed 75 dBA at any offsite residential receptor (based on the City of Los Angeles Municipal Code). The 1-hour L_{eq} from project construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use (based on the L.A. CEQA Thresholds Guide).

d) Any project operations activity would generate noise related to the Project that would exceed the limits specified in any jurisdiction's municipal code.

3.12(b) Generate excessive groundborne vibration or groundborne noise levels.

3.12(c) Be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.

3.12.3.3 Impacts and Mitigation Measures

The following sections address construction and operational impacts from potential noise and vibration impacts. Because thresholds depend on the specific jurisdiction, the analysis is broken down by frames and addresses specific jurisdictional requirements germane to construction and operations. In many cases different jurisdictions overlap throughout different frames. When jurisdictions overlap different frames, the analysis will be referenced to the first frame where the jurisdiction appears unless otherwise stated.

Typical Projects, as described in Chapter 2, *Project Description*, have been identified for detailed analysis in this PEIR based on the availability of potential design concepts in the *2020 LA River Master Plan*. As discussed above, the location of Typical Projects could occur along any portion of the 51-mile river and would be based on safety, comfort, and wayfinding.

Impact 3.12(a): Would the proposed Project result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Table 3.12-30 summarizes impacts related to construction of the Common Elements Typical Project. A more detailed discussion is provided below.

Typical Projects

Common Elements

Construction

Frame 1—City of Long Beach

Section 8.80.202 of the Long Beach Municipal Code regulates construction activities where a building or other related permit is required that may annoy or disturb a reasonable person of normal sensitivity between 7 p.m. and 7 a.m. the following day on weekdays and 7 p.m. on Friday and 9 a.m. on Saturday and after 6 p.m. on Saturday.

Three ambient field measurements were conducted within Frame 1 within the City of Long Beach. Ambient noise levels ranged from 51 to 61 dBA L_{eq}. Table 3.12-9 indicates that construction noise levels associated with the Common Element Typical Projects would be 87 L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of this magnitude would likely dominate the noise environment if construction is within 50 feet and would not attenuate to ambient levels within 3,200 feet (in a free field environment with no intervening shielding). Intervening structures and anomalous and atmospheric spreading would likely reduce construction noise to below the ambient noise levels well before 3,200 feet. However, construction noise levels could still dominate the noise environment surrounding the project site.

Projects and construction associated with the proposed Project would generally occur during the prescribed hours outlined in the Long Beach Municipal Code. If, during development of the final construction schedule, it is deemed necessary to work outside of the permitted hours, the implementing agency will follow the necessary procedures to obtain an appropriate variance. Additionally, the *City of Long Beach General Plan* Policy N 12-5 requires best business practices to be incorporated into construction activities. As such, the implementing agency will incorporate the following guidance as project design features for any construction projects within the City of Long Beach's jurisdiction:

- The construction contractor should schedule high noise- and vibration-producing activities to a shorter window of time during the day outside early morning hours to minimize disruption to sensitive uses.
- Grading and construction contractors should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment.
- Construction haul truck and materials delivery traffic should avoid residential areas whenever feasible.
- The construction contractor should place noise- and vibration-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible.
- The construction contractor should use onsite electrical sources to power equipment rather than diesel generators, where feasible.
- All residential units within 500 feet of a construction site should be sent a notice regarding the construction schedule. A sign legible at a distance of 50 feet should also be posted at the construction site. All notices and the signs should indicate the dates and durations of

construction activities, as well as provide a telephone number for a "noise disturbance coordinator."

- A "noise disturbance coordinator" should be established by the project developer. The disturbance coordinator should be responsible for responding to any local complaints about construction noise. The disturbance coordinator should determine the cause of the noise complaint (e.g., starting too early, bad muffler) and should be required to implement reasonable measures to reduce noise levels.

With consideration of the anticipated timing of construction being conducted within the time of day not regulated by the Long Beach Municipal Code (i.e., between 7 p.m. and 7 a.m. the following day on weekdays and the hours of 7 p.m. on Friday and 9 a.m. on Saturday and after 6 p.m. on Saturday and at no time on Sunday), and the inclusion of the project design features laid out in the *City of Long Beach General Plan*, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 1—City of Los Angeles

Land uses located within the City of Los Angeles are all industrial in nature and located approximately 5,000 feet of the LA River within Frame 1. Therefore, the City of Los Angeles impacts are discussed in Frame 6.

Frame 2—City of Long Beach

Land uses within the study area in the City of Long Beach in this frame are generally of the same nature as those discussed in Frame 1. Please refer to the detailed analysis of construction included in Frame 1.

Frame 2—City of Carson

Section 5502 of the City of Carson's Municipal Code restricts construction operations of 20 days or less to 75 dBA L_{max} between 7:00 a.m. and 8:00 p.m. and 60 dBA L_{max} daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays at single-family residences and 65 dBA L_{max} between 7:00 a.m. to 8:00 p.m. and 55 dBA L_{max} daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays for construction operations of 21 days or more.

Noise-sensitive land uses within Frame 2 in the City of Carson are generally no closer than 2,000 feet from the LA River. General make-up of land uses that would be considered noise sensitive within the City of Carson's jurisdiction comprise single-family residences, parks, and Rancho Dominguez Preparatory School. The closest ambient field measurement conducted within Frame 2 is ST17 along the LA River within the City of Long Beach, which is representative of the existing ambient noise environment within the City of Carson. Ambient noise levels at this location measured 59 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Project would be 85 L_{max} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 85 dBA L_{max} would generally dominate the noise environment if construction occurs within 50 feet; however, as the closest noise-sensitive receptors (single-family residences) within the City of Carson are over 2,000 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 32 dB, not accounting for intervening structures or anomalous and atmospheric spreading. As such noise from construction would be reduced to 53 dBA L_{max}, which would be under the thresholds outlined in the Carson Municipal Code. As such, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 2—Unincorporated County

Los Angeles County Code

Land uses within the County in Frame 2 are industrial in nature and, as such, do not meet the criteria outlined in the County's code. Therefore, no impact would occur. A more detailed analysis of construction within the County is included in Frame 3.

Frame 2—City of Compton

The Compton Municipal Code regulates construction that would take place within the city. The municipal code restricts construction unless the noise caused thereby is confined within a building at any time other than between 7:00 a.m. and 7:00 p.m. on Monday through Saturday.

Land uses within the city in the Frame 2 are generally institutional in nature, consisting of two schools. However, these two land uses are approximately 3,300 feet away from the LA River. Therefore, no impact would occur. A more detailed analysis of construction within the City of Compton is included in Frame 3.

Frame 3—City of Compton

Section 7-12.22 of the Compton Municipal Code regulates construction that would take place within the city. The municipal code restricts construction unless the noise caused thereby is confined within a building at any time other than between 7:00 a.m. and 7:00 p.m. on Monday through Saturday. Additionally, the City of Compton's general plan Noise Policy 2.1 requires "noise studies for new development projects and expansion of existing developments that will result in construction activities in excess of 30 days or projects that are 5,000 square feet or more of building or structure area or fifteen units or more. To measure and propose mitigation measures for noise impacts on the nearby community, especially on existing noise-sensitive land uses." The Common

Elements Typical Project would generally be on the order of 10,000 square feet of construction, which would exceed the City of Compton's 5,000-square-foot threshold for new developments.

Noise-sensitive land uses within Frame 3 in the City of Compton are generally residential in nature with two schools (Carson Elementary and Dominguez High School). Residential land uses are within 1,000 feet of the LA River with I-710 between the land uses and the river. The Carson Elementary and Dominguez High School are within 400 feet of the river. The closest ambient field measurement conducted within Frame 3 is ST14 along the LA River within the City of Paramount, which is representative of the land uses within the City of Compton's jurisdiction. Ambient noise levels at this location measured at 60 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element projects would be 87 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 87 dBA L_{eq} would generally dominate the noise environment if construction occurs within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the City of Compton are over 1,000 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 26 dB, not accounting for intervening structures or anomalous and atmospheric spreading. At the school, noise from project construction, would attenuate approximately 18 dB. Therefore, noise levels from construction would attenuate to approximately 59 dBA and 67 dBA L_{eq}, respectively (not accounting for intervening structures or anomalous and atmospheric spreading).

Projects and construction associated with the proposed Project would occur during the prescribed hours outlined in the City of Compton's Municipal Code. Additionally, with consideration to the type of construction associated with the Common Elements Typical Project and the distance between any noise-sensitive receptors, noise levels associated with construction would be audible at the school closer to the river, but would not dominate the environment. Noise levels of 59 dBA at the residential land uses would likely be subsumed by noise from I-710.

The City of Compton's general plan Noise Policy 3.1 requires sound attenuation on construction equipment. As such, the proposed Project's implementing agency will incorporate the following guidance as a project design feature for any construction projects within the City of Compton's jurisdiction:

- All construction equipment will be required to keep properly functioning mufflers on all internal combustion and vehicle engines used in construction.

With consideration of the anticipated timing of construction occurring within the time of day considered acceptable by the Compton Municipal Code (i.e., 7:00 a.m. to 7:00 p.m. Monday through Saturday), and the inclusion of the above City of Compton's general plan policy as a project design feature, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Paramount

Section 45-7 of the Paramount Municipal Code regulates construction that would take place within the city. The municipal code exempts "construction, repair or remodeling equipment and devices and other related construction noise sources shall be exempted from the provisions of this chapter provided a permit for such construction, repair or remodeling shall have been obtained for such construction, repair or remodeling from the building department of the city and the construction, repair or remodeling does not take place between the hours of 8:00 P.M. and 7:00 A.M."

Therefore, with consideration of the anticipated timing of construction occurring within the time of day exempted by the Paramount Municipal Code (i.e., 7:00 a.m. to 8:00 p.m.), and the anticipation that the implementing agency would obtain a construction permit, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—Unincorporated County

The Los Angeles County Code, as discussed in Frame 2, regulates construction that would take place within the jurisdiction of the County.

Noise-sensitive land uses within Frame 3 in the unincorporated County area are generally residential in nature. Residential land uses are within 500 feet of the LA River with I-710 between the land uses and the river. The closest ambient field measurement conducted within Frame 3 is ST22 to the west of the proposed Project separated by I-710. Ambient noise levels at this location measured at 65 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Project would be 85 dBA L_{max} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 85 dBA L_{max} would generally dominate the noise environment if construction occurs within 50 feet of a receptor; however as the noise-sensitive receptors (single-family residences) within unincorporated County areas are over 500 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 20 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 65 dBA L_{max}. Additionally, there is an approximately 12-foot soundwall that provides noise reduction associated with I-710, which would shield noise-sensitive land uses.

Projects and construction associated with the proposed Project would occur during the prescribed hours outlined in the LA County Code. Additionally, considering the types of construction associated with the Common Elements Typical Project and the distance between any noise-sensitive receptors, noise levels associated with construction may be audible, but would generally be similar to the existing noise environment in the vicinity of I-710.

The County's requirement for limiting noise between 8:00 p.m. and 7:00 a.m. would not be applicable as project construction would not occur between these times. However, as project construction for the Common Elements would exceed the 10-day threshold for construction, the L_{max} value of 60 dBA would apply. Nevertheless, existing noise levels at the residences would be approximately 65 dBA L_{eq} and would represent the baseline noise environment. As such the noise levels associated with the proposed Project would not be discernable from the existing noise environment. Impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Lynwood

Section 3-12.13 of the Lynwood Municipal Code regulates construction that would take place within the city. The municipal code regulates construction noise: "within a residential zone, or within a radius of five hundred feet (500') therefrom… between the hours of ten o'clock (10:00) P.M. of one day and seven o'clock (7:00) A.M. of the next day in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the director of development services or his or her designee."

Noise-sensitive land uses within Frame 3 in the City of Lynwood are residential and are within 500 feet but are separated from the LA River by I-710 and commercial land uses. The closest ambient field measurement conducted within Frame 3 is ST23 along the LA River within the City of Lynwood. Ambient noise levels at this location measured 65 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element Typical Projects would be 87 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 87 dBA L_{eq} would generally dominate the noise environment if construction is within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the City of Lynwood are approximately 500 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 20 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 67 dBA L_{eq}. Noise levels of this nature would be similar to the existing baseline.

With consideration of the anticipated timing of construction occurring within the time of day considered acceptable by the Lynwood Municipal Code (i.e., 7 a.m. to 10 p.m.), impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of South Gate

Section 3-12.13 of the South Gate Municipal Code regulates construction that would take place within the city. The municipal code applies a variance process for construction noise, which requires the applicant to "detail the approved method of achieving maximum compliance and a time schedule for its accomplishment." Additionally, the City of South Gate's general plan outlines the hours from 7:00 p.m. through 8:00 a.m., Monday through Saturday, and on Sundays and federal holidays as times when construction is prohibited. The City of South Gate also includes policies in its general plan that will be incorporated as project design features.

Noise-sensitive land uses within Frame 3 in the City of South Gate are residential land uses along the boundary of the LA River (50 feet from the property line). The closest ambient field measurement conducted within Frame 3 is ST13 along the LA River within the City of Paramount, which is representative of the land uses within the City of South Gate's jurisdiction. Ambient noise levels at this location measured 54 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element projects would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels would be 87 dBA L_{eq} at the noise-sensitive receptors that border the LA River, which would likely dominate the noise environment.

Projects and construction associated with the proposed Project would generally occur during the prescribed hours outlined in the City of South Gate's general plan. Additionally, the City of South Gate's general plan Objective N1.1 and Policies 1 through 3, which require adherence to the prohibited hours of construction and methods to reduce construction noise, would be incorporated by the implementing agency for any construction projects within the City of South Gate's jurisdiction. These project design features could include but not limited to:

- Construction noise reduction methods will be employed to the maximum extent feasible. These measures may include, but not be limited to,
    - shutting off idling equipment,
    - installing temporary acoustic barriers around stationary construction noise sources,
    - maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and

- use of electric air compressors and similar power tools, rather than diesel equipment.

- Prior to approval of project plans and specification by the City, project applicants and/or construction contractors will identify construction equipment and noise reducing measures, and the anticipated noise reduction.

With consideration of the anticipated timing of construction being conducted within the time of day not regulated by the City of South Gate's general plan (i.e., 7 p.m. and 7 a.m., or at any time on Sundays or holidays), and the inclusion of the project design features identified in the City of South Gate's general plan, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Cudahy

The City of Cudahy generally does not regulate construction with the exception of policies in the City of Cudahy's general plan, which state that the city will:

- Limit hours of operation at all noise generation sources adjacent to noise sensitive areas or uses.

- Require all exterior noise sources (construction, operations, air compressors, pumps, fans, and leaf blowers) to use available noise suppression techniques and devices to lower exterior noise to acceptable levels which are compatible with adjacent land uses.

- Implement appropriate standard construction noise controls for all construction projects.

Noise-sensitive land uses within Frame 3 in the City of Cudahy are residential land uses along the boundary of the LA River (50 feet from the property line). The closest ambient field measurement conducted is within Frame 4, at ST12 along the LA River within the City of Bell, which is representative of the land uses within the City of Cudahy's jurisdiction. Ambient noise levels at this location measured 58 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element projects would be 85 dBA L_{max} during the noisiest phase of construction. Construction noise levels would be 85 dBA L_{max} at the noise-sensitive receptors that border the LA River, which would likely dominate the noise environment.

The City of Cudahy does not specifically identify hours of operation for construction; therefore, the implementing agency would designate hours for construction as appropriate. Construction associated with the proposed Project would generally occur during the hours prescribed by the implementing agency. General plan policies NE 1.2 and 2.6, which require noise suppression techniques and application of appropriate standard construction noise controls for all construction projects, would be incorporated by the implementing agency for any construction projects within the City of Cudahy's jurisdiction. The City of Cudahy does not outline what standard noise control

measures could be; however, noise control measures such as those outlined by the City of Long Beach, but not limited to those measures, could be included as project design features.

With consideration of the anticipated timing of construction being conducted within the time of day designated by the implementing agency and the inclusion of the project design features laid out in the City of Cudahy's general plan (such as but not limited to the use of available noise suppression techniques and devices to lower exterior noise and those listed in the *City of Long Beach General Plan*), impacts associated with construction would be less than significant

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Downey

Section 4606.5 of the Downey Municipal Code regulates construction that would take place within the city. The municipal code exempts construction noise from the requirements of the municipal code "provided a valid permit for such construction, repair, or remodeling shall have been obtained from the City. In any circumstance other than emergency work, no repair or remodeling shall take place between the hours of 9:00 p.m. of one day and 7:00 a.m. of the following day, and no repair or remodeling shall exceed eighty-five (85) db(A) across any property boundary at any time during the course of a twenty-four (24) hour day."

Noise-sensitive land uses within Frame 3 in the City of Downey are residential land uses approximately 3,400 feet from the boundary of the LA River. The closest ambient field measurement conducted within Frame 3 is ST13 along the LA River within the City of Paramount, which is representative of the land uses within the City of Downey jurisdiction. Ambient noise levels at this location measured at 54 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element Typical Projects would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 37 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 50 dBA at noise-sensitive receptors within the City of Downey. Noise levels of this magnitude would not be discernable from the existing ambient levels.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Bell Gardens

Section 16.24.120 of the Bell Gardens Municipal Code regulates construction that would take place within the city. The municipal code regulates construction "within a residential zone, or within a radius of 500 feet, between the hours of 7:00 p.m. of one day and 8:00 a.m. of the next day."

Noise-sensitive land uses within Frame 4 in the City of Bell Gardens are residential land uses along the boundary of the LA River (300 feet from the property line). The closest ambient field measurement conducted is within Frame 4, at ST12 along the LA River within the City of Bell. Ambient noise levels at this location measured 58 dBA L_{eq}. However, the I-710 alignment is between the LA River and the noise-sensitive land uses within the City of Bell Gardens. Therefore, noise levels within these land uses would likely be more akin to those at ST22 (65 dBA L_{eq}).

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Projects would be 87 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 87 dBA L_{eq} would generally dominate the noise environment if construction is within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the City of Bell Gardens are approximately 300 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 16 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 67 L_{eq}.

As the City of Bell Gardens Municipal Code regulates construction "within a residential zone, or within a radius of 500 feet, between the hours of 7:00 p.m. of one day and 8:00 a.m. of the next day," the Common Elements Typical Project would comply with the City of Bell Gardens' thresholds for construction. Therefore, with consideration of the anticipated timing of construction being conducted within the time of day not regulated by the City of Bell Gardens' general plan (i.e., between 7:00 p.m. and 8:00 a.m. the following day), impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Bell

Section 16.24.120 of the Bell Municipal Code generally regulates noise and, therefore, construction noise. However, the City of Bell does not regulate time specifically for construction that would take place within the city. The municipal code regulates construction that would "emanate from any activity taking place on real property owned or occupied by such person, which has the effect of

disturbing the peace and quiet of the neighborhood, or which directly causes an unreasonable interference with the use, enjoyment and/or possession of any real property owned or occupied by any other person."

Noise-sensitive land uses within Frame 4 in the City of Bell are residential land uses along the boundary (within 50 feet) of the LA River. The closest ambient field measurement conducted is within Frame 4, at ST12 along the LA River within the City of Bell. Ambient noise levels at this location measured 58 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Project would be 87 dBA L_{eq} during the noisiest phase of construction. As noise-sensitive land uses within the City of Bell are within 50 feet, construction noise levels of 87 dBA L_{eq} would generally dominate the noise environment.

The City of Bell's municipal code or general plan do not necessarily regulate construction or allow a specific time frame in which construction can occur. Therefore, the implementing agency will designate hours for construction to include as part of any potential project. Construction associated with the Common Elements Typical Project would generally occur during the prescribed hours outlined by the implementing agency in lieu of specific direction supplied by the City of Bell. Therefore, with consideration of the anticipated timing of construction, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Maywood

Section 5.23.11 of the Maywood Municipal Code regulates construction that would take place within the city. The municipal code exempts construction noise from the requirements of the municipal code: "Noise sources associated with the construction, repair, remodeling, or grading of any real property or during authorized seismic surveys provided such activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sunday or a Federal holiday, and provided the noise level created by such activities does not exceed the noise standard of seventy (70) dBA plus the limits specified in Section 5-23.08 of this chapter as measured on residential property and does not endanger the public health, welfare, and safety."

Noise-sensitive land uses within Frame 4 in the City of Maywood are residential land uses approximately 200 feet from the boundary of the LA River. The closest ambient field measurement conducted within Frame 4 is ST12 along the LA River within the City of Bell, which is representative of the land uses within the City of Maywood. Ambient noise levels at this location measured 58 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Project would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 12 dB, not accounting for intervening

structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 75 dBA at noise-sensitive receptors within the City of Maywood. Noise levels of this magnitude would be plainly audible. As construction noise would exceed the City of Maywood's 70 dBA standard, impacts would be potentially significant without mitigation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.

During final design the implementing agency will prepare a focused noise analysis for any project within the city, which identifies nearby noise sensitive receptors that could be affected, predicts anticipated construction-related noise levels, and identifies measures that will be implemented by the construction contractor in order to comply with the city's standard. Measures that could be implemented include, but are not limited to, the following:

- Using equipment that generates lower noise levels than those outlined in Table 3.12-9
- Locating construction equipment far enough from noise-sensitive land uses such that noise attenuates to below the city's standard
- Designing and installing temporary sound barriers, which would provide attenuation below the city's dBA standard

The implementing agency will also require noise monitoring during all phases of construction to confirm that the mitigation measures identified by the construction noise work plan and implemented by the construction contractor reduce construction noise to below the city's threshold.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4—City of Commerce

Section 19.19.160 of the Commerce Municipal Code regulates construction that would take place within the city. The municipal code exempts construction noise from the requirements of the municipal code provided construction does not occur "within any residential zone, or within a radius of five hundred feet of a residential zone or between the hours of ten p.m. and seven a.m., unless a permit has been obtained from the city."

No noise-sensitive land uses are within 500 feet of the LA River within the City of Commerce. Land uses within the area of influence in the City of Commerce are completely commercial/industrial in nature. Therefore, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Huntington Park

Section 9-3.506 of the Huntington Park Municipal Code regulates construction that would take place within the city. The municipal code exempts construction noise from the requirements of the municipal code provided construction does not take place "between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sundays or Federal holidays."

Noise-sensitive land uses within Frame 4 in the City of Huntington Park are residential land uses approximately 4,200 feet from the boundary of the LA River. No field measurement was conducted that would represent the land uses within the City of Huntington Park due to the jurisdiction's proximity to the LA River.

Table 3.12-9 indicates that construction noise levels associated with the Common Element Typical Projects would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 39 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 48 dBA at noise-sensitive receptors within the City of Huntington Park. Noise levels of this magnitude would not likely be discernable from the existing ambient.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Vernon

The Vernon Municipal Code generally regulates construction through its operational guidance, which restricts noise between 7:00 a.m. and 10:00 p.m. to 65 dBA within one-tenth of a mile of any residence or school.

Most land uses within the City of Vernon's jurisdiction along the LA River within one-tenth of a mile are commercial/industrial; however, some residential land uses are within this area. The closest ambient field measurement conducted within Frame 4 is ST11, within the City of Vernon, located along the LA River. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Project would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 19 dB, not accounting for intervening

structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 68 dBA at noise-sensitive receptors within the City of Vernon. Noise levels of this magnitude would be similar to the existing ambient level, but nonetheless would exceed the City of Vernon's 65 dBA threshold. The Vernon Municipal Code prescribes that any noise level from a project that would exceed the City of Vernon's 65 dBA standard would be required to obtain a conditional use permit that would allow noise sources in excess of the standard.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.

In addition, apply the following mitigation measure.

Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.

Prior to any construction within the City of Vernon, the implementing agency will apply for and obtain a conditional use permit, which will allow the Project to exceed the City of Vernon's noise standard of 65 dBA.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Frame 4—Unincorporated County

Land uses located within the unincorporated County areas in Frame 4 are generally not noise sensitive along the LA River. Refer to impacts as discussed in Frame 3.

Frame 5—City of Los Angeles

Land uses located within the City of Los Angeles are generally industrial and commercial in nature within Frame 5 and therefore are not considered noise sensitive. Impacts related to the Project are discussed in Frame 6 below.

Frame 6—City of Los Angeles

The Los Angeles Municipal Code regulates construction that would take place within the jurisdiction of the City of Los Angeles. Section 41.40 of the Los Angeles's Municipal Code restricts construction "between the hours of 9:00 P.M. and 7:00 A.M. of the following day." Additionally, the City of Los Angeles's CEQA Threshold Guide provides guidance for analysis of construction noise by setting a general screening criteria:

- Would construction activities occur within 500 feet of a noise sensitive use?

- For projects located within the City of Los Angeles, would construction occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday?

Noise-sensitive land uses within Frame 6 in the City of Los Angeles are varied but include residential land uses that front the LA River. Residential land uses are generally within 50 feet of the LA River right-of-way. The closest ambient field measurement conducted within Frame 6 is ST8 within the City of Los Angeles. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element Typical Projects would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of 87 dBA L_{eq} would generally dominate the noise environment if construction is within 50 feet.

Construction associated with the Common Elements Typical Project would occur during the prescribed hours outlined in the City of Los Angeles's municipal code and CEQA guidelines. However, the City of Los Angeles's CEQA guidelines state that a significant impact may occur if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use; or
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

As shown in Table 3.12-9 noise levels could be as high as 87 dBA L_{eq}, which would exceed the existing ambient level by more than 20 dB. Therefore, impacts could be significant without mitigation incorporated.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-3: Require Noise-Reducing Practices Be Incorporated into Construction Activities.

Prior to any construction within the City of Los Angeles, the implementing agency will require the contractor to include the following noise-reducing practices:

- Use noise control devices, such as equipment mufflers, enclosures, and barriers. Natural and artificial barriers such as ground elevation changes and existing buildings can shield construction noise. Stage construction operations as far from noise-sensitive uses as possible.
- Avoid residential areas when planning haul truck routes.
- Maintain all sound-reducing devices and restrictions throughout the construction period.
- Replace noisy equipment with quieter equipment (for example, use a vibratory pile driver instead of a conventional pile driver and rubber-tired equipment rather than track equipment).
- Change the timing and/or sequence of the noisiest construction operations to avoid sensitive times of the day.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 6—City of Glendale

The Glendale Municipal Code regulates construction that would take place within the jurisdiction of the City of Glendale. Section 8.36.080 of the Glendale Municipal Code restricts construction "within a residential zone, or within a radius of five hundred feet therefrom between the hours of seven p.m. on one day and seven a.m. of the next day or from seven p.m. on Saturday to seven a.m. on Monday or from seven p.m. preceding a holiday." The City of Glendale's general plan includes a policy to "[c]hange the permitted hours of construction to Monday through Friday, 7 a.m. to 7 p.m. and on Saturday from 9 a.m. to 5 p.m. Maintain the ban on construction on Sundays and Holidays."

Most land uses within the City of Glendale's jurisdiction along the LA River are industrial in nature; however, some residences are along the LA River. The closest ambient field measurement conducted within Frame 6 is ST7 within the City of Los Angeles, which is representative of the land uses within the City of Glendale. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Element Typical Projects would be 87 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 11 dB, at a distance of 180 feet, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 76 dBA at noise-sensitive receptors within the City of Glendale. Noise levels of this magnitude would exceed the existing ambient.

The City of Glendale's general plan policy regulates construction "Monday through Friday, 7 a.m. to 7 p.m. and on Saturday from 9 a.m. to 5 p.m. and maintains the ban on construction on Sundays and Holidays." The Common Elements Typical Project would comply with the City of Glendale's thresholds of construction. Therefore, with consideration of the anticipated timing of construction being conducted within the time of day not regulated by the City of Glendale's general plan, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 7—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 7 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Frame 7—Unincorporated County

Based on review of the study area, land uses located within the unincorporated County areas in Frame 7 are generally not noise sensitive along the LA River. However, for any noise-sensitive land use located within this area not identified, refer to impacts as discussed in Frame 3.

Frame 7—City of Burbank

The City of Burbank's municipal code and general plan regulate construction that would take place within the jurisdiction of the City of Burbank. The general plan and municipal code state that, "construction noise that occurs between the hours of 7 a.m. and 7 p.m. Monday through Friday and 8 a.m. to 5 p.m. on Saturday is exempt from applicable noise standards."

Noise-sensitive land uses within Frame 7 in the City of Burbank include residential land uses that are along the LA River within 50 feet of potential construction. The closest ambient field measurement conducted within Frame 7 is ST6 within the City of Los Angeles. Ambient noise levels at this location measured 54 dBA L_{eq}.

Table 3.12-9 indicates that construction noise levels associated with the Common Elements Typical Project would be 87 dBA L_{eq} during the noisiest phase of construction. As noise-sensitive land uses are located along the LA River, construction noise levels could be as high as 87 dBA L_{eq}. Noise levels of this magnitude would likely dominate the existing ambient environment.

The City of Burbank's general plan and municipal code exempt construction provided it occur "between the hours of 7 a.m. and 7 p.m. Monday through Friday and 8 a.m. to 5 p.m. on Saturday." Therefore, with consideration of the anticipated timing of construction being conducted within the time of day permitted by the City of Burbank's general plan, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 8—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 8 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Frame 9—City of Los Angeles

Land uses within the City of Los Angeles in Frame 9 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Operations (Traffic)

Operational traffic associated with the Common Elements Typical Project would occur and generally be relegated to the project location. Traffic could be located anywhere along the river, and as such this discussion would be applicable to all frames and jurisdictions. As discussed above, the typical number of visitors attending the Common Elements Typical Project would be no more than 500 per day. This would result in no more than 33 visitors per hour or 66 total trips per hour. The typical arterial roadways average daily traffic (ADT) could range from 2,000 vehicles per day up to 70,000 or more per day, with a typical average around 28,000 (OCTA 2019). Assuming an average typical arterial roadway volume, 28,000 vehicles per day, the hourly number of vehicles along this type of example roadway would be 1,167 vehicles (28,000 vehicles/24 hours). A single automobile at a speed of 45 miles per hour (mph) at distance of 50 feet (as calculated by FHWA's Traffic Noise Model [TNM] 2.5) will produce a sound pressure level of 36.4 dBA L_{eq}. Therefore, 1,167 and 1,233 vehicles (traffic along an arterial roadway without and with the Common Elements Typical Project) would produce sound pressure levels of 67.1 and 67.3 dBA L_{eq}, respectively, a difference of 0.2 dB. Changes in traffic noise of this magnitude would be negligible. Based on the low range of the ADT volumes, (i.e., 2,000 vehicles) an average hourly traffic volume would be 83 vehicles (2,000 vehicles/24 hours). Therefore, 83 and 149 trips (traffic along an arterial roadway without and with the Common Elements Typical Project) would produce sound pressure levels of 55.6 and 58.1 dBA L_{eq}, respectively, a difference of 2.5 dB. The generally agreed upon criterion for perception is a change in noise of 3 dB. As such, an increase of this magnitude would be approaching that criterion. However, overall noise levels associated with hourly traffic (i.e., 58 dBA L_{eq}) would not meet or exceed any codified threshold. Therefore, impacts associated with operational traffic would be less than significant.

Operations (Onsite)

Frame 1—City of Long Beach

The Common Elements Typical Project would generally encompass no more than 3 acres and typically could include a variety of development types. A complete list of Common Element components is included in Chapter 2, *Project Description*. The anticipated average daily patronage at the Common Elements Typical Project is up to 500 visitors per day, or 33 visitors per hour (based on the typical 7:00 a.m. through 10:00 p.m. L_{dn} daytime frame). The average raised male and female voice at 1 meter (3.28 feet) is 65 and 62 dBA, respectively. Therefore, if 50 percent of visitors were speaking at one time (equally split amongst men and women) the noise from visitors speaking would be approximately 53 dBA L_{eq} at a distance of 50 feet.

Section 8.80.150 of the Long Beach Municipal Code regulates noise that could adversely affect citizens by setting day and nighttime noise thresholds at noise-sensitive land uses. Specifically, the City of Long Beach regulates predominantly residential land use by applying a daytime noise level of 50 dBA L_{eq} between 7:00 a.m. and 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m.

The ambient environment based on field measurements conducted within Frame 1 within the City of Long Beach ranged from 51 to 61 dBA L_{eq}. The municipal code states in 8.80.150 subsection C: "If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories in Subsection B of this Section, the allowable noise exposure standard shall be increased in five (5) decibels increments in each category as appropriate to encompass or reflect the ambient noise level."

Table 3.12-15. Operational Noise Level – Common Elements (City of Long Beach)

Field Measurement Location	1-hour L_{eq}, dBA				Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime (Unadjusted) Baseline Sound Level Limit	Adjusted Sound Level Limit[1]	Unadjusted	Adjusted	
ST16	53	51	50	55	Yes	No	No
ST17		59	50	60	Yes	No	No
ST18		61	50	65	Yes	No	No
ST19		60	50	65	Yes	No	No
ST20		52	50	55	Yes	No	No

Table 3.12-15 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would exceed the unadjusted baseline sound level limit set forth in the municipal code by no more than 2 dB. However, the existing ambient measured ambient exceeds the baseline sound level limit in the municipal code. Therefore, the baseline sound level limits are adjusted by 5 dB to account for the existing ambient. As such the adjusted baseline would be no less than 55 dBA. The noise contribution from the Common Elements Typical Project would not exceed the adjusted baseline.

Other operational components associated with the Common Elements Typical Project would be HVAC systems. The locations of HVAC systems are not known; however, noise from HVAC systems could be as loud as 77 dBA at a distance of 1 foot. At a distance of 50 feet (assuming a 6 dB reduction for doubling of distance), HVAC system noise would reduce to 44 dBA. Noise from HVAC systems would likely exceed both the daytime unadjusted and adjusted sound level limits it the City of Long Beach. Therefore, impacts associated with the Common Elements Typical Project could be significant and would require mitigation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

During final design of the Common Elements Typical Project, the implementing agency will design HVAC systems to comply with the applicable city's municipal code standards. This could include but would not be limited to actions such as:

- Prepare a focused noise study to analyze HVAC noise, which will identify a location for HVAC systems at appropriate distances so as to not exceed a 30-minute noise level (within any 1 hour) of 50 dBA at the closest noise sensitive land use.

- Design housings or shielding for HVAC systems that would reduce HVAC noise so as to not exceed a 30-minute noise level (within any 1 hour) of 50 dBA at the closest noise sensitive land use.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 1—City of Los Angeles

Land uses located within the City of Los Angeles are all industrial in nature and located approximately 5,000 feet of the LA River within Frame 1. As such noise would not be expected to impact land uses within the City of Los Angeles as they are not noise sensitive. Therefore, the City of Los Angeles impacts are discussed in Frame 6.

Frame 2—City of Long Beach

Land uses within the area of the LA River are generally of the same nature as those discussed in Frame 1. Please refer to the detailed analysis of operations included in Frame 1.

Frame 2—City of Carson

The City of Carson has adopted the Los Angeles County Code and amended the guidance as discussed in the regulatory section. The City of Carson has regulated residential land use by applying a daytime noise level of 50 dBA L_{eq} between 7:00 a.m. and 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m., unless otherwise noted.

The ambient environment based on field measurements conducted within Frame 2 within the City of Carson when measured was 53 L_{eq} (ST21), which represents the baseline noise level by which to judge the Common Elements Typical Project.

Table 3.12-16. Operational Noise Level – Common Elements Typical Project (City of Carson)

	1-hour L_{eq}, dBA				Exceeds Sound Level Limits?		
Field Measurement Location	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime (Unadjusted) Baseline Sound Level Limit	Adjusted Sound Level Limit	Unadjusted	Adjusted	Significant Impact?
ST21	53	53	50	53	Yes	No	No

Table 3.12-16 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would exceed the unadjusted baseline sound level limit set forth in the municipal code by no more than 3 dB. However, the existing ambient level exceeds the baseline sound level limit in the municipal code. Therefore, the baseline sound level limits are adjusted by 3 dB to account for the existing ambient levels. The noise contribution from the Common Elements Typical Project would not exceed the adjusted baseline.

As discussed above, the locations of HVAC systems are not known. Noise from HVAC systems would likely exceed both the daytime unadjusted and adjusted sound level limits in the City of Carson. Therefore, impacts associated with the Common Elements Typical Project could be significant and would require mitigation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 2—Unincorporated County

Unincorporated County regulations are discussed in Frame 3.

Frame 3—City of Compton

Section 7-12.4 of the City of Compton's municipal code sets baseline noise for land uses within the city and restricts machinery that could "create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five (5) decibels."

The ambient environment based on field measurements conducted within Frame 3 within the City of Compton is represented by measurement location ST22, which was north of the City of Compton's jurisdiction in the unincorporated County areas. Noise measured at the time of the measurement was 65 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project would develop.

Table 3.12-17. Operational Noise Level – Common Elements (City of Compton)

Field Measurement Location	1-hour L_{eq}, dBA		Exceeds Sound Level Limits?	Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Ambient	
ST22	53	65	No	No

Table 3.12-17 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would be well below the measured daytime noise level. The noise contribution from the Common Elements Typical Project would negligible and would not be noticeable. Therefore, impacts would be less than significant.

As discussed above, the locations of HVAC systems are not known. Noise from HVAC systems would be similar to the daytime noise levels in the City of Compton. Therefore, impacts associated with the Common Elements Typical Project would likely be less than significant. However, based on the uncertainty of the location of the Common Elements Typical Project, the County would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 3—City of Paramount

Section 45-4 of the Paramount Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 62 dBA L_{eq} at residential land uses within the city between 6:00 a.m. and 10:00 p.m. The code also applies to both speech and HVAC systems.

The ambient environment based on field measurements conducted within Frame 3 in the City of Paramount is represented by measurement location ST14. Noise at the time of the measurement was 51 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-18 indicates that operational noise of the common elements would not exceed the maximum daytime sound level limit. As discussed, the existing measured baseline would be 51 dBA L_{eq}, which would result in a 2 dB increase over the measured level. A 2 dB increase would not be considered perceptible. Therefore, impacts would be less than significant.

Table 3.12-18. Operational Noise Level – Common Elements (City of Paramount)

Field Measurement Location	1-hour L_{eq}, dBA		Exceeds Sound Level Limits?	Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Daytime Baseline Sound Level Limit	Daytime Baseline Sound Limit	
ST14	53	62	No	Yes

As discussed above, the locations of HVAC systems are not known. Noise from HVAC systems would be similar to the daytime noise levels in the City of Paramount. Therefore, impacts associated with the Common Elements Typical Project would likely be less than significant. However, based on the

uncertainty of the location of the Common Elements Typical Project, the implementing agency will incorporate mitigation measures below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 3—Unincorporated County

The Los Angeles County Code regulates operational noise that would take place within the County. The County Code regulates the maximum allowable noise level of 50 dBA L_{eq} at residential land uses within the County between 7:00 a.m. and 10:00 p.m.

The ambient environment based on field measurements conducted within Frame 3 within the County is represented by measurement location ST22. Noise at the time of the measurement was 65 dBA L_{eq}. The County, however, uses a 50 dBA L_{eq} operational metric in lieu of an ambient measurement. If an ambient measurement that exceeds the baseline of 50 dBA L_{eq} was conducted based on Section 12.08.390 subsection B, the ambient L_{50} will become the baseline. The measured L_{50} measured at ST22 (included in Appendix H) was 64 dBA L_{50}. This noise level would be representative of the noise environment within the unincorporated County area in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-19 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}. As L_{eq} is a logarithmic average of the overall noise level and L50 is the median noise level, L_{eq} is a more conservative metric. Therefore, as operational L_{eq} would be well below the measured L50, operational noise of the Common Elements would not exceed the measured daytime ambient sound level limit. Therefore, impacts would be less than significant.

Table 3.12-19. Operational Noise Level – Common Elements (County of Los Angeles)

Field Measurement Location	1-hour L_{eq}, dBA	Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient (L50)	Measured	
ST22	53	64	No	No

As discussed above, the locations of HVAC systems are not known. Noise from HVAC systems would be similar to the daytime noise levels in the unincorporated County areas. Therefore, impacts associated with the Common Elements Typical Project would likely be less than significant. However, based on the uncertainty of the location of the Common Elements Typical Project, the

County would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 3—City of Lynwood

The Lynwood Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 60 dBA L_{eq} at residential land uses between 7:00 a.m. and 10:00 p.m.

The ambient environment based on field measurements conducted within Frame 3 within the City of Lynwood is represented by measurement location ST23. Noise at the time of the measurement was 65 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-20 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime or baseline sound level. Additionally, land uses in the City of Lynwood are separated by I-710 from the LA River. Therefore, impacts would not likely be noticeable at land uses within the City of Lynwood's jurisdiction and would be less than significant.

Table 3.12-20. Operational Noise Level – Common Elements (City of Lynwood)

Field Measurement Location	1-hour L_{eq}, dBA			Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Daytime Baseline Sound Limit	
ST14	53	65	60	No	No	No

Other operational components associated with the Common Elements Typical Project would be HVAC systems. The locations of HVAC systems are not known; however, noise from HVAC systems could be as loud as 77 dBA at a distance of 1 foot. At a distance of 50 feet (assuming a 6 dB reduction for doubling of distance), HVAC system noise would reduce to 44 dBA. Similar to operational noise levels associated with visitors, noise would not likely be noticeable at surrounding land uses within the City of Lynwood. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of South Gate

The South Gate Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 50 dBA L_{eq} at residential land uses between 7:00 a.m. and 10:00 p.m.

The ambient environment based on field measurements conducted within Frame 3 in the City of South Gate is represented by measurement location ST13. Noise at the time of the measurement was 54 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-21 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime sound level. However, the operational noise would exceed the daytime baseline set forth in the City of South Gate's municipal code. Therefore, impacts would be potentially significant and would require mitigation.

Other operational components associated with the Common Elements Typical Project would be HVAC systems. The locations of HVAC systems are not known; however, noise from HVAC systems could be as loud as 77 dBA at a distance of 1 foot. At a distance of 50 feet (assuming a 6 dB reduction for doubling of distance), HVAC system noise would reduce to 44 dBA. However, based on the uncertainty of the location of the Common Elements Typical Project, the County would incorporate mitigation measures below to make sure that impacts would be less than significant.

Table 3.12-21. Operational Noise Level – Common Elements (City of South Gate)

Field Measurement Location	1-hour L_{eq}, dBA			Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Daytime Baseline Sound Limit	
ST13	53	54	50	No	Yes	Yes

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

In addition, apply the following mitigation measure.

Mitigation Measure NOI-5: Prepare Focused Noise Study and Implement Findings

During final design of the Common Elements Typical Project, the implementing agency will prepare a focused noise study to determine the existing ambient baseline noise level by which to compare the operational noise level of the Common Elements Typical Project. The focused noise study will analyze the existing baseline noise level against operational noise, and, if it is determined that operational noise levels from the Common Elements would exceed the sound level limit, the implementing agency will provide measures or engineering best management practices to reduce exterior noise below the limit. These measures or best management practices could include, but are not limited to, the following:

- Locating the Common Elements Typical Project away from noise-sensitive receptors to reduce operational noise to below the existing baseline
- Designing the Common Elements Typical Project to shield noise-sensitive receptors from noise-producing elements
- Including sound-attenuating features such as soundwalls

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 3—City of Cudahy

The Cudahy Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 65 dBA L_{eq} at residential land uses between7:00 a.m. and 10:00 p.m.

The ambient environment is based on field measurements at location ST12 conducted within the City of Bell, north of the City of Cudahy. Noise at the time of the measurement was 58 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-22 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime or the Cudahy Municipal Code's baseline sound level.

Table 3.12-22. Operational Noise Level – Common Elements (City of Cudahy)

Field Measurement Location	1-hour L_{eq}, dBA			Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Daytime Baseline Sound Limit	
ST12	53	58	65	No	No	No

As discussed above, the locations of HVAC systems are not known; however, noise from HVAC systems could be as loud as 77 dBA at a distance of 1 foot. At 50 feet (assuming a 6 dB reduction for doubling of distance), HVAC system noise would reduce to 44 dBA. However, based on the uncertainty of the location of the Common Elements Typical Project, the County would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 3—City of Downey

The Downey Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 55 dBA L_{eq} at residential land uses between 7:00 a.m. and 10:00 p.m.

Noise-sensitive land uses within Frame 3 in the City of Downey are residential land uses approximately 3,400 feet from the boundary of the LA River. As such, noise from the Common Elements Typical Project along the LA River would not be noticeable within the jurisdiction of the City of Downey. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Bell Gardens

The Bell Garden Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the noise that would cause the noise level at the property line of any property to exceed the ambient noise level by more than 5 dB. This regulation applies specifically to machinery such as air conditioners; however, for the purposes of this analysis it has been extended to all operation noise associated with the Common Elements Typical Project.

The ambient environment is based on field measurements conducted at location ST12 within the City of Bell. Noise at the time of the measurement was 58 dBA L_{eq}. It should also be noted that noise-

sensitive land uses within the City of Bell Gardens are separated from the LA River by I-710. Therefore, noise from I-710 would likely dominate and increase the ambient noise level above what is represented by measurement location ST12. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-23 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime sound level.

Table 3.12-23. Operational Noise Level – Common Elements (City of Bell Gardens)

Field Measurement Location	1-hour L_{eq}, dBA		Exceeds Sound Level Limits?	Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Measured	
ST12	53	58	No	No

As discussed above, the locations of HVAC systems are not known. Noise-sensitive land uses within the City of Bell Gardens are separated from the LA River by I-710. As such, noise from the HVAC systems associated with the Common Elements Typical Project would not be noticeable, and impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Bell

The Bell Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the noise that would "emanate from any activity taking place on real property owned or occupied by such person, which has the effect of disturbing the peace and quiet of the neighborhood, or which directly causes an unreasonable interference with the use, enjoyment and/or possession of any real property owned or occupied by any other person." As this regulation does not specify a codified level at which an impact would occur, it is assumed that exceedance of the ambient noise environment would constitute a violation.

The ambient environment is based on field measurements conducted at location ST12 within the City of Bell. Noise at the time of the measurement was 58 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-24 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime sound level. Therefore, impacts would be less than significant.

Table 3.12-24. Operational Noise Level – Common Elements (City of Bell)

Field Measurement Location	1-hour L_{eq}, dBA		Exceeds Sound Level Limits?	Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Measured	
ST12	53	58	No	No

As discussed above, noise from HVAC systems could affect nearby noise-sensitive receptors within the City of Bell. Based on the uncertainty of the location of the Common Elements Typical Project, specifically the HVAC systems, the County would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4—City of Maywood

The Maywood Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 60 dBA L_{eq} at residential land uses between 7:00 a.m. and 10:00 p.m.

The ambient environment is based on field measurements conducted at location ST12 within the City of Bell. Noise at the time of the measurement was 58 dBA L_{eq}. This noise level would be representative of the noise environment within the city in proximity to locations along the LA River where the Common Elements Typical Project could be developed.

Table 3.12-25 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime or baseline sound level. Therefore, impacts would be less than significant.

Table 3.12-25. Operational Noise Level – Common Elements (City of Maywood)

Field Measurement Location	1-hour L_{eq}, dBA			Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Daytime Baseline Sound Limit	
ST12	53	58	60	No	No	No

As discussed above, noise from HVAC systems could affect nearby noise-sensitive receptors within the City of Maywood. Based on the uncertainty of the location of the Common Elements Typical Project, the County would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4—City of Commerce

Section 19.19.160 of the Commerce Municipal Code regulates operational noise that would take place within the city. The municipal code regulates the maximum allowable noise level of 55 dBA L_{eq} at residential land uses during daytime hours (7:00 a.m. and 7:00 p.m.) and 50 dBA L_{eq} at residential land uses during evening hours (7:00 p.m. and 10:00 p.m.).

No noise-sensitive land uses are within 500 feet of the LA River within the City of Commerce. All land uses within the area of influence in the City of Commerce are completely commercial/industrial in nature.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Vernon

The Vernon Municipal Code generally regulates operations, restricting noise between 7:00 a.m. and 10:00 p.m. to 65 dBA within one-tenth of a mile of any residence or school.

Most land uses within the City of Vernon's jurisdiction along the LA River within one-tenth of a mile are commercial/industrial; however, some residential land uses are within this area. The closest ambient field measurement was conducted at ST11 along the LA River (in the City of Vernon). Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-26 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime or baseline sound level. Therefore, impacts would be less than significant.

Table 3.12-26. Operational Noise Level – Common Elements (City of Vernon)

Field Measurement Location	1-hour L_{eq}, dBA			Exceeds Sound Level Limits?		Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Daytime Baseline Sound Limit	
ST11	53	64	65	No	No	No

As discussed above, noise from HVAC systems could affect nearby noise-sensitive receptors within the City of Vernon. Based on the uncertainty of the location of the Common Elements Typical Project, the implementing party would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4—Unincorporated County

Based on review of the study area, land uses located within the unincorporated County areas in Frame 4 are generally not noise sensitive along the LA River. However, for any noise sensitive land use located within this area not identified, refer to impacts as discussed in Frame 3.

Frame 5—City of Los Angeles

Land uses located within the City of Los Angeles are generally industrial commercial in nature within Frame 5. The discussion of impacts related to the proposed Project is discussed in Frame 6 below.

Frame 6—City of Los Angeles

The Los Angeles Municipal Code regulates operational noise that would take place within the jurisdiction of the City of Los Angeles. The municipal code regulates stationary noise sources that would "create any noise which would cause the noise level on the premises of any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit.to exceed the ambient noise level by more than five (5) decibels," and that "disturbs the peace

or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area" based on the character of the offending noise.

Additionally, the City of Los Angeles's CEQA guidelines describe operational screening criteria designed to aid in the determination of significant. The screening criteria identify that additional analysis may be necessary if a project would:

- Introduce a stationary noise source likely to be audible beyond the property line of the project site?
- Include 75 or more dwelling units, 100,000 square feet (sf) or greater of nonresidential development or have the potential to generate 1,000 or more average daily vehicle trips?

Noise-sensitive land uses within Frame 6 in the City of Los Angeles include residential land uses that front onto the LA River. The closest ambient field measurement conducted within Frame 6 is ST8. Ambient noise levels at this location measured 64 dBA L_{eq}.

The Common Elements Typical Project would not exceed 100,000 square feet or include more than 1,000 average daily trips, but these projects may include more stationary noise sources that are audible across the property line of a noise-sensitive land use. Table 3.12-27 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime sound level. Therefore, impacts would be less than significant.

Table 3.12-27. Operational Noise Level – Common Elements (City of Los Angeles)

Field Measurement Location	1-hour L_{eq}, dBA		Exceeds Sound Level Limits?	Significant Impact?
	Common Elements Predicted Noise Level at 50 Feet	Measured Average Daytime Ambient	Measured	
ST8	53	64	No	No

As discussed above, noise from HVAC systems could affect nearby noise-sensitive receptors within the City of Los Angeles. Based on the uncertainty of the location of the Common Elements Typical Project, the implementing party would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 6—City of Glendale

The Glendale Municipal Code generally regulates operations, restricting noise between 7:00 a.m. and 10:00 p.m. to 55 dBA at residences.

Most land uses within the City of Glendale's jurisdiction along the LA River are industrial in nature; however, some residences are along the LA River. The closest ambient field measurement conducted within Frame 6 is ST7 along the LA River in the City of Los Angeles. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-28 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime or baseline sound level. Additionally, the municipal code uses an adjusted average daytime ambient level that is no more than 5 dB over the baseline. The predicted noise level for the Common Elements Typical Project would not exceed the adjusted daytime ambient. Therefore, impacts would be less than significant.

Table 3.12-28. Operational Noise Level – Common Elements (City of Glendale)

Field Measurement Location	Common Elements Predicted Noise Level at 50 Feet	1-hour L_{eq}, dBA			Exceeds Sound Level Limits?			Significant Impact?
		Measured Average Daytime Ambient	Adjusted Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Adjusted Average Daytime Ambient	Daytime Baseline Sound Limit	
ST7	53	64	60	55	No	No	No	No

As discussed above, noise from HVAC systems could affect nearby noise-sensitive receptors within the City of Glendale. Based on the uncertainty of the location of the Common Elements Typical Project, the implementing agency would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 7—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 7 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Frame 7—Unincorporated County

Based on review of the study area, land uses located within the unincorporated County areas in Frame 7 are generally not noise sensitive along the LA River. However, for any noise sensitive land use located within this area not identified refer to impacts as discussed in Frame 3.

Frame 7—City of Burbank

The Burbank Municipal Code generally regulates operations, restricting noise between 7:00 a.m. and 10:00 p.m. to 55 dBA at residences.

Noise-sensitive land uses within the City of Burbank's jurisdiction along the LA River are residential in nature. The closest ambient field measurement conducted within Frame 7 is ST6 along the LA River in the City of Los Angeles. Ambient noise levels at this location measured 54 dBA L_{eq}.

Table 3.12-29 indicates that operational noise from visitors would be as loud as 53 dBA L_{eq}, which would not exceed the measured daytime or baseline sound level. The predicted noise level for the Common Elements Typical Project would not exceed the adjusted daytime ambient. Therefore, impacts would be less than significant.

Table 3.12-29. Operational Noise Level – Common Elements (City of Burbank)

Field Measurement Location	Common Elements Predicted Noise Level at 50 Feet	1-hour L_{eq}, dBA		Exceeds Sound Level Limits?		Significant Impact?
		Measured Average Daytime Ambient	Daytime Baseline Sound Level Limit	Measured	Daytime Baseline Sound Limit	
ST7	53	54	55	No	No	No

As discussed above, noise from HVAC systems could affect nearby noise-sensitive receptors within the City of Burbank. Based on the uncertainty of the location of the Common Elements Typical Project, the implementing agency would incorporate the mitigation measure below to make sure that impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 8—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 8 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Frame 9—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 9 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Multi-Use Trails and Access Gateways

Construction

The representative municipal codes and ambient field noise measurements for each jurisdiction within each frame discussed below is described above under the *Typical Projects/Common Elements/ Construction* analysis.

Frame 1—City of Long Beach

As discussed above, ambient noise levels in the City of Long Beach ranged from 51 to 61 dBA L_{eq}. Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of this magnitude would likely dominate the noise environment if construction occurs within 50 feet and would not attenuate to ambient levels within 3,200 feet (in a free field environment with no intervening shielding). Intervening structures and anomalous and atmospheric spreading would likely reduce construction noise to below the ambient noise levels well before 3,200 feet. However, construction noise levels could still dominate the noise environment surrounding a project site.

Construction associated with a Multi-Use Trails and Access Gateways Typical Project would generally occur during the prescribed hours outlined in the City of Long Beach's municipal code. If, during development of the final construction schedule, it is deemed necessary to work outside of the permitted hours, the County would follow the necessary procedures to obtain an appropriate variance. Additionally, as discussed above, the *City of Long Beach General Plan* Policy N 12-5 requires best business practices to be incorporated into construction activities. Therefore, the County would incorporate the City of Long Beach's guidance as project design features, as discussed above.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 1—City of Los Angeles

Land uses located within the City of Los Angeles are all industrial in nature and located approximately 5,000 feet of the LA River within Frame 1. Therefore, the City of Los Angeles impacts are discussed in Frame 6.

Frame 2—City of Long Beach

Land uses within the study area are generally of the same nature as those discussed in Frame 1. Please refer to the detailed analysis of construction is included in Frame 1.

Frame 2—City of Carson

Noise-sensitive land uses within Frame 2 in the City of Carson are generally no closer than 2,000 feet from the LA River. The general make-up of land uses that would be considered noise sensitive within the City of Carson's jurisdiction comprises single-family residences, parks, and Rancho Dominguez Preparatory School. The closest ambient field measurement conducted within Frame 2 is ST17 along the LA River within the City of Long Beach. Ambient noise levels at this location measured 59 dBA L_{eq}. Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{max} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 95 dBA L_{max} would generally dominate the noise environment if construction occurs within 50 feet; however, as the closest noise-sensitive receptors (single-family residences) within the City of Carson are over 2,000 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 32 dB, not accounting for intervening structures or anomalous and atmospheric spreading. As such, noise from construction would be reduced to 63 dBA $L_{max,}$ which would be under the thresholds outlined in Section 5502 of the City of Carson's Municipal Code. As such, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 2—Unincorporated County

Land uses within the unincorporated County areas in Frame 2 are industrial in nature and as such do not meet the criteria outlined in the Los Angeles County Code. Therefore, no impact would occur. A more detailed analysis of construction within the unincorporated County areas is included in Frame 3.

Frame 2—City of Compton

Land uses within the City of Compton in Frame 2 are generally institutional in nature, consisting of two schools. However, these two land uses are approximately 3,300 feet away from the LA River.

Therefore, no impact would occur. A more detailed analysis of construction within the City of Compton is included in Frame 3.

Frame 3—City of Compton

Noise-sensitive land uses within Frame 3 in the City of Compton are generally residential in nature with two schools (Carson Elementary and Dominguez High School). Residential land uses are within 1,000 feet of the LA River with I-710 between the land uses and the river. Carson Elementary School and Dominguez High School are within 400 feet of the LA River. The closest ambient field measurement conducted within Frame 3 is ST14 along the LA River within the City of Paramount (north of the City of Compton's jurisdiction). Ambient noise levels at this location measured 60 dBA L_{eq}. Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 95 dBA L_{eq} would generally dominate the noise environment if construction occurs within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the City of Compton are over 1,000 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 26 dB, not accounting for intervening structures or anomalous and atmospheric spreading. At the school, noise from construction would attenuate approximately 18 dB. Therefore, noise levels from construction would attenuate to approximately 69 dBA and 77 dBA L_{eq}, respectively (not accounting for intervening structures or anomalous and atmospheric spreading).

Construction associated with a Multi-Use Trails and Access Gateways Typical Project would occur during the prescribed hours outlined in the City of Compton's municipal code. Additionally, given the types of construction expected with a Multi-Use Trails and Access Gateways Typical Project and the distance from any noise-sensitive receptors, construction noise would be audible at the school closer to the river, but would not dominate the environment. Noise levels of 59 dBA at the residential land uses would likely be dominated by noise from I-710.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Paramount

Section 45-7 of the Paramount Municipal Code regulates construction that would take place within the city. The municipal code exempts "construction, repair or remodeling equipment and devices and other related construction noise sources shall be exempted from the provisions of this chapter provided a permit for such construction, repair or remodeling shall have been obtained for such construction, repair or remodeling from the building department of the city and the construction, repair or remodeling does not take place between the hours of 8:00 P.M. and 7:00 A.M."

Therefore, with consideration of the anticipated timing of construction occurring within the time of day exempted by the Paramount Municipal Code (i.e., 7:00 a.m. to 8:00 p.m.), and the anticipation that the implementing agency would obtain a construction permit, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—Unincorporated County

Noise-sensitive land uses within Frame 3 in the unincorporated County areas are generally residential in nature. Residential land uses are within 500 feet of the LA River, with I-710 between the land uses and the River. The closest ambient field measurement conducted within Frame 3 is ST22. Ambient noise levels at this location measured 65 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 95 dBA L_{eq} would generally dominate the noise environment if construction occurs within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the unincorporated County areas are over 500 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 20 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 75 dBA L_{max}. Additionally, there is an approximately 12-foot soundwall that provides noise reduction associated with I-710, which would shield noise-sensitive land uses.

Construction associated with the Multi-Use Trails and Access Gateways Typical Projects would occur during the prescribed hours outlined in the Los Angeles County Code. Additionally, given the types of construction associated with a Multi-Use Trails and Access Gateways Typical Project and the distance from any noise-sensitive receptors, construction noise may be audible, but would generally be similar to the existing noise environment with the I-710 facility.

As discussed above, construction of a Multi-Use Trails and Access Gateways Typical Project would not occur between 8:00 p.m. and 7:00 a.m. and would comply with the L_{max} value of 60 dBA. Existing noise levels at the residences would be approximately 65 dBA. As such, the noise levels associated with the proposed Project would not be discernable from the existing noise environment.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Lynwood

Noise-sensitive land uses within Frame 3 in the City of Lynwood are residential and are within 500 feet of the LA River, but separated from the river by I-710 and commercial land uses. The closest ambient field measurement conducted within Frame 3 is ST23 along the LA River within the City of Lynwood. Ambient noise levels at this location measured 65 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 95 dBA L_{eq} would generally dominate the noise environment if construction occurs within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the City of Lynwood are approximately 500 feet away from any construction that would occur along the LA River. Noise would be expected to attenuate by approximately 20 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 75 L_{eq}.

As discussed above, the implementing agency would comply with the time requirements laid out by the Lynwood Municipal Code (i.e., 7 a.m. to 10 p.m.), and impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of South Gate

Noise-sensitive land uses within Frame 3 in the City of South Gate are residential land uses along the boundary of the LA River (50 feet from the property line). The closest ambient field measurement conducted within Frame 3 is ST13 along the LA River within the City of Paramount (which is representative of the land uses within the City of South Gate's jurisdiction). Ambient noise levels at this location measured 54 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Thus, construction noise levels would be 95 dBA L_{eq} at the noise-sensitive receptors that border the LA River, which would likely dominate the noise environment.

Construction associated with the Multi-Use Trails and Access Gateways Typical Projects would generally occur during the prescribed hours outlined in the City of South Gate's general plan. Additionally, the city's general plan Objective N1.1 and Policies 1 through 3, which require adherence to the prohibited hours of construction and methods to reduce construction noise, will be

incorporated by the County, as discussed above. Impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Cudahy

Noise-sensitive land uses within Frame 3 in the City of Cudahy are residential land uses along the boundary of the LA River (50 feet from the property line). The closest ambient field measurement conducted within Frame 3 is ST12 along the LA River within the City of Bell, which is representative of the land uses within the City of Cudahy's jurisdiction. Ambient noise levels at this location measured 58 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Thus, construction noise levels would be 95 dBA L_{eq} at the noise-sensitive receptors that border the LA River, which would likely dominate the noise environment.

As discussed above, the City of Cudahy does not specifically identify hours of operation for construction; therefore, the implementing agency would designate hours for construction as appropriate. Construction associated with the Multi-Use Trails and Access Gateways Typical Projects would generally occur during the hours prescribed by the implementing agency. Additionally, the *Cudahy 2040 General Plan* Policies NE 1.2 and 2.6, which require noise suppression techniques and application of appropriate standard construction noise controls for all construction projects, would be applicable, as discussed above. Impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3—City of Downey

As discussed above, noise-sensitive land uses within Frame 3 in the City of Downey are residential land uses approximately 3,400 feet from the boundary of the LA River. The closest ambient field measurement conducted within Frame 3 is ST13 along the LA River within the City of Paramount

(north of the City of Compton's jurisdiction). Ambient noise levels at this location measured 54 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 37 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 58 dBA L_{eq} at noise-sensitive receptors within the City of Downey. Noise levels of this magnitude would not be discernable from the existing ambient conditions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Bell Gardens

Noise-sensitive land uses within Frame 4 in the City of Bell are residential land uses along the boundary of the LA River (300 feet from the property line). The closest ambient field measurement conducted within Frame 4 is ST12 along the LA River within the City of Bell. Ambient noise levels at this location measured 58 dBA L_{eq}. However, the I-710 alignment is between the LA River and the noise-sensitive land uses within the City of Bell Gardens. Therefore, noise levels within these land uses will likely be more akin to those at ST22 (65 dBA L_{eq}).

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Noise attenuates at a rate of 6 dB per doubling of distance for a single source (point source) such as construction. Construction noise levels of 95 dBA L_{eq} would generally dominate the noise environment if construction occurs within 50 feet; however, as the noise-sensitive receptors (single-family residences) within the City of Bell Gardens are approximately 300 feet away from any construction that would occur along the LA River, noise would be expected to attenuate by approximately 16 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 79 dBA L_{eq}.

As discussed above, the implementing agency would comply with the requirements in the Bell Gardens Municipal Code. Impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Bell

Noise-sensitive land uses within Frame 4 in the City of Bell are residential land uses along the boundary of the LA River. The closest ambient field measurement conducted is within Frame 4 at ST12 along the LA River within the City of Bell. Ambient noise levels at this location measured 58 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. As noise-sensitive land uses within the City of Bell share a property line with the LA River alignment, construction noise levels of 95 dBA L_{eq} would generally dominate the noise environment as construction would occur within 50 feet of noise-sensitive receptors (single-family residences).

The City of Bell's municipal code and general plan do not specifically regulate construction or allow a specific time frame in which construction can occur. Therefore, the implementing agency would designate hours for construction to include as part of any potential project. Construction associated with the Multi-Use Trails and Access Gateways Typical Projects would generally occur during the prescribed hours outlined by the implementing agency in lieu of specific direction supplied by the City of Bell. Therefore, construction impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Maywood

Noise-sensitive land uses within Frame 4 in the City of Maywood are residential land uses approximately 200 feet from the boundary of the LA River. The closest ambient field measurement conducted within Frame 4 is ST12 along the LA River within the City of Bell, which is representative of the land uses within the City of Maywood. Ambient noise levels at this location measured 58 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 12 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 83 dBA L_{eq} at noise-sensitive receptors within the City of Maywood. Noise levels of this magnitude would be plainly audible. As construction noise would exceed the City of Maywood's 70 dBA standard, impacts would be potentially significant without mitigation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4—City of Commerce

No noise-sensitive land uses are within 500 feet of the LA River within the City of Commerce. Land uses within the area of influence in the City of Commerce are completely commercial/industrial in nature.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Huntington Park

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 39 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 56 dBA L_{eq} at noise-sensitive receptors within the City of Huntington Park. Noise levels of this magnitude would not likely be discernable from the existing ambient conditions.

Impact Determination

Impacts would be less than significant

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 4—City of Vernon

Most land uses within the City of Vernon's jurisdiction within one-tenth of a mile of the LA River are commercial/industrial; however, there are some residential land uses within this area. The closest ambient field measurement conducted within Frame 4 is ST11 along the LA River, within the City of Vernon. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 19 dB, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 76 dBA at noise-sensitive receptors within the City of Vernon. Noise levels of this magnitude would be similar to the existing ambient condition, but nonetheless would exceed the City of Vernon's 65 dBA threshold.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Frame 4—Unincorporated County

Based on review of the study area, land uses located within the unincorporated County areas in Frame 4 are generally not noise sensitive along the LA River. However, for any noise sensitive land use located within this area not identified, refer to impacts as discussed in Frame 3.

Frame 5—City of Los Angeles

Land uses located within the City of Los Angeles are generally industrial/commercial in nature within Frame 5. The discussion of impacts related to Multi-Use Trails and Access Gateways Typical Projects is discussed in Frame 6 below.

Frame 6—City of Los Angeles

As discussed above, noise-sensitive land uses within Frame 6 in the City of Los Angeles are varied but include residential land uses that front onto the LA River. Residential land uses are generally within 50 feet of the LA River right-of-way. The closest ambient field measurement conducted within Frame 6 is ST8 within the City of Los Angeles. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of 95 dBA L_{eq} would generally dominate the noise environment if construction occurs within 50 feet.

Construction associated with the Multi-Use Trails and Access Gateways Typical Projects would occur during the prescribed hours outlined in the City of Los Angeles's municipal code and CEQA guidelines. However, the guidelines state that a significant impact may occur if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use; or
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

As shown in Table 3.12-10 noise levels could be as high as 95 dBA L_{eq}, which would exceed the existing ambient condition by more than 30 dB. Therefore, impacts could be significant without mitigation incorporated.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-3: Require Noise-Reducing Practices Be Incorporated into Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 6—City of Glendale

Noise-sensitive land uses within Frame 6 in the City of Glendale include residential land uses that are within 180 feet of the LA River. The closest ambient field measurement conducted within Frame 6 is ST7 located within the City of Los Angeles. Ambient noise levels at this location measured 64 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. Construction noise levels of this nature would be expected to attenuate by approximately 11 dB at a distance of 180 feet, not accounting for intervening structures or anomalous and atmospheric spreading. Therefore, noise levels from construction would attenuate to approximately 84 dBA at noise-sensitive receptors within the City of Glendale. Noise levels of this magnitude would exceed the existing ambient conditions.

As the implementing agency would comply with the City of Glendale's general plan policy as discussed above, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 7—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 7 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Frame 7—Unincorporated County

Based on review of the study area, land uses located within the unincorporated County areas in Frame 7 are generally not noise sensitive along the LA River. However, for any noise sensitive land use located within this area not identified, refer to impacts as discussed in Frame 3.

Frame 7—City of Burbank

Noise-sensitive land uses within Frame 7 in the City of Burbank include residential land uses that are within 50 feet of the LA River. The closest ambient field measurement conducted within Frame 6 is ST6 within the City of Los Angeles. Ambient noise levels at this location measured 54 dBA L_{eq}.

Table 3.12-10 indicates that construction noise levels associated with the Multi-Use Trails and Access Gateways Typical Projects would be 95 dBA L_{eq} during the noisiest phase of construction. As noise-sensitive land uses are located along the LA River, construction noise levels could be as high as 95 dBA L_{eq}. Noise levels of this magnitude would likely dominate the existing ambient environment.

As the implementing agency would comply with the City of Burbank's general plan and municipal code, as discussed above, impacts associated with construction would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 8—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 8 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Frame 9—City of Los Angeles

Land uses located within the City of Los Angeles in Frame 9 are generally noise sensitive and located along the LA River. Refer to impacts as discussed in Frame 6.

Operations

Frame 1 though 9

Operational traffic associated with a Multi-Use Trails and Access Gateways Typical Project would generally occur wherever access gateways would be located, which could be anywhere within the 51-mile study area. Multi-Use Trails and Access Gateways Typical Projects could extend over an approximate 5-mile stretch; as such, traffic could be located anywhere along that stretch, and the analysis would be applicable to all frames and jurisdictions. As discussed above, the typical number of visitors would be no more than 1,000 per day, resulting in no more than 67 per hour or 134 total trips per hour. The typical arterial roadways carry from 10,000 up to 70,000 vehicles or more per day, with a typical average around 28,000 (OCTA 2019). Assuming an average typical arterial roadway volume, 28,000 vehicles per day, the hourly number of vehicles would be 1,167 (28,000 vehicles/24 hours). A single automobile at a speed of 45 mph at a distance of 50 feet (as calculated by the FHWA TNM 2.5 model) will produce a sound pressure level of 36.4 dBA L_{eq}. Therefore, 1,167 and 1,301 vehicles (traffic along an arterial roadway without and with the Multi-Use trails and Access Gateways) would produce sound pressure levels of 67.1 and 67.6 dBA L_{eq}, respectively, a difference of 0.5 dB. Changes in traffic volumes of this magnitude would be negligible. Based on the low range of the spread of ADT (i.e., 2,000 vehicles) the average hourly traffic volume would be 83 vehicles (2,000 vehicles per hour/24 hours). Therefore, 83 and 217 vehicles (traffic along an arterial roadway without and with the Multi-Use trails and Access Gateways) would produce sound pressure levels of 55.6 and 59.8 dBA L_{eq}, respectively, a difference of 4.2 dB. The generally agreed upon threshold of perception is for a change in noise is 3 dB while a 5 dB increase is clearly audible. As such, an increase of this magnitude would be slightly above this threshold and therefore may be audible. However overall noise levels associated with hourly traffic (i.e., 59.8 dBA L_{eq}) would not meet or exceed any codified threshold. Therefore, impacts associated with operational traffic would be less than significant.

Multi-Use Trails and Access Gateways Typical Projects involve uses such as bike trails, equestrian trails, and easy to find and welcoming access gateways. It is expected that a Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 visitors on any given day. Based on the length of the river, this would represent an average of 67 visitors dispersed equally within the 5-mile stretch of the river where a Multi-Use Trails and Access Gateways Typical Project would be located. As such, this would equate to, at the most, one visitor per minute at any given location within any given frame and in any given jurisdiction. The primary operational noise associated with a Multi-Use Trails and Access Gateways Typical Project would be visitors talking. Assuming one visitor at any one location and only one visitor talking at any given point in time, the average raised voice would be 40 dBA L_{eq} at a distance of 50 feet. Given the measured noise levels presented in Table 3.12-2 and the threshold set out in each jurisdiction's municipal code, noise levels of this magnitude would not exceed any of the thresholds or ambient noise levels presented in this section. Impacts would be less than significant.

Summary

Table 3.12-30 summarizes impacts related to construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects.

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Table 3.12-30. Summary of Common Elements Typical Project and Multi-Use Trails and Access Gateways Typical Project Construction-Related Impacts

Frame	Jurisdiction	Regulatory Guidance	Project Design Features	Mitigation Measures (MM)
Frame 1	City of Long Beach	Section 8.80.202 of the Long Beach Municipal Code regulates construction activities where a building or other related permit is required that may annoy or disturb a reasonable person of normal sensitivity between the hours of 7 p.m. and 7 a.m. the following day on weekdays and the hours of 7 p.m. on Friday and 9 a.m. on Saturday and after 6 p.m. on Saturday. *City of Long Beach General Plan* Policy N 12-5 requires best business practices to be incorporated into construction activities.	The Project Design Features from the City of Long Beach's general plan include, but are not limited to, the following: • Scheduling high-noise and vibration-producing activities to a shorter window of time during the day outside early morning hours to minimize disruption to sensitive uses. • Grading and construction contractors should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment. • Construction haul truck and materials delivery traffic should avoid residential areas whenever feasible. The construction contractor should place noise- and vibration-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible. • The construction contractor should use on-site electrical sources to power equipment rather than diesel generators, where feasible. • All residential units located within 500 feet of a construction site should be sent a notice regarding the construction schedule. A sign legible at a distance of 50 feet should also be posted at the construction site. All notices and the signs should indicate the dates and durations of construction activities, as well as provide a telephone number for a "noise disturbance coordinator." • A "noise disturbance coordinator" should be established by the project developer. The disturbance coordinator should be responsible for responding to any local complaints about construction noise. The disturbance coordinator should determine the cause of the noise complaint (e.g., starting too early, bad muffler) and should be required to implement reasonable measures to reduce noise levels.	No mitigation is necessary.
Frame 2	City of Carson	Section 5502 of the Carson Municipal Code restricts construction operations of 20 days or less to 75 dBA L_{max} from 7:00 a.m. to 8:00 p.m., to 60 dBA L_{max} daily, from 8:00 p.m. to 7:00 a.m., and all day Sunday and legal holidays at single-family residences; and to 65 dBA L_{max} from 7:00 a.m. to 8:00 p.m., to 55 dBA L_{max} daily, 8:00 p.m. to 7:00 a.m., and all day Sunday and legal holidays for construction operations of 21 days or more.	No Project Design Features are necessary.	No mitigation is necessary.
Frame 3	City of Compton	Section 7-12.22 of the Compton Municipal Code regulates construction that would take place within the city. The municipal code restricts construction unless the noise caused thereby is confined within a building other than between the hours of 7:00 a.m. and 7:00 p.m. on Monday through Saturday. The City of Compton's general plan Noise Policy 2.1 requires "noise studies for new development projects and expansion of existing developments that will result in construction activities in excess of 30 days or projects that are 5,000 square feet or more of building or structure area or fifteen units or more to measure and propose mitigation measures for noise impacts on the nearby community, especially on existing noise-sensitive land uses." The City of Compton's general plan Noise Policy 3.1 requires sound attenuation on construction equipment.	The Project Design Features from the City of Compton's general plan will include: • All construction equipment will be required to keep properly functioning mufflers on all internal combustion and vehicle engines used in construction.	No mitigation is necessary.

Frame	Jurisdiction	Regulatory Guidance	Project Design Features	Mitigation Measures (MM)
	City of Paramount	Section 45-7 of the Paramount Municipal Code exempts "construction, repair or remodeling equipment and devices and other related construction noise sources shall be exempted from the provisions of this chapter provided a permit for such construction, repair or remodeling shall have been obtained for such construction, repair or remodeling from the building department of the city and the construction, repair or remodeling does not take place between the hours of 8:00 P.M. and 7:00 A.M."	No Project Design Features are necessary.	No mitigation is necessary.
	Los Angeles County	Section 12.08.440 of the Los Angeles County Code restricts construction that would cause a noise disturbance across a residential or commercial property line between 7:00 p.m. and 7:00 a.m. or at any time on Sundays or holidays. The County Code further restricts construction noise that would last less than 10 days at affected structures to a maximum noise level (L_{max}) of: • 75 dBA L_{max} between the hours of 7:00 a.m. and 8:00 p.m. and 60 dBA L_{max} between the hours of 8:00 p.m. and 7:00 a.m. at single-family residences, • 80 dBA L_{max} between the hours of 7:00 a.m. and 8:00 p.m. and 64 dBA L_{max} between the hours of 8:00 p.m. and 7:00 a.m. at multi-family residences, and • 85 dBA L_{max} between the hours of 7:00 a.m. and 8:00 p.m. and 70 dBA L_{max} between the hours of 8:00 p.m. and 7:00 a.m. at semi-residential/commercial uses. It also restricts construction noise that would last 10 or more days at affected structures to a maximum noise level (L_{max}) of: • 60 dBA L_{max} between the hours of 7:00 a.m. and 8:00 p.m. and 50 dBA L_{max} between the hours of 8:00 p.m. and 7:00 a.m. at single-family residences, • 65 dBA L_{max} between the hours of 7:00 a.m. and 8:00 p.m. and 55 dBA L_{max} between the hours of 8:00 p.m. and 7:00 a.m. at multi-family residences, and • 70 dBA L_{max} between the hours of 7:00 a.m. and 8:00 p.m. and 60 dBA L_{max} between the hours of 8:00 p.m. and 7:00 a.m. at semi-residential/commercial uses.	No Design Features are necessary.	No mitigation is necessary.
	City of Lynwood	Section 3-12.13 of the Lynwood Municipal Code regulates construction noise: "within a residential zone, or within a radius of five hundred feet (500') therefrom… between the hours of ten o'clock (10:00) P.M. of one day and seven o'clock (7:00) a.m. of the next day in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the director of development services or his or her designee."	No Project Design Features are necessary.	No mitigation is necessary.

	City of South Gate	Section 3-12.13 of the South Gate Municipal Code applies a variance process for construction noise that requires the applicant to "detail the approved method of achieving maximum compliance and a time schedule for its accomplishment."
		City of South Gate general plan Objective N1.1 and Policies 1 through 3 require adherence to the prohibited hours of construction (from 7:00 p.m. through 8:00 a.m. Monday through Saturday, and on Sundays and federal holidays) and methods to reduce construction noise.
			The Project Design Features from the City of South Gate's general plan include, but are limited to, the following:
			• Construction noise reduction methods will be employed to the maximum extent feasible. These measures may include, but not limited to:
			  ○ shutting off idling equipment,
			  ○ installing temporary acoustic barriers around stationary construction noise sources,
			  ○ maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and
			  ○ using electric air compressors and similar power tools, rather than diesel equipment.
			• Prior to approval of project plans and specification by the City of South Gate, project applicants and/or construction contractors will identify construction equipment and noise reducing measures, and the anticipated noise reduction.
				No mitigation is necessary.

Frame	Jurisdiction	Regulatory Guidance	Project Design Features	Mitigation Measures (MM)
	City of Cudahy	The City of Cudahy general plan states that the City of Cudahy will: • Limit hours of operation at all noise generation sources adjacent to noise sensitive areas or uses. • Require all exterior noise sources (construction, operations, air compressors, pumps, fans, and leaf blowers) to use available noise suppression techniques and devices to lower exterior noise to acceptable levels which are compatible with adjacent land uses. • Implement appropriate standard construction noise controls for all construction projects.	The Project Design Features from the City of Cudahy general plan include but are not limited to, the following: • Scheduling high-noise and vibration-producing activities to a shorter window of time during the day outside early morning hours to minimize disruption to sensitive uses. • Grading and construction contractors should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment. • Construction haul truck and materials delivery traffic should avoid residential areas whenever feasible. The construction contractor should place noise- and vibration-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible. • The construction contractor should use on-site electrical sources to power equipment rather than diesel generators, where feasible. • All residential units located within 500 feet of a construction site should be sent a notice regarding the construction schedule. A sign legible at a distance of 50 feet should also be posted at the construction site. All notices and the signs should indicate the dates and durations of construction activities, as well as provide a telephone number for a "noise disturbance coordinator." • A "noise disturbance coordinator" should be established by the project developer. The disturbance coordinator should be responsible for responding to any local complaints about construction noise. The disturbance coordinator should determine the cause of the noise complaint (e.g., starting too early, bad muffler) and should be required to implement reasonable measures to reduce noise levels.	No mitigation is necessary.
	City of Downey	Section 4606.5 of the Downey Municipal Code exempts construction noise from the requirements of the municipal code "provided a valid permit for such construction, repair, or remodeling shall have been obtained from the City. In any circumstance other than emergency work, no repair or remodeling shall take place between the hours of 9:00 p.m. of one day and 7:00 a.m. of the following day, and no repair or remodeling shall exceed eighty-five (85) db(A) across any property boundary at any time during the course of a twenty-four (24) hour day."	No Project Design Features are necessary.	No mitigation is necessary.
Frame 4	City of Bell Gardens	Section 16.24.120 of the Bell Gardens Municipal Code regulates construction "within a residential zone, or within a radius of 500 feet, between the hours of 7:00 p.m. of one day and 8:00 a.m. of the next day"	No Project Design Features are necessary.	No mitigation is necessary.
	City of Bell	Section 16.24.120 of the Bell Municipal Code generally regulates noise and therefore, construction noise. The municipal code regulates construction that would "emanate from any activity taking place on real property owned or occupied by such person, which has the effect of disturbing the peace and quiet of the neighborhood, or which directly causes an unreasonable interference with the use, enjoyment and/or possession of any real property owned or occupied by any other person."	No Project Design Features are necessary.	No mitigation is necessary.
	City of Maywood	Section 5.23.11 of the Maywood Municipal Code exempts construction noise from the requirements of the municipal code "Noise sources associated with the construction, repair, remodeling, or grading of any real property or during authorized seismic surveys provided such activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on		**Mitigation Measure NOI-1. Prepare Construction Noise Work and Mitigation Monitoring Plan.** During final design the implementing agency will prepare a focused

Frame	Jurisdiction	Regulatory Guidance	Project Design Features	Mitigation Measures (MM)
		weekdays, including Saturdays, or at any time on Sunday or a Federal holiday, and provided the noise level created by such activities does not exceed the noise standard of seventy (70) dBA plus the limits specified in Section 5-23.08 of this chapter as measured on residential property and does not endanger the public health, welfare, and safety."		noise analysis for any project within the city, which identifies nearby noise sensitive receptors that could be affected, predicts anticipated construction-related noise levels, and identifies measures that will be implemented by the construction contractor in order to comply with the city's standard. Measures that could be implemented include, but are not limited to, the following: • Using equipment that generates lower noise levels than those outlined in Table 3.12-9, • Locating construction equipment far enough from noise-sensitive land uses such that noise attenuates to below the city's standard, and/or • Designing and installing temporary sound barriers, which would provide attenuation below the city's dBA standard. The implementing agency will also require noise monitoring during all phases of construction to confirm that the mitigation measures identified by the construction noise work plan and implemented by the construction contractor reduce construction noise to below the city's threshold.
	City of Commerce	Section 19.19.160 of the Commerce Municipal Code exempts construction noise from the requirements of the municipal code provided construction does not occur "within any residential zone, or within a radius of five hundred feet of a residential zone or between the hours of ten p.m. and seven a.m., unless a permit has been obtained from the city."	No Project Design Features are necessary.	No mitigation is necessary.
	City of Huntington Park	Section 9-3.506 of the Huntington Park Municipal Code exempts construction noise from the requirements of the municipal code provided construction does not take place "between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sundays or Federal holidays."	No Project Design Features are necessary.	No mitigation is necessary.
	City of Vernon	The Vernon Municipal Code generally regulates construction through its operational guidance, which restricts noise between the hours of 7:00 a.m. and 10:00 p.m. to 65 dBA within one-tenth of a mile of any residence or school.		**Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.** Prior to any construction within the City of Vernon, the implementing agency will apply for and obtain a conditional use permit, which would allow the Project to exceed the City of Vernon's noise standard of 65 dBA.
Frame 6	City of Los Angeles	The Los Angeles Municipal Code Section 41.40 restricts construction "between the hours of 9:00 P.M. and 7:00 A.M. of the following day." Additionally the City of Los Angeles' CEQA Threshold Guide provides guidance for analysis of construction noise, by setting a general screening criteria: • Would construction activities occur within 500 feet of a noise sensitive use?		**Mitigation Measure NOI-3: Require Noise-Reducing Practices Be Incorporated into Construction Activities.** Prior to any construction within the City of Los Angeles, the implementing agency will require the contractor to include noise-reducing practices:

Frame	Jurisdiction	Regulatory Guidance	Project Design Features	Mitigation Measures (MM)
		• For projects located within the City of Los Angeles, would construction occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday?		• Use noise control devices, such as equipment mufflers, enclosures, and barriers. Natural and artificial barriers such as ground elevation changes and existing buildings can shield construction noise. Stage construction operations as far from noise-sensitive uses as possible. • Avoid residential areas when planning haul truck routes. • Maintain all sound-reducing devices and restrictions throughout the construction period. • Replace noisy equipment with quieter equipment (for example, a vibratory pile driver instead of a conventional pile driver and rubber-tired equipment rather than track equipment). • Change the timing and/or sequence of the noisiest construction operations to avoid sensitive times of the day.
	City of Glendale	The Glendale Municipal Code Section 8.36.080 restricts construction "within a residential zone, or within a radius of five hundred feet therefrom between the hours of seven p.m. on one day and seven a.m. of the next day or from seven p.m. on Saturday to seven a.m. on Monday or from seven p.m. preceding a holiday." The City of Glendale's general plan includes a policy to "Change the permitted hours of construction to Monday through Friday, 7 a.m. to 7 p.m. and on Saturday from 9 a.m. to 5 p.m. Maintain the ban on construction on Sundays and Holidays."	No Project Design Features are necessary.	No mitigation is necessary.
Frame 7	City of Burbank	The City of Burbank's municipal code and general plan regulate construction that would take place within the jurisdiction of the City. The general plan and municipal code state that, "construction noise that occurs between the hours of 7 a.m. and 7 p.m. Monday through Friday and 8 a.m. to 5 p.m. on Saturday is exempt from applicable noise standards."	No Project Design Features are necessary.	

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2020 LA River Master Plan Kit of Parts

Construction

KOP Categories 1 through 5

As most of the KOP categories would have similar construction components, they are discussed herein together, with the exception of KOP Category 6, because its location would be anywhere within the 1-mile project boundary on each side of the LA River. Thus, KOP Category 6 is discussed individually below.

The specific location (in-channel or off-channel) and design for these design components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Considering the various development components that could be included in each individual KOP, construction impacts cannot be directly quantified until the specific locations (in-channel vs off-channel) are known. It is anticipated that construction noise could be similar to that described above related to Multi-Use Trails and Access Gateways Typical Projects. Therefore, based on the jurisdiction these projects occur in, construction would result in potentially significant impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.

Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.

Mitigation Measure NOI-3: Require Noise-Reducing Practices Be Incorporated into Construction Activities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 6

The specific location and design for the Off-Channel Land Assets design components have not been determined yet and would depend on numerous factors, including location of the improvements, complement of construction equipment, project proponent, and availability of funding. Considering this KOP includes a variety of construction activities construction impacts of KOP Category 6 cannot be directly quantified as the specific design details, sizes, and locations are not known. Construction noise associated with these projects cannot be associated comparatively with any construction element listed herein due to the uncertainty with these types of projects. Therefore, depending on

the jurisdiction in which the KOP Category 6 project occurs, construction would result in potentially significant impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.

Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.

Mitigation Measure NOI-3: Require Noise-Reducing Practices Be Incorporated into Construction Activities.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

KOP Category 1

Potential impacts from operations of the design components under the Trails and Access Gateways KOP would vary depending on the specific design component and its intended function, as discussed in Chapter 2, *Project Description*. Generally, operational components associated with habitat improvements that are used to increase biodiversity or species connectivity do not have noise components that would be discernable. Additionally, stationary improvements such as water and light towers would not produce significant amounts of noise. Operational components such as boardwalks, lookout points, and in-channel trails would include noise components; however, these types of improvements would be similar in nature to the Multi-Use Trails and Access Gateways Typical Projects discussed above. However, components such as equestrian facilities, under- and overpasses, and other operation components may have a larger noise profile. With consideration of the type of uses associated with the ecological, and some recreational, uses (as discussed above) operational analysis may not be necessary as these projects would not include an operation noise source. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity for some other recreational projects that could occur as they relate to noise, quantification of these types of impacts is not possible at this time. Therefore, impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-6: Prepare a Noise Study.

The implementing agency will prepare a focused noise study that analyzes the operational noise impacts of subsequent projects under the six KOP categories that include noise-producing

components, such as, but not limited to, equestrian facilities and under- and overpasses or any other KOP-related project component. The focused noise study will include the quantification of noise-producing activities located on and originating from the subsequent project site. The focused noise study will determine the extent of impacts and whether these impacts would exceed any codified thresholds or guidance associated with the relevant jurisdiction. Should impacts be identified, the implementing agency will provide mitigation to reduce impacts to less-than-significant levels. Mitigation could include, but is not limited to, the following:

- Project design that would isolate noise producing features away from noise-sensitive receptors
- Inclusion of noise-attenuating features such as sound walls, berms, acoustical shielding, etc., which would block the line of sight and provide noise reduction to surrounding noise-sensitive land uses

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 2

Potential impacts from operation of the design components under the Channel Modifications KOP would vary depending on the specific design component and its intended function, as well as on the specific location, including in-channel or off-channel. The specific location (in-channel or off-channel) and design for these design components has not been determined yet and would depend on numerous factors, as discussed in Chapter 2, *Project Description*. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity for some other recreational projects that could occur as they relate to noise, quantification of these types of impacts is not possible at this time. Therefore, impacts would be potentially significant.

Impact Determination

Impacts would be significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-6: Prepare a Noise Study.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 3

Potential impacts from operation of the design components under the Crossings and Platforms KOP would vary depending on the specific design component and its intended function, as well as on the specific location. The specific location and design for these design components has not been determined yet and would depend on numerous factors as discussed in Chapter 2, *Project*

Description. With consideration of the type of uses associated with the ecological, and some recreational, components operational analysis may not be necessary as these projects would not include an operation noise source. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity for some other recreational projects that could occur as they relate to noise, quantification of these types of impacts is not possible at this time. Therefore, impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-6: Prepare a Noise Study.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 4

Potential impacts from operation of the design components under the Diversions KOP would vary depending on the specific design component and its intended function, as well as on the specific location. The specific location and design for the design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding, as described in Chapter 2, *Project Description*. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity for some other design components that could occur as they relate to noise, quantification of these types of impacts is not possible at this time. Therefore, impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-6: Prepare a Noise Study.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 5

Potential impacts from operation of the design components under the Flood Reclamation KOP would vary depending on the specific design component and its intended function, as well as on the specific location. The specific location and design for the design components has not been determined yet and would depend on numerous factors, including project proponent and

availability of funding, as described in Chapter 2, *Project Description*. With consideration of the type of uses associated with the ecological, and some recreational, components operational analysis may not be necessary as these projects would not include an operation noise source. The one caveat to this is any of these design components that would require the use of any sort of pump or system of pumps. Additionally, uses such as the inclusion of a farmers' market could result in impacts on surrounding noise-sensitive land uses. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity that could occur at these locations as they relate to noise, quantification of these types of impacts is not possible at this time. Therefore, impacts would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-6: Prepare a Noise Study.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Category 6

Potential impacts from operation of the design components under the Off-Channel Land Assets KOP would vary depending on the specific design component and its intended function, as well as on the specific location. The specific location and design for these design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description*, this KOP could include land assets such as affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity that could occur at these locations as they relate to noise, quantification of these types of impacts is not possible at this time. Therefore, impacts would be potentially significant.

Impact Determination

Impacts would be significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-6: Prepare a Noise Study.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. As described in detail above, the Typical Projects and six KOP categories under the *2020 LA River Master Plan* would comply with jurisdictional thresholds and requirements for both construction and operations incumbent within the municipal codes, general plans, and planning documents as it relates to noise. Inclusion of mitigation measures and preparation of a focused noise study would help reduce impacts and compliance with the jurisdictional thresholds and requirements. However, with the uncertainty as to the location and extent of projects associated with the overall *2020 LA River Master Plan*, it is possible that impacts could be reduced to less-than-significant levels. As such, impacts would be significant and unavoidable.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure NOI-1: Prepare Construction Noise Work and Mitigation Monitoring Plan.

Mitigation Measure NOI-2: Obtain Conditional Use Permit and Implement its Requirements during Construction Activities.

Mitigation Measure NOI-3: Require Noise-Reducing Practices Be Incorporated into Construction Activities.

Mitigation Measure NOI-4: Prepare Focused Noise Study and Implement Findings to Reduce HVAC Noise.

Mitigation Measure NOI-5: Prepare Focused Noise Study and Implement Findings.

Mitigation Measure NOI-6: Prepare a Noise Study.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.12(b): Would the proposed Project generate excessive groundborne vibration or groundborne noise levels?

Typical Projects

Common Elements

Construction

Frames 1 through 9

Construction-related vibration associated with the Common Elements Typical Project would occur and generally be associated with the location of the individual projects throughout the entire 51-mile study area. Because many jurisdictions do not include a codified threshold for vibration, the County's perception threshold (0.01 inch per second [in/sec]) is used herein unless otherwise noted. For jurisdictions where codified vibration thresholds are present, those thresholds are discussed within their respective frames below.

Table 3.12-9 shows the construction equipment that would be used for the Common Elements Typical Project. Equipment such as loaded trucks and small bulldozers would be the most vibratory-intensive construction equipment used. Based on Table 3.12-11, each one of these pieces of equipment produce vibration on the levels of 0.089 and 0.003 PPV, respectively. Vibration for earth-moving equipment attenuates at a rate of $PPV_{ref} \times (25/D)^n$. Table 3.12-31 shows the distance to the County's 0.01 PPV threshold. Based on Caltrans' Guidelines Vibration Annoyance Potential Criteria (Caltrans 2013b), transient construction vibration levels of 0.01 would fall between the levels of Barely perceptible and Distinctly perceptible. The 0.01 threshold is well below any damage potential criteria and, therefore, does not represent any damage potential with respect to vibration.

Table 3.12-31. Common Elements Typical Project Distance to the County's Threshold

Equipment	Reference at 25 feet (PPV)	Distance to the County's 0.01 Threshold (feet)
Loaded Trucks	0.089	200
Small Bulldozers	0.003	--

As discussed above, vibration levels from construction equipment would attenuate to below the level of perception at a distance of 200 feet from the source. Based on the locations of the land uses throughout the study area, vibration-sensitive land uses could be as close as 50 feet from construction sites. As such, vibration levels could exceed the County's threshold of 0.01 PPV.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-7: Locate Project 200 Feet or More from Occupied Structures or Prepare Vibration Study and Implement Findings.

The implementing agency will locate any development of the Common Elements Typical Project outside of a distance of 200 feet from any occupied structure. If for some reason this is not possible, then during final design the implementing agency will prepare a focused vibration study that analyzes construction vibration sources and predicts vibration levels at nearby vibration sensitive land uses. If vibration levels are predicted to exceed the County's 0.01 PPV threshold or any applicable city's standards, the implementing agency will prescribe measures to reduce vibration to the greatest extent practical. Measures could include but are not limited to:

- Using less vibration-intensive construction equipment
- Timing construction so that structures would not be occupied when high levels of vibration are expected
- Informing residents of the timing of construction and that vibration may be noticeable during these times

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frames 1 and 2

City of Long Beach

The City of Long Beach includes codified threshold for vibration, enumerated in Table 3.12-9. As many of the land uses within the City of Long Beach's jurisdiction in the study area are residential and would be considered non-engineered timber and masonry construction, thresholds would be 0.2 PPV. Table 3.12-9 shows the construction equipment that would be used to construct the Common Elements Typical Project. Equipment such as loaded trucks and small bulldozers would be the most vibratory intensive construction equipment used during construction. Based on Table 3.12-11 each one of these pieces of equipment produce vibration on the levels of 0.089 and 0.003 PPV, respectively. Vibration levels would be below the 0.2 PPV threshold set by the City of Long Beach; therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3

City of South Gate

The City of South Gate includes a codified threshold for vibration. As many of the land uses within the City of South Gate's jurisdiction along the LA River are residential and would be considered non-engineered timber and masonry construction, thresholds would be 0.01 PPV. Table 3.12-9 shows the construction equipment that would be used to construct the Common Elements Typical Projects. Equipment such as loaded trucks and small bulldozers would be the most vibratory intensive construction equipment used during construction. Based on Table 3.12-11 each one of these pieces of equipment produce vibration on the levels of 0.089 and 0.003 PPV, respectively. Vibration for earth-moving equipment attenuates at a rate of $PPV_{ref} \times (25/D)^n$. Table 3.12-32 shows the distance to the City of South Gate's 0.01 PPV threshold. Based on the Caltrans' Guidelines Vibration Annoyance Potential Criteria (Caltrans 2013b), transient construction vibration levels of 0.01 would fall between the levels of Barely perceptible and Distinctly perceptible. The 0.01 threshold is well below any damage potential criteria and, therefore, does not represent any damage potential with respect to vibration.

Table 3.12-32. Common Elements Typical Project Distance to the City of South Gate's Threshold

Equipment	Reference at 25 feet (PPV)	Distance to the City of South Gate's 0.01 Threshold (feet)
Loaded Trucks	0.089	200
Small Bulldozers	0.003	--

As discussed above, vibration levels from construction equipment would attenuate to below the level of perception at 200 feet from the source. Based on the locations of the land uses throughout the study area, vibration sensitive land uses could be as close as 50 feet from construction sites. As such, vibration levels could exceed the City of South Gate's threshold of 0.01 PPV.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-7: Locate Project 200 Feet or More from Occupied Structures or Prepare Vibration Study and Implement Findings.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4

City of Commerce

The City of Commerce includes a codified threshold for vibration that states that no person shall "cause ground vibration that is perceptible without instruments to a person of normal sensitivity at any point on a property that is adjacent to the property of the vibration source." Land uses within the City of Commerce's jurisdiction along the study area are all industrial in nature and therefore would not be considered vibration sensitive. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Common Elements Typical Projects would generally include operational uses such as drinking fountains, waste disposal, pavilions, restrooms, bike racks, and picnic areas. Uses of these types would not result in noticeable levels of vibration. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Frames 1 through 9

Similar to the Common Elements, because many jurisdictions do not include a codified threshold for vibration, the County's perception threshold (0.01 in/sec) is used unless otherwise noted. For jurisdictions where codified vibration thresholds are present, those thresholds are discussed within their respective frames below. Table 3.12-9 shows the construction equipment that would be used for a Multi-Use Trails and Access Gateways Typical Project. Equipment such as vibratory rollers, hoe rams, jack hammers, and loaded trucks would be the most vibratory intensive construction equipment used during construction. Based on Table 3.12-11 each one of these pieces of equipment produce vibration on the levels of 0.035 and 0.210 PPV. Vibration for earth-moving equipment attenuates at a rate of $PPV_{ref} \times (25/D)^n$. Table 3.12-33 shows the distance to the County's 0.01 PPV

threshold. Based on Caltrans' Guidelines Vibration Annoyance Potential Criteria (Caltrans 2013b), transient construction vibration levels of 0.01 would fall between the levels of Barely perceptible and Distinctly perceptible. The 0.01 threshold is well below any damage potential criteria and, therefore, does not represent any damage potential with respect to vibration.

Table 3.12-33. Multi-Use Trails and Access Gateways Typical Project Distance to the County's Threshold

Equipment	Reference at 25 feet (PPV)	Distance to the County's 0.01 Threshold (feet)
Vibratory Roller	0.210	400
Loaded Trucks	0.089	200
Hoe Ram	0.089	200
Jack Hammer	0.035	75

As discussed above, vibration levels from construction equipment would attenuate to below the level of perception at a distance of 400 feet from the source. Based on the locations of the land uses throughout the study area, vibration sensitive land uses could be as close as 50 feet from construction sites. As such, vibration levels could exceed the County's threshold of 0.01 PPV, and impacts would be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-8: Locate Project 400 Feet or More from Occupied Structures or Prepare Vibration Study and Implement Findings.

The implementing agency will locate any development of a Multi-Use Trails and Access Gateways Project outside of a distance of 400 feet from any occupied structure (dependent on phase and construction equipment used). If for some reason this is not possible, during final design the implementing agency will prepare a focused vibration study that analyzes construction vibration sources and predicts vibration levels at nearby vibration sensitive land uses. If vibration levels would exceed the County's 0.01 PPV threshold or any applicable city's standards, the implementing agency will prescribe measures to reduce vibration to the greatest extent practical. Measures could include but are not limited to:

- Using less vibration-intensive construction equipment
- Timing construction so that structures would not be occupied when high levels of vibration are expected
- Informing residents of the timing of construction and that vibration may be noticeable during these times

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frames 1 and 2

City of Long Beach

The City of Long Beach includes a codified threshold for vibration, enumerated in Table N-1. As many of the land uses within the City of Long Beach's jurisdiction along the study area are residential and would be considered non-engineered timber and masonry construction, thresholds would be 0.2 PPV. Table 3.12-9 shows the construction equipment that would be used to construct a Multi-Use Trails and Access Gateways Typical Project. Equipment such as vibratory rollers, hoe rams, jack hammers, and loaded trucks would be the most vibratory intensive construction equipment used during construction. Based on Table 3.12-11 each one of these pieces of equipment produce vibration on the levels of 0.035 and 0.210 PPV. Vibration for earth-moving equipment attenuates at a rate of $PPV_{ref} \times (25/D)^n$. Table 3.12-34 shows the distance to the City of Long Beach's 0.2 PPV threshold.

Table 3.12-34. Multi-Use Trails and Access Gateways Project Distance to the City of Long Beach's Threshold

Equipment	Reference at 25 feet (PPV)	Distance to the City of Long Beach's 0.2 Threshold (feet)
Vibratory Roller	0.210	30
Loaded Trucks	0.089	--
Hoe Ram	0.089	--
Jack Hammer	0.035	--

As discussed above, vibration levels from construction equipment would attenuate to below the City of Long Beach's threshold at 30 feet from the source. Based on the locations of the land uses throughout the study area, vibration sensitive land uses could be as close as 50 feet from construction sites. As such, vibration levels would not likely exceed the City of Long Beach's threshold of 0.2 PPV.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Frame 3

City of South Gate

The City of South Gate includes a codified threshold for vibration. As many of the land uses within the City of South Gate's jurisdiction along the study area are residential and would be considered non-engineered timber and masonry construction, thresholds would be 0.02 PPV.

Table 3.12-9 shows the construction equipment that would be used to construct the Multi-Use Trails and Access Gateways Project. Equipment such as vibratory rollers, hoe rams, jack hammers, and loaded trucks would be the most vibratory intensive construction equipment used during construction. Based on Table 3.12-11 each one of these pieces of equipment produce vibration on the levels of 0.035 and 0.210 PPV. Vibration for earth-moving equipment attenuates at a rate of $PPV_{ref} \times (25/D)^n$. Table 3.12-35 shows the distance to the City of South Gate's 0.01 PPV threshold. Based on Caltrans' Guidelines Vibration Annoyance Potential Criteria (Caltrans 2013b), transient construction vibration levels of 0.01 would fall between the levels of Barely perceptible and Distinctly perceptible. The 0.01 threshold is well below any damage potential criteria and, therefore, does not represent any damage potential with respect to vibration.

Table 3.12-35. Multi-Use Trails and Access Gateways Projects Distance to the City of South Gate's Threshold

Equipment	Reference at 25 feet (PPV)	Distance to the City of South Gate's 0.01 Threshold (feet)
Vibratory Roller	0.210	400
Loaded Trucks	0.089	200
Hoe Ram	0.089	200
Jack Hammer	0.035	75

As discussed above, vibration levels from construction equipment would attenuate to below the level of perception at 400 feet from the source. Based on the locations of the land uses throughout the LA River, vibration sensitive land uses could be as close as 50 feet from construction sites. As such, vibration levels could exceed the City of South Gate's threshold of 0.01 PPV. Therefore, impacts associated with vibration would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-8: Locate Project 400 Feet or More from Occupied Structures or Prepare Vibration Study and Implement Findings.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Frame 4

City of Commerce

The City of Commerce includes a codified threshold for vibration that states that no person shall "cause ground vibration that is perceptible without instruments to a person of normal sensitivity at any point on a property that is adjacent to the property of the vibration source." Land uses within the City of Commerce's jurisdiction along the study area are all industrial in nature and therefore would not be considered vibration sensitive. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Frame 1 through 9

Multi-Use Trails and Access Gateways Typical Projects would generally include operational uses such as pedestrian trails, equestrian trails, bike trails, multi-use trails, vegetated buffers, and river gateways. Uses of these types would not result in noticeable levels of vibration. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 5

Construction

The specific locations (in-channel or off-channel) and designs for the KOP Categories 1 through 5 design components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Considering the KOP categories include a variety of construction activities ranging from trail modifications to diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors, and wetlands, constructed anywhere in the study area, construction of the KOP categories could result in potentially significant

impacts associated with vibration, as the construction equipment is not known. In-channel construction would likely locate potential high-impact, vibration-intensive construction equipment away from sensitive receptors; however, based on the discussion above, quantifying vibration impacts without knowing where construction would take place or the specific project is not possible at this time. Therefore, impacts associated with vibration would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure NOI-9: Prepare Vibration Study and Implement Findings.

The implementing agency will, during final design, prepare a focused vibration study that analyzes construction vibration sources and predicts vibration levels at nearby vibration sensitive land uses. If vibration levels would exceed the County's 0.01 PPV threshold or any other codified threshold, the implementing agency will prescribe measures to reduce vibration to the greatest extent practical. Measures could include, but are not limited to, the following:

- Using less vibration-intensive construction equipment
- Timing construction so that structures would not be occupied when high levels of vibration are expected
- Informing residents of the timing of construction and that vibration may be noticeable during these times

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Categories 1 through 5 would include operational design components ranging from trails and access gateways to flood reclamation improvements such as naturalized banks and braided channels. Each project under the respective KOP would vary depending on the specific design component and its intended function, as well as on the specific location. The specific location and design has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description*, the KOP improvements do not include operational components that would be vibration intensive. Any vibration source associated with the operation of the KOP categories would include events such as vehicles accessing local roadways, which do not produce noticeable amounts of vibration. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

The specific location and design for the Off-Channel Land Assets design components have not been determined yet and would depend on numerous factors, including location of the improvements, complement of construction equipment, project proponent, and availability of funding. Considering this KOP includes a variety of construction activities, including but not limited to affordable housing, recreation fields, urban agriculture/composting, and arts and culture facilities, construction impacts of KOP Category 6 cannot be directly quantified as the specific locations are not known. Construction vibration associated with these projects cannot be quantified as to the effects on any surrounding land uses. Therefore, depending on the jurisdiction in which the KOP Category 6 project occurs, construction would result in potentially significant impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure NOI-9: Prepare Vibration Study and Implement Findings.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

Potential impacts from operation of the design components under the Off-Channel Land Assets KOP would vary depending on the specific design component and its intended function, as well as on the specific location. The specific location and design for these design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2, *Project Description*, this KOP could include land assets such as affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Generally, operational components associated with KOP Category 6 would not include land uses with substantial vibration sources. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

The *2020 LA River Master Plan* would comply with jurisdictional thresholds and requirements incumbent within the municipal codes, general plans, and planning documents as it relates to vibration. Because details about the *2020 LA River Master Plan* construction and operation scenario are unknown, vibrational impacts associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the vibrational impacts considered together could also potentially result in significant impacts by exceeding thresholds established by the jurisdictions.

Although Mitigation Measures NOI-7, NOI-8, and NOI-9 would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., scale of project design, construction equipment, construction duration, nearby sensitive receptors and land uses), it cannot be stated with certainty that vibration impacts could be reduced to levels below the thresholds set by the jurisdictions. As such, impacts would be significant and unavoidable.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure NOI-7: Locate Project 200 Feet or more from Occupied Structures or Prepare Vibration Study and Implement Findings.

Mitigation Measure NOI-8: Locate Project 400 Feet or more from Occupied Structures or Prepare Vibration Study and Implement Findings.

Mitigation Measure NOI-9: Prepare Vibration Study and Implement Findings.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.12(c) : Would the proposed Project be located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?

Typical Projects

Several airports are within general proximity of the study area. These include Long Beach, Compton, Van Nuys, and Bob Hope Airports. Compton Airport is the closest at approximately 2.8 miles from the study area. However, the Typical Projects are not within an airport land use plan, nor would the Typical Projects expose people living or working to excessive noise. Therefore, impacts from construction and operation would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 5

For the same reasons described above for the Typical Projects, KOP Categories 1 through 5 would not be within an airport land use plan, nor would KOP Categories 1 through 5 expose people living or working to excessive noise impacts from airports during construction and operations. Therefore, impacts from construction and operation would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

The locations of Off-Channel Land Assets are unknown at this point; however, it is assumed that they could be anywhere within the 2-mile-wide, 51-mile-long study area. Compton and Long Beach Airports are approximately 2 miles from the study area. Even though the off-channel assets could include land uses such as affordable housing, similar to the Typical Projects and the other KOP categories, this KOP is outside of any airport land use plan and would be more than 2 miles from any airport. Therefore, impacts from construction and operation would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

As described above for the Typical Projects and KOP categories, the *2020 LA River Master Plan* study area is not within an airport land use plan and is not located within 2 miles of an airport. Therefore, impacts from the implementation of the anticipated 107 projects under the 2020 LA River Master Plan would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative noise impacts is confined to 0.5 mile from the study area boundary (or 1.5 miles from the river on each side). Noise diminishes 6 dB with a doubling of distance from the source, and would, therefore, not be readily perceptible or a disturbance outside that radius. Buildout of the *Los Angeles County General Plan* would encompass future development within the study area plus 0.5-mile radius for cumulative development. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on noise, if, in combination with other projects within the defined geographic context, it would result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable

standards of other agencies. This impact would occur if: any project construction activity would take place outside the codified hours of construction specified by any city or County government codes; any project construction activity generates maximum noise levels that exceed 75 dBA at any offsite residential receptor (based on the City of Los Angeles Municipal Code); the 1-hour Leq from project construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use (based on the L.A. CEQA Thresholds Guide); any project operations activity would generate noise related to the Project that would exceed the limits specified in any jurisdiction's municipal code; the Project would generate excessive groundborne vibration or groundborne noise levels; or the Project would be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.

Cumulative Condition

The greater Los Angeles region is a developed, urban area. The study area and its surroundings are subject to existing high levels of ambient noise. Development of new residential, commercial, or industrial structures as well as transportation projects could increase both stationary and mobile sources of noise from heating, ventilation, and air-conditioning and other equipment, as well as vehicles. Construction activities could also generate significant cumulative noise and vibration effects if in proximity to one another or in combination with operational or vehicular noise. Cumulative projects would be required to comply with applicable land use compatibility classifications and noise ordinances. However, buildout of the *County of Los Angeles General Plan* would also result in substantial noise level increases throughout the County. Implementation of general plan policies would reduce impacts to the extent feasible. However, impacts related to noise land use compatibility are considered significant because of the anticipated level of buildout of the *Los Angeles County General Plan*.

Additionally, vibration generated by construction equipment has the potential to be substantial and exceed the FTA criteria for human annoyance and structural damage, which would be significant. Implementation of the applicable general plans in the study area, when taken into consideration with all other infrastructure and development projects that may occur in the region between 2016 and 2040, would result in significant cumulative impacts from the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Both construction and operation activities would expose people to excessive groundborne vibration or groundborne noise levels, constituting a significant impact. Therefore, there is a cumulative condition related to noise and vibration.

Contribution of the Project to Cumulative Impacts

The *2020 LA River Master Plan* would comply with jurisdictional thresholds and requirements for both construction and operations incumbent within the municipal codes, general plans, and planning documents as it relates to noise. Inclusion of mitigation measures would help reduce impacts. The cumulative noise and vibration impacts would be localized to the area where construction activities would take place. Noise and vibration effects diminish substantially as distance between the source and receptors widens. Noise generated by a stationary noise source, or "point source," decreases by approximately 6 dBA over hard surfaces (e.g., reflective surfaces, such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces, such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance.

Implementation of Mitigation Measures NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, NOI-6, NOI-7, NOI-8, and NOI-9 would further help reduce potential project impacts. Therefore, the Project would not make a cumulatively considerable contribution to cumulative noise and vibration impacts.

Section 3.13
Population and Housing

3.13.1 Introduction

This section describes the environmental and regulatory setting for population, housing, and employment conditions in County, the 17 municipal jurisdictions within the *2020 LA River Master Plan* area. An analysis of potential population, housing, and employment impacts that could occur with implementation of the *2020 LA River Master Plan* is presented. Data presented in this section was obtained from the U.S. Census Bureau and the Southern California Association of Governments (SCAG).

The State CEQA Guidelines state "An economic or social change by itself shall not be considered a significant impact on the environment (Section 15382)." Therefore, socioeconomic characteristics should be considered in an EIR only to the extent that they create adverse impacts on the physical environment. Pursuant to this requirement, only project-related effects on population and housing that result in adverse physical effects on the environment are considered in this section.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.13.2 Setting

3.13.2.1 Geographic

Regional Population

The proposed Project is located in Los Angeles County, the most populous county in the U.S., with more than 10 million residents in 2019 (U.S. Census Bureau 2019) as seen in Table 3.13-1. Like much of the Southern California region, the population in Los Angeles County has increased over the past decade. Between 2000 and 2012, the County experienced a growth rate of 3.8 percent, which is roughly two and a half times below the rest of the SCAG region (10.4 percent) (SCAG 2012). The County's population is estimated to grow to 11,514,000 by 2040 (SCAG 2016). Population within the County, including unincorporated County areas and the 17 jurisdictions within the project study area, are presented in Table 3.13-1.

Table 3.13-1. Total Population in the County and Local Jurisdictions

Jurisdiction	Population
Bell	35,521
Bell Gardens	42,012
Burbank	102,511
Carson	91,394
Commerce	12,900
Compton	95,605
Cudahy	23,569
Downey	111,126
Glendale	199,303
Huntington Park	57,509
Long Beach	462,628
Los Angeles	3,979,576
Lynwood	69,887
Maywood	26,973
Paramount	53,955
South Gate	93,444
Vernon	100
Unincorporated County	1,057,162
Los Angeles County	10,039,107

Source: U.S. Census Bureau 2019.

Regional and Local Race/Ethnicity Distribution

Nearly every community across the County is diverse; yet, there are parts of the county that have larger than average shares of particular racial or ethnic groups. Between 2000 and 2016, the Hispanic population in the County grew to nearly half of the total population, from 45 to 48 percent. While also growing, the share of Hispanic residents in California is lower, at 39 percent. North of Griffith Park to Canoga Park on the LA River, communities have larger-than-average shares of non-Hispanic white residents. Areas near the river in Downtown Los Angeles, Chinatown, and Little Tokyo have large concentrations of Asian residents, whereas Glendale's 80,000 Armenians represent the second-largest Armenian population in a city outside Yerevan, Armenia's capital. South of Downtown Los Angeles, communities have larger-than-average shares of Hispanic residents. About 14 percent of residents have limited English-speaking ability, compared with California's 10 percent average. Near the river, the highest concentrations of limited English speakers live between Glendale and South Gate (Geosyntec and OLIN 2018).

According to the U.S. Census Bureau's 2019 records, Hispanic/Latino was the largest ethnic group in the County, with 48.6 percent of the total population identifying themselves as such. Of the remaining population, 26.1 percent identified themselves as White, 15.4 percent as Asian, and 9.0 percent as Black or African American. American Indian/Alaska Native, Native Hawaiian/Pacific Islander or Other Pacific, and Two or More Races were also represented, accounting for 1.4 percent, 0.4 percent, 0.3 percent, and 3.1 percent of the gross population, respectively. These statistics are shown in Table 3.13-2, as well as the race/ethnicity distribution of the 17 jurisdictions.

Table 3.13-2 shows the racial/ethnic breakdown of Los Angeles County's population and in each of the 17 other jurisdictions within the project study area (U.S. Census Bureau 2019).

Table 3.13-2. Regional and Local Race/Ethnicity Distribution (by percentage)

Race/ Ethnicity	Hispanic/ Latino	White	Asian	Black or African American	American Indian/ Alaska Native	Native Hawaiian/ Other Pacific
Bell	91.7	5.5	0.8	1.5	0.6	0.2
Bell Gardens	95.6	2.7	0.9	0.8	0.3	0.0
Burbank	23.7	56.7	12.5	2.8	0.7	0.0
Carson	38.8	7.3	25.6	23.5	0.6	2.6
Commerce	95.2	1.2	0.6	1.5	1.7	0.1
Compton	68.2	1.2	0.8	29.5	0.3	0.3
Cudahy	95.7	2.8	0.5	0.4	0.4	0.2
Downey	73.9	14.4	7.4	3.2	0.5	0.4
Glendale	18.2	62.0	15.5	1.6	0.4	0.1
Huntington Park	96.7	1.5	0.6	1.3	0.7	0.3
Long Beach	42.5	28.1	13.1	12.9	0.9	0.8
Los Angeles	48.6	28.5	11.6	8.9	0.7	0.2
Lynwood	87.5	2.4	0.8	8.5	0.8	0.4
Maywood	98.0	1.3	0.2	0.4	0.1	0.0
Paramount	80.8	4.8	2.9	10.2	0.4	0.8
South Gate	95.0	3.1	0.7	0.8	0.6	0.2
Vernon	72.4	9.2	6.6	11.8	0	0
Unincorporated County	58.7	18.6	12.6	8.2	0.2	1.9
Los Angeles County	48.6	26.1	15.4	9.0	1.4	0.4

Source: U.S. Census Bureau 2019.

Regional Housing

As of 2019, the total number of housing units in unincorporated County and the 17 jurisdictions within the 2-mile-wide study area along the LA River was estimated to be 544,541. Table 3.13-3 provides a summary of the total number of housing units, the total numbers of occupied and vacant homes, the homeowner vacancy rate, the rental vacancy rate, and the average household size. within the County, including unincorporated County areas and the 17 jurisdictions within the project study area. The homeowner vacancy rate in the jurisdictions located within the 2-mile-wide study area ranges from 0 to 3.0 percent, the rental vacancy rate from 2.1 to 9.7 percent, and the average household size from 1 to 4.9 persons.

Table 3.13-4 shows the projections of housing growth in the cities within the 2-mile-wide study area along the LA River. As shown, the number of housing units is expected to grow throughout all cities, except the City of Vernon, which shows 0 percent growth predicted. For the other cities, housing growth[1] ranges from a 3 percent increase in the City of Bell and City of Paramount to a 31 percent increase in the City of Los Angeles. Unincorporated areas of Los Angeles County are expected to have a 22 percent growth increase, and the County as a whole is expected to have a 10 percent increase.

[1] Housing growth was measured from 2020 population levels to 2040 population levels.

Table 3.13-3. Current Housing Data

Jurisdiction	Number of Housing Units (Year)			Homeowner Vacancy Rate	Rental Vacancy Rate	Average Household Size
	Occupied	Vacant	Total			
Bell	24,764	1,870	26,634	2.2	7.9	2.68
Bell Gardens	25,202	2,001	27,203	3.1	9.7	3.92
Burbank	38,925	1,657	40,582	1.3	2.1	1.45
Carson	49,116	2,741	51,857	2.6	6.0	3.98
Commerce	59,283	6,118	65,401	3.2	9.5	3.42
Compton	4,383	63	4,446	0.0	2.8	2.79
Cudahy	15,471	1,107	16,578	2.5	8.7	3.42
Downey	8,719	767	9,486	4.0	3.8	2.64
Glendale	22,941	676	23,617	1.0	5.4	3.25
Huntington Park	25,823	1,532	27,355	1.6	8.3	2.83
Long Beach	22,941	676	23,617	1.0	5.4	3.25
Los Angeles	15,982	1,655	17,637	1.9	9.6	3.61
Lynwood	9,523	388	9,911	2.0	4.6	3.81
Maywood	18,231	1,411	19,642	3.0	9.0	2.79
Paramount	44,931	2,518	47,449	2.0	5.8	3.63
South Gate	54,383	2,235	56,618	1.6	5.2	2.98
Vernon	20,772	1,025	21,797	2.1	6.4	3.41
Unincorporated County	51,487	3,224	54,711	1.4	4.8	3.10
Los Angeles County	3,281,845	208,273	3,490,118	1.1	3.3	3.03

Source: U.S. Census Bureau 2019.

Table 3.13-4. Housing Growth Estimates

Jurisdiction	2016	2045	Total Increase (2016–2045)	Percentage Increase (2016–2045)
Bell	8,900	9,200	300	3
Bell Gardens	9,700	10,200	500	5
Burbank	41,900	48,600	6,700	16
Carson	25,500	107,900	5,200	20
Commerce	3,400	3,700	300	9
Compton	23,500	24,600	1,100	5
Cudahy	5,600	6,100	500	9
Downey	32,600	34,100	1,500	5
Glendale	74,500	82,300	7,800	10
Huntington Park	14,700	16,500	1,800	12
Long Beach	168,600	198,200	29,600	18
Los Angeles	1,367,000	1,793,000	426,000	31
Lynwood	14,900	16,500	1,600	11
Maywood	6,600	7,000	400	6

Jurisdiction	2016	2045	Total Increase (2016–2045)	Percentage Increase (2016–2045)
Paramount	14,100	14,500	400	3
South Gate	23,700	25,600	1,900	8
Vernon	100	100	0	0
Unincorporated County	294,800	419,300	124,500	22

Source: SCAG 2020

Homeless Populations

Approximately 66,436 people in Los Angeles County currently experience homelessness, about 72 percent of whom are unsheltered, meaning they are not in traditional shelters, emergency shelters, or safe-haven housing (LAHSA 2020). Unsheltered individuals live on the street, in vehicles, in tents, or in makeshift shelters. The remaining 28 percent of those experiencing homelessness live in emergency or transitional shelters or in safe havens. Within Los Angeles County, a total of about 23,000 beds are available in permanent housing, i.e., subsidized long-term housing for those who have experienced long-term or repeated homelessness.

Los Angeles County has among the 10 largest homeless populations within the largest 30 cities nationwide across different metrics—including rate per 10,000 residents and absolute number of people experiencing homelessness—and has the highest percentage of people experiencing homelessness sleeping outside in the country. Between 2016 and 2018, the number of vehicles, tents, and makeshift shelters increased by about a third. More than one in 20 adults along the LA River south of Vernon experienced a time in the past 5 years when they were homeless or did not have their own place to live or sleep.

The most prevalent causes of homelessness are economic in nature, not migrating itinerant populations; 75 percent of those experiencing homelessness in Los Angeles County resided there before becoming homelessness, and 65 percent reported living in Los Angeles County for 20 years or more. In Los Angeles County, about 80 percent of people experiencing homelessness are single adults. Homelessness can lead to additional health risks and burdens; loss of personal safety and security; discrimination and abuse; and chronic deprivation.

Homelessness and homeless people living in public rights-of-way or in natural open space or recreational areas are a concern throughout the State of California, the County, and specifically near the LA River. A number of homeless encampments are located along the LA River—currently, more than 7,500 people experiencing homelessness live in communities along the LA River. No counts of the population within the fence line were identified, but anecdotally sizable encampments exist in multiple locations along the corridor and have been the subject of multiple news accounts. They are not just visitors to the river; they may live in the channel or along the river banks, with no other refuge in inclement weather or at night. Homeless and housed people face many of the same risks along the river: risk from flooding, from heat, from violent crime, and from the remoteness of available emergency services. The unsheltered population, however, is more vulnerable and they tend to lack the same resources and safety net that other users of the LA River have.

Regional Employment and Income

The average household in Los Angeles County has three people. Median household income dropped from $59,200 to $57,900 between 2000 and 2016 (in 2016 dollars) and is more than $20,000 higher

for white non-Hispanic residents ($76,800) and Asian residents ($68,300) than for Hispanic residents ($46,700) and black residents ($41,700). Median individual income for males ($30,100) is 39 percent higher than median individual income for females ($21,600) (Table 3.13-5).

Households in communities along the LA River between Downtown LA and Compton tend to be larger (about 3.7 people per household) and have lower household incomes (around $43,000) than those along other parts of the river (about three people per household and around $67,000)[2].

Table 3.13-6 shows the projections of employment growth in the cities and unincorporated County areas within the 2-mile-wide study area along the LA River. As shown, employment is expected to grow throughout all cities, ranging from a 3 percent increase in the City of Vernon and City of Cudahy to a 22 percent increase in the City of Burbank. Unincorporated areas of Los Angeles County are expected to have a 19 percent growth.

Table 3.13-5. Median Household Income

Jurisdiction	Median Household Income
Bell	$42,548
Bell Gardens	$41,355
Burbank	$73,277
Carson	$78,580
Commerce	$47,083
Compton	$50,507
Cudahy	$43,381
Downey	$71,948
Glendale	$62,531
Huntington Park	$40,638
Long Beach	$60,551
Los Angeles	$58,385
Lynwood	$49,684
Maywood	$39,738
Paramount	$53,031
South Gate	$50,246
Vernon	$66,250
Unincorporated County	$54,200
Los Angeles County	$64,251

Source: U.S. Census Bureau 2019.

[2] As stated in Geosyntec's *Demographics, Health, and Social Equity* progress memorandum prepared for the *2020 LA River Master Plan*.

Table 3.13-6. Employment Growth

Jurisdiction	2016	2045	Total Increase (2016–2045)	Percentage Increase (2016-2045)
Bell	12,400	13,200	800	6
Bell Gardens	9,600	10,300	700	7
Burbank	114,000	138,700	24,700	22
Carson	63,400	70,000	6,600	10
Commerce	53,400	56,000	2,600	5
Compton	28,600	30,200	1,600	6
Cudahy	2,900	3,000	100	3
Downey	42,900	45,800	2,900	7
Glendale	117,000	125,900	8,900	8
Huntington Park	15,900	17,800	1,900	12
Long Beach	155,900	184,400	28,500	18
Los Angeles	1,848,300	2,135,900	287,600	16
Lynwood	12,000	13,100	1,100	9
Maywood	4,000	4,300	300	8
Paramount	21,400	23,000	1,600	7
South Gate	22,400	24,600	2,200	10
Vernon	43,300	44,600	1,300	3
Unincorporated County	269,100	320,100	51,000	19

Source: SCAG 2020.

3.13.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of population and housing in this PEIR.

State

California Housing Element Law

According to the California Department of Housing and Community Development (2020), "California's housing-element law acknowledges that, in order for the private market to adequately address the housing needs and demand of Californians, local governments must adopt plans and regulatory systems that provide opportunities for (and do not unduly constrain), housing development. As a result, housing policy in California rests largely upon the effective implementation of local general plans and, in particular, local housing elements." Los Angeles County and the 17 local jurisdictions have adopted Housing Elements that are utilized as part of this analysis, which are provided below.

Regional

Southern California Association of Governments' Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS)

In April 2016, SCAG adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS),* which includes goals to increase mobility and enhance sustainability for the region's residents and visitors. The RTP/SCS encompasses three principles to improve the region's future: mobility, economy, and sustainability. As previously discussed, the RTP/SCS includes population, housing, and employment growth projections for 2020, 2035, and 2040. These growth projections are utilized in SCAG's transportation modeling and shape SCAG's regional planning efforts, as outlined in the RTP/SCS. The RTP/SCS minimizes increases in regional traffic congestion by focusing growth, density, and land use intensity within existing urbanized area as the general land use growth pattern for the region while enhancing the existing transportation system and integrating land use into transportation planning. The RTP/SCS recommends local jurisdictions accommodate future growth within existing urbanized areas to reduce vehicle miles traveled (VMT), congestion, and greenhouse gas (GHG) emissions.

Southern California Association of Governments' Regional Housing Needs Assessment

SCAG determines regional housing needs and the share of the regional needs to be addressed by Los Angeles County and its constituent cities and publishes these results in their RTP/SCS and Regional Housing Needs Assessment (RHNA). The RHNA does not necessarily encourage or promote growth, nor does it require the designated city to build the number of housing units that it projects (although sufficient opportunity to do so must be provided). The RHNA identifies the amount of very low income, low income, moderate income, and above moderate-income housing that should be produced for a particular city over a specific period to address regional housing needs. The RHNA adopted by SCAG for the planning period of 2014–2021 is show in Table 3.13-7.

Table 3.13-7. Los Angeles County RHNA within the Study Area

City	Number of Very Low Income Households	Number of Low Income Households	Number of Moderate Income Households	Number of Above Moderate Income Households	Total
Bell	11	7	8	21	47
Bell Gardens	11	7	8	20	46
Burbank	694	413	443	1,134	2,684
Carson	447	263	280	708	1,698
Commerce	12	7	7	20	46
Compton	1	1	0	0	2
Cudahy	80	46	51	141	318
Downey	210	123	135	346	814
Glendale	508	310	337	862	2,017
Huntington Park	216	128	149	402	895
Long Beach	1,773	1,066	1,170	3,039	7,048

City	Number of Very Low Income Households	Number of Low Income Households	Number of Moderate Income Households	Number of Above Moderate Income Households	Total
Los Angeles	20,427	12,435	13,728	35,412	82,002
Lynwood	123	72	81	218	494
Maywood	13	8	9	23	53
Paramount	26	16	17	46	105
South Gate	314	185	205	558	1,262
Vernon	1	1	0	0	2
Unincorporated County	7,854	4,650	5,060	12,581	30,145
Total[a]	32,721	19,738	21,688	55,531	129,678

[a] Total represents the total number of housing units identified for the 18 jurisdictions.
Source: SCAG 2016.

Measure H: Los Angeles County Plan to Prevent and Combat Homelessness

On August 17, 2015, the Los Angeles County Board of Supervisors (Board) launched the Homeless Initiative to combat the homelessness crisis that pervades its communities. The County Homeless Initiative conducted an inclusive and comprehensive planning process, including 18 policy summits on nine topics from October 1 to December 3, 2015, which brought together 25 County departments, 30 cities and other public agencies, and over 100 community partners and stakeholders. The Homeless Initiative generated a powerful set of 47 coordinated and integrated strategies divided into the following six areas, which are each key to combating homelessness:

- Prevent homelessness.
- Subsidize housing.
- Increase income.
- Provide case management and services.
- Create a coordinated system.
- Increase affordable/homeless housing.

On February 9, 2016, after hearing the testimony of elected officials and representatives for over 14 cities from throughout the County who pledged their support and commitment to working collaboratively with the County, the Board adopted the Chief Executive Officer's Homeless Initiative's 47 strategies (Strategies). The Board also approved new, one-time funding of $100 million to initiate the implementation of these Strategies; however, the Board will soon need to replenish these one-time funds. The community-based organizations that participated in crafting the Strategies strongly advocated that the Board needed to secure additional, ongoing, annual funds to implement the Strategies in the years to come.

Los Angeles County General Plan

The Housing Element of the *Los Angeles County General Plan* (Los Angeles County 2015) establishes goals, policies, and programs the County intends to implement to address housing needs and issues.

The goals, policies, and implementation programs in the Housing Element intend to ensure decent, safe, sanitary, and affordable housing for current and future residents of the unincorporated areas, including those with special needs. The Housing Element includes the following goals and policies for the 2014–2021 Planning Period.

Goal 4: A housing delivery system that provides assistance to low and moderate-income households and those with special needs.

- **Policy 4.1**: Provide financial assistance and ensure that necessary supportive services are provided to assist low and moderate income households and those with special needs to attain and maintain affordable and adequate housing.

Goal 5: Neighborhoods that protect the health, safety, and welfare of the community, and enhance public and private efforts to maintain, reinvest in, and upgrade the existing housing supply.

- **Policy 5.2**: Maintain adequate neighborhood infrastructure, community facilities, and services as a means of sustaining the overall livability of neighborhoods.

Goal 8: Accessibility to adequate housing for all persons without discrimination in accordance with state and federal fair housing laws.

- **Policy 8.1**: Support the distribution of affordable housing, shelters, and transitional housing in geographically diverse locations throughout the unincorporated areas, where appropriate support services and facilities are available in close proximity.

Los Angeles County Housing Programs

Program 10: First 5 LA Supportive Housing for Homeless Families Fund – The First 5 LA Supportive Housing for Homeless Families Fund provides services to families who are homeless or at risk of homelessness with very young children. This program funds supportive services, rental assistance, and capital development of housing.

Program 14: Section 8 Rental Assistance

- **Homeless Set Aside Program**: This program provides rental assistance to homeless families and individuals. It also provides supportive services, such as advocacy, counseling, tenant education, money management, employment, and job training referrals, crisis intervention, child care referrals, and children's services, through contracted homeless services agencies. Case management includes an 18-month follow-up. Families who are successful in maintaining housing for 12 months are retained in the program, similar to the Section 8 Housing Choice Voucher Program.
- **Housing Opportunities for Persons with HIV/AIDS (HOPWA)**: This program provides rental assistance to eligible homeless households that include a person who has HIV/AIDS. The Housing Authority of the County of Los Angeles (HACoLA) has entered into agreements with two supportive services agencies—AIDS Project Los Angeles and AIDS Service Center—to identify, assess, refer, and provide case management for eligible households. This program also provides supportive services, such as advocacy, counseling, tenant education, money management, employment and job training referrals, crisis intervention, child care referrals, and children's services.

Program 17: Shelter Plus Care – Supportive Housing Program

- **Shelter Plus Care (S+C) Program**: The S+C Program provides rental assistance for difficult-to-serve homeless persons with disabilities in connection with supportive services funded from sources outside of the program.

- **Supportive Housing Program (SHP)**: The SHP is designed to develop supportive housing and services that will allow homeless persons to live as independently as possible.

Program 19: **Winter Shelter Program for Homeless (WSP)**: The WSP operates 19 sites across 15 cities and communities throughout Los Angeles County. This program is instituted yearly during the coldest and wettest months. The sites offer persons experiencing homelessness with temporary overnight shelter, meals, and help with connecting to supportive services and stable housing.

Los Angeles County Department of Public Social Services

The DPSS Housing Program offers a number of benefits and services designed to assist California Work Opportunity and Responsibility to Kids (CalWORKs) families who are homeless. The CalWORKs Homeless Assistance (HA) Program provides temporary HA and permanent HA. Temporary HA provides temporary shelter payments to homeless families while they are looking for permanent housing. Permanent HA helps homeless families secure a permanent residence or provides up to two months back rent when the family has received a pay rent or quit notice.

Los Angeles Homeless Services Authority

In December of 1993, the Los Angeles County Board of Supervisors and the Los Angeles mayor and City Council created the Los Angeles Homeless Services Authority (LAHSA) as an independent, joint powers authority. LAHSA is the lead agency in the Los Angeles Continuum of Care, which is the regional planning body that coordinates housing and services for families and individuals experiencing homelessness in Los Angeles County. LAHSA coordinates and manages over $300 million annually in federal, State, County, and City funds for programs that provide shelter, housing, and services to people experiencing homelessness.

Los Angeles River Ranger Program Establishment Plan

The Los Angeles River Ranger Program Establishment Plan (River Ranger Plan) was developed in response to Assembly Bill 1558 (C. Garcia), Los Angeles River: River Ranger Program, which required the development of a program to provide a network of river rangers who assist the public at sites along the LA River and its tributaries. The bill was enacted in 2017 to address river-adjacent communities' limited contact with and responsibility for the River, as well as coordinate with current revitalization plans working to enhance the river to increase its ecological, social, and recreational opportunities.

The River Ranger Plan was developed by a stakeholder-driven process. The planning process was led by two State conservancies with LA River jurisdiction and their respective Joint Powers Authorities (JPAs). Additionally, two advisory groups were established to guide the development of the Plan: the Steering Committee and the Stakeholder Committee. The River Ranger Plan defines a unified program that is responsive to the unique needs and conditions of the river's diverse reaches.

If programs like the River Ranger Program are implemented to provide river staff and services, the perception of the LA River as a rich community and environmental asset could continue to grow. Furthermore, these types of programs can emerge as a new model for both multijurisdictional collaboration and community-based revitalization around LA River awareness and education. The River Ranger Program includes goals to engage with existing entities who conduct homeless engagement and provide support services and resources. The program will facilitate ongoing information sharing and coordination with governing jurisdictions including but not limited: to Los

Angeles County Flood Control District, the U.S. Army Corp of Engineers, cities with jurisdictions along the LA River, the Los Angeles County Metropolitan Transportation Authority, public and private utilities, public schools and homeless services agencies. Information sharing and coordination with homeless service agencies, and relevant law enforcement agencies will be essential for implementing appropriate outreach strategies with homeless populations and for responding to critical public safety incidents

Local

Frame 1

City of Long Beach

City of Long Beach General Plan

The Housing Element of the *City of Long Beach General Plan* (City of Long Beach 2014) establishes goals, policies, and programs to address housing needs within the City of Long Beach during the 2013–2021 planning period. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and to increase the supply of a diversity of housing types, including special needs housing and affordable housing. The Housing Element includes the following goals, policies, and programs for the 2013–2021 planning period.

Goal 2: Address the Unique Housing Needs of Special Needs Residents

- **Policy 2.2**: Support continued efforts to implement and expand the Continuum of Care program for homeless persons. Implement the feasible components of Within Our Reach: A Community Partnership to Prevent and End Homelessness, Long Beach's 10-Year Plan Report.

Goal 3: Retain and Improve the Quality of Existing Housing and Neighborhoods

- **Policy 3.5**: Continue to improve streets and drainage, sidewalks and alleys, green spaces and parks, street trees, and other public facilities, amenities and infrastructure.

Program 2.1: Continuum of Care

- **Objective**: Continue to support services and programs that are part of the Continuum of Care system for the homeless through the City's annual funding allocation process.

Program 2.2: Zoning Code Update for Special Needs Housing

- **Objective**: The City of Long Beach will explore additional opportunities for allowing emergency shelters in PD-29 and the IL (Light Industrial) zone. Annually, monitor the effectiveness of the various zones for by-right emergency shelters and pursue alternative strategies, as necessary.

Program 3.4: Neighborhood Improvement Services

- **Objective**: Continue to implement various neighborhood improvement programs, such as Neighborhood Partners, Urban Forestry, Home Improvement Rebates, Neighborhood Clean Up, and Neighborhood Leadership.

City of Los Angeles

City of Los Angeles General Plan

The Housing Element of the *City of Los Angeles General Plan* (City of Los Angeles 2013) establishes goals, policies, and programs to address housing needs within Los Angeles during the 2013–2021 planning period. The goals and policies in the Housing Element are intended to maintain and

upgrade the quality of existing neighborhoods and housing and increase the supply of a diversity of housing types, including special needs housing and affordable housing. The Housing Element includes the following goals and policies for the 2013–2021 planning period.

Housing Element

Goal 4: Ending and Preventing Homelessness

- **Objective 4.1**: Provide an adequate supply of short-term and permanent housing and services throughout the city that are appropriate and meet the specific needs of all persons who are homeless or at risk of homelessness.
    - **Policy 4.1.1:** Ensure an adequate supply of emergency and temporary housing for people who are homeless or are at a risk of becoming homeless, including people with disabilities.
    - **Policy 4.1.2**: Promote and facilitate programs and strategies that ensure the rapid re-housing of all people who become homeless.
    - **Policy 4.1.3**: Provide permanent supportive housing options with services for homeless persons and persons/families at risk of homelessness to ensure that they remain housed and get the individualized help they may need.
    - **Policy 4.1.4**: Target chronically homeless individuals and prioritize the most vulnerable among them for services and Permanent Supportive Housing, including through the coordination of service provision and the efficient access to information so as to rapidly match available services to those in need of services.
    - **Policy 4.1.5**: Plan for emergency housing needs that will result from natural or man-made disasters.
    - **Policy 4.1.6**: Provide housing facilities and supportive services for the homeless and special needs populations throughout the city, and reduce zoning and other regulatory barriers to their placement and operation in appropriate locations.
- **Objective 4.2**: Promote outreach and education to: homeless populations; residents; community stakeholders; health, social service and housing providers and funders; criminal justice system agencies; and communities in which facilities and services may be located.
    - **Policy 4.2.1**: Provide a high level of outreach targeted to the chronically homeless to inform them of their rights and opportunities to move them from the streets into permanent housing with appropriate support services.
    - **Policy 4.2.2**: Inform communities about special needs populations in the city and effective approaches to meeting their housing needs.
    - **Policy 4.2.3**: Strengthen the capacity of the development community to locate, construct and manage housing facilities for the homeless.
    - **Policy 4.2.4**: In accordance with the federal Hearth Act, target outreach and permanent supportive housing resources to the chronically homeless so as to move them from the streets into permanent housing with appropriate supportive services.
    - **Policy 4.2.5**: Promote and facilitate a planning process that includes homeless persons, formerly homeless, and providers of housing and services for the homeless in order to provide up-to date information for the more effective coordination and use of resources.

Housing Programs

Objective 1.1: Produce an adequate supply of rental and ownership housing to meet current and projected needs.

- **Program 6**: New Production of Affordable Housing

Add 500 rental units annually to the City of Los Angeles affordable housing stock, of which approximately 30 percent will be Permanent Supportive Housing.

Objective 4.1: Provide an adequate supply of short-term and permanent housing and services throughout the city that are appropriate and meet the specific needs of all persons who are homeless or at high risk of homelessness.

- **Program 110**: **HOPWA Emergency Shelter and Transitional Housing Program**: Provide housing subsidies to low-income persons with HIV/AIDS in Los Angeles County, including Tenant- and Project-Based Rental Assistance; Short Term Rent, Mortgage, and Utility Assistance (STRMU); scattered site rental assistance; permanent housing placement grants; emergency motel and meal vouchers; and emergency and transitional housing.
- **Program 111**: **Emergency Shelter and Transitional Housing Facilities Fund**: the operating and supportive services costs of existing facilities and programs providing emergency and transitional housing to homeless persons citywide.
- **Program 112**: **Overnight Shelter (Winter Shelter and Year-Round Shelter)**: Provide temporary shelter to homeless men and women through a Winter Shelter program (December 1st through March 15th), and to men, women, and families through a Year Round shelter program. Provide vouchers for low cost hotels/motels for persons not suited to large group shelters, including elderly persons and people with communicable diseases.
- **Program 114**: **Family Solutions System**: The Family Solutions System (FSS) is a new system of service delivery in Los Angeles County, developed to improve and expedite the delivery of housing and other supportive services to homeless families in Los Angeles County. In addition to direct services, the FSS also has the added ability to provide direct financial assistance for rapid rehousing, including a security deposit for an apartment, partial rent for 3 months or a motel voucher, and utilities, etc.
- **Program 115**: **Veterans Affairs Supportive Housing (VASH)**: The HUD Veterans Affairs Supportive Housing (HUD-VASH) program combines Housing Choice Voucher (HCV) rental assistance for homeless Veterans with case management and clinical services provided by the Department of Veterans Affairs (VA). VA provides these services for participating Veterans at VA medical centers (VAMCs) and community-based outreach clinics.
- **Program 117**: **HOPWA Supportive Services for Persons Living with HIV/AIDS**: Provide low-income persons living with HIV/AIDS with services to help locate, obtain, and maintain appropriate and affordable housing and improve/obtain financial resources and benefits, employment, health care, food and nutrition services, mental health and substance abuse counseling, and legal services.
- **Program 118**: **Rental Assistance for Homeless Households**: Provide HUD Section 8 Housing Choice Vouchers to qualifying homeless families. Provide supportive services to help homeless households make the transition to stable, affordable housing. Pursue local administrative changes in order to expedite application processes and facilitate voucher portability across jurisdictions.
- **Program 119**: **Rental Assistance for Homeless Households with Disabilities**: Provide rental assistance and supportive services for homeless persons with disabilities, specifically those with serious mental illness, chronic substance abuse problems and/or HIV/AIDS
- **Program 122**: **Permanent Supportive Housing For Homeless Persons**: Provide long-term housing with supportive services designed to enable homeless persons with mental and physical disabilities to live as independently as possible in a permanent setting.
- **Program 124**: **Homeless Housing and Services Coordination**: Coordinate with LAHSA, the County and other government and non-profit agencies to develop plans to reduce and end homelessness and to implement homeless policies and programs.
- **Program 125**: **Access New Resources and Services for the Homeless**: Monitor federal, state and County legislative and budgetary initiatives that affect homeless persons, including homeless subpopulations with special needs, such as persons with disabilities.

Objective 4.2: Promote outreach and education to: homeless populations; residents; community stakeholders; health, social service, and housing providers and funders; criminal justice system agencies; and communities in which facilities and services may be located.

- **Program 134**: **Assistance for Homeless Persons in Accessing Housing and Services**: Fund community-based organizations to provide outreach and referral assistance to homeless persons including: housing referrals; food, blankets, and other necessities; needs assessment and engagement in social services; medical, mental health, and/or substance abuse services. Assist clients to move off the streets or out of places not meant for human habitation and into any form of housing.
- **Program 135**: **Computerized Information Center/Information and Referrals for Persons with Disabilities**: Provide assistance to callers seeking social service programs for homeless services and housing resource referrals in times of need and crisis. Assess the need/crisis via client intake, locate appropriate resource/service provider, and explain programs offered by the community-based organization and/or government agency.

Land Use Element

The City of Los Angeles maintains 35 community plans, one for each of its Community Plan Areas. Community plans establish neighborhood-specific goals and implementation strategies to achieve the broad objectives laid out in the *City of Los Angeles General Plan*. Together, the 35 Community Plans comprise the General Plan's Land Use Element, which plays an important role in bolstering housing and job opportunities, conserving open space and natural resources, and balancing different neighborhoods' needs.

Each community plan consists of a policy document and a land use map. The policy document lays out the community's goals, policies, and programs, whereas the land use map identifies where certain uses (e.g., residential, commercial, and industrial) are permitted. Together, the policy document and land use map inform local zoning decisions. Proposed changes to the city's zoning are usually initiated though Community Plan Updates The following Community Plan policies in Table 3.13-8 are applicable to the *2020 LA River Master Plan*:

Table 3.13-8. Land Use Element – Community Plans

Community Plan	Policies
Sherman Oaks–Studio City–Toluca Lake–Cahuenga Pass	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
Van Nuys–North Sherman Oaks	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
North Hollywood–Valley Village	This Community Plan contains no specific numbered policies related to land use, the plan proposes that the low-density residential character of North Hollywood–Valley Village should be preserved and that single-family neighborhoods be protected from other types of uses.

Community Plan	Policies
Silver Lake–Echo Park–Elysian Valley	• **Policy 1-1.3** Protect existing single-family neighborhoods from new out-of-scale development. • **Policy 1-1.5** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses.
Northeast Los Angeles	• **Policy 1-1.1** Protect existing stable single-family and other lower density residential neighborhoods from encroachment by higher density residential and other uses that are incompatible as to scale and character or would otherwise diminish the quality of life.
Southeast Los Angeles	• **Policy LU2.1** Preserve Neighborhoods. Strive to maintain existing single-family land use designations throughout the Community Plan Area and protect them from encroachment by higher density residential and other incompatible uses. • **Policy LU.2.2** Appropriate Scale. Proposed development should be designed to achieve transition in scale and be compatible with adjacent single-family neighborhoods.
Wilmington–Harbor City	• **Policy 1-1.2** Protect existing single-family residential neighborhoods from new, out-of-scale development. • **Policy 1-1.3** Protect existing stable single-family and low-density residential neighborhoods from encroachment by higher density residential and other incompatible uses. • **Policy 1-6.1** The enlargement of nonconforming, incompatible commercial and industrial uses within areas designated on the Plan map for residential land use shall be prohibited, and action shall be taken toward their removal on a scheduled basis in conformance with Section 12.23 of the Municipal Code. • **Policy 1-6.2** Compatible non-conforming uses that are a recognized part of a neighborhood (e.g., "Mom and Pop" neighborhood stores) should be allowed to continue as legal nonconforming uses in accordance with applicable provisions of the Municipal Code.

Comprehensive Homeless Strategy

The Comprehensive Homeless Strategy presented was adopted by the Los Angeles City Council on February 9, 2016. It is meant to be a comprehensive approach to address short- and long-term homelessness issues.

Strategy B3 – Partner with Cities to Expand Rapid Re-Housing

- **County Recommendation**: Direct the Department of Health Services and the Los Angeles Homeless Services Authority to partner with cities and expand the availability of rapid rehousing, as described below.

Strategy B7 – Crisis/Interim/Bridge Housing for those Exiting Institutions

- **County Recommendation**: Direct the Department of Health Services, in collaboration with the Department of Mental Health (DMH), Probation Department, Department of Children and Family Services (DCFS), Sheriff (LASD), and the Los Angeles Homeless Services Authority (LAHSA), to develop a plan to increase the crisis/interim/bridge housing stock across the County, including identification of funding that can be used to support the increase.

Strategy B8 – Housing Choice Vouchers for Permanent Supportive Housing

- **County Recommendation**: Direct the Housing Authority of the County of Los Angeles (HACoLA) to dedicate a percentage of Housing Choice Vouchers which become available

through routine turnover to permanent supportive housing for chronically homeless individuals.

Strategy F6 – Using Public Land for Homeless Housing

- **County Recommendation**: Instruct the Community Development Commission, in collaboration with the Chief Executive Office, Internal Services Department, and Departments of Health Services, Regional Planning, and Public Works, to assess the feasibility of making County-owned property available for the development of housing for homeless families/individuals, and develop a public land development strategy/program

Housing Authority of the City of Los Angeles (HACLA) Initiatives

- **Waiting List Limited Preference: Homeless Program:** The goal of the program is to provide permanent affordable housing for homeless individuals and families while ensuring them access to supportive services to maintain independent living. The Homeless Program's allocation of 4,111 housing choice vouchers targets homeless individuals and families living in transitional housing, emergency shelters, and the streets. The HACLA currently works with 19 non-profit and public agency partners located throughout the City of Los Angeles.
- **Waiting List Limited Preference: Tenant-Based Supportive Housing Program**: The Tenant Based Supportive Housing program (TBSH) provides affordable, permanent, supportive housing for high-service-need chronically homeless individuals and families by providing rental subsidies and supportive services through the collaborative effort of the [Los Angeles Homeless Services Authority] and local service providers. The intensive supportive services enable chronically homeless individuals and families to stabilize their living conditions and remain successfully housed for the length of time that they are on the program. The TBSH program currently has 800 housing choice vouchers. The HACLA currently works with nine non-profit and public agency partners located throughout the community.
- **Permanent Supportive Housing Project-Based Voucher Program:** The Permanent Supportive Housing (PSH) Project-Based Voucher (PBV) Program provides long-term rental subsidy contracts that facilitate development of housing for homeless and chronically homeless individuals and families, targeting a variety of special needs populations.
- **Department of Housing and Urban Development (HUD)-Veterans Affairs Supported Housing (VASH) Program:** The HUD-VASH Program is a partnership that was developed by the VA with the Department of Housing and Urban Development (HUD) to provide permanent housing and supportive services to homeless and chronically homeless veterans. The program partners the Housing Authority of the City of Los Angeles (HACLA) and the Los Angeles Veterans Affairs Medical Center.
- **Waiting List Limited Preference: Homeless Veterans Initiative:** Section 8 increased the Waiting List Limited Preference for Homeless by 500 vouchers to support the Homeless Veterans Initiative which will target homeless veterans who are not VA health care eligible, a population currently not being assisted. HACLA's nonprofit and public agency partners will provide supportive services which will enable the veterans to maintain independent living and remain successfully housed.
- **Shelter Plus Care (Continuum of Care Rental Assistance) Program:** The Shelter Plus Care Program was created under the McKinney Homeless Assistance Act and is designed to promote permanent housing with supportive service to persons with disabilities coming from the streets and emergency shelters.
- **Moderate Rehabilitation Single Room Occupancy (SRO) Program:** The Moderate Rehabilitation Single Room Occupancy (SRO) Program was created under the Stewart B. McKinney Homeless Assistance Act of 1987. The Section 8 rental assistance provided under this program is designed to bring more SRO units into the local housing supply to assist homeless persons into permanent housing.

Frame 2

Unincorporated County

Applicable regulations are described above.

City of Long Beach

Applicable regulations are described above.

City of Carson

City of Carson General Plan

The Housing Element of the *Carson General Plan* (City of Carson 2013) establishes goals, policies, and programs to address housing needs within the City of Carson during the 2014-2021 planning period. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and to increase the supply of a diversity of housing types, including special needs housing and affordable housing. The Housing Element includes the following goals and policies for the 2014–2021 planning period.

Goal 1: Improvement and Maintenance of the Existing Housing Stock While Preserving Affordability.

- **Policy 1.1:** Work toward the elimination and prevention of the spread of blight and deterioration, and the conservation, rehabilitation, and redevelopment of blighted areas within the city.
- **Policy 1.3:** Promote economic well-being of the city by encouraging the development and diversification of its economic base.

Goal 2: Maintenance and Enhancement of Neighborhood Quality

- **Policy 2.1:** Develop safeguards against noise and pollution to enhance neighborhood quality.
- **Policy 2.2:** Assure residential safety and security.
- **Policy 2.4:** Encourage community involvement in addressing the maintenance and improvement of housing stock and neighborhood context.
- **Policy 2.5:** Continue to improve streets, drainage, sidewalks, alleys, street trees, parks, and other public amenities and infrastructure.

Housing Programs

Emergency Shelters: Carson prepared and adopted an amendment to the Zoning Code Ordinance to permit emergency shelters by-right in the ML (Manufacturing Light) and MH (Heavy Industrial) zone districts along with development and operational standards. This program commits Carson to continue to monitor the inventory of sites appropriate to accommodate emergency shelters and work with appropriate organizations to ensure the needs of the homeless population and extremely low-income households are met.

Transitional and Supportive Housing: Carson prepared and adopted an amendment to the Zoning Code Ordinance to identify transitional and supportive housing as a residential use and permitted in all residential zones, subject only to those standards/regulation that apply to other residential uses of the same type in the same zone. This program commits Carson to continue to monitor the inventory of sites appropriate to accommodate emergency shelters and work with appropriate

organizations to ensure the needs of the homeless population and extremely low-income households are met.

City of Compton

City of Compton General Plan

The City of Compton is in the process of updating the Housing Element of its General Plan. The Draft Housing Element of the *City of Compton Draft General Plan 2030* (City of Compton 2019) establishes goals, policies, and programs to address housing needs within Compton during the 2013–2021 planning period. The goals and policies in the Housing Element intend to encourage the provision of suitable housing for Compton residents and to protect the vitality of existing residential neighborhoods. The Housing Element includes the following goals and policies for the 2013–2021 planning period.

Goal 2: The City of Compton will promote affordable housing and shelter for all economic segments of the community.

- **Policy 2.2:** The City of Compton will inform residents of the availability of housing assistance programs and community services available in the area (such as Section 8 certificates and vouchers).

Goal 5: The City of Compton will promote equal access and opportunity to housing, regardless of race, religion, sex, marital status, ancestry, national origin, or color.

- **Policy 5.3:** The City of Compton will establish referral agencies to serve low-income households, the homeless, handicapped, elderly households, and residents with special housing needs.

Housing Programs

Homelessness Plan: To broaden the collective impact and accelerate change, the City of Compton will prepare a locally specific City Plan to Combat Homelessness. The plan will comprehensively assess homelessness in Compton, assess the resources currently available to address the challenge, identify opportunities for City and County collaboration and identify implementation strategies to address the issue.

Frame 3

Unincorporated County

Applicable regulations are described above.

City of Compton

Applicable regulations are described above.

City of Cudahy

City of Cudahy General Plan

The Housing Element of the *Cudahy 2040 General Plan* (City of Cudahy 2018) establishes goals and policies to address housing needs within the City of Cudahy. The goals and policies in the Housing Element intend to respond to the key housing related issues facing Cudahy. The Housing Element includes the following goals and policies.

Goal 1: The City of Cudahy will improve the housing supply and the choice of housing opportunities through private investment and, where necessary, through public action and financing.

- **Policy 1.8:** The City of Cudahy will work with the appropriate service providers to develop and coordinate programs to assist in the conservation of affordable housing and to serve the homeless population.

Goal 2: The City of Cudahy will promote affordable housing and shelter for all economic segments of the community.

Goal 5: The City of Cudahy will promote equal access and opportunity to housing regardless of race, religion, sex, marital status, ancestry, national origin, or color.

- **Policy 5.4:** The City of Cudahy will establish referral agencies to serve low income households, the homeless, handicapped, elderly households, and residents with special housing needs.
- **Policy 5.7:** The City of Cudahy will provide continued cooperation between the City and adjacent cities in the development of regional housing programs and homeless services.

Housing Programs

Program 9: Hotel and Motel Resources – The City shall preserve hotels and motels as an emergency housing resource. To encourage the use of hotels by "homeless" individuals, the City continuously works with hotel managers on making rooms available for emergency/transitional housing and makes community service agencies in the area aware of the facilities. The City also refers persons in need to these facilities. Vouchers shall be solicited from the hotel, local businesses, charitable agencies, and other organizations/individuals to provide short-term stays at the hotels. The 160 rooms available in local hotels are adequate to serve the temporary housing needs of homeless individuals in the area. This program is ongoing, implemented, and monitored annually (coinciding with the fiscal year) by the Community Development Department.

Program 11: Emergency, Transitional, and Supportive Housing – The City will continue to monitor the inventory of sites appropriate to accommodate transitional housing and supportive housing and will work with the appropriate organizations to ensure the needs of homeless and extremely low-income residents are met.

Program 17: Homeless Assistance Program – The City shall maintain a list of local social services to use as referral sources for residents in need. The information will be distributed to City departments that interface with homeless persons or persons at risk of being homeless.

City of Downey

City of Downey General Plan

The Housing Element of the *Downey Vision 2025 General Plan* (City of Downey 2013) establishes goals and policies to address housing needs within the City of Downey. The goals and policies in the Housing Element intend to respond to the key housing related issues facing Downey. The Housing Element includes the following goals and policies.

- **Policy 3.1:** Use public financial resources, as feasible, to support the provision of housing for lower income households and special needs groups.

City of Lynwood

The City of Lynwood plans, coordinates, and organizes strategies to assist the city's homeless population in collaboration with other public and private organizations. Lynwood currently contracts with the Homeless Outreach Program Integrated Care System (HOPICS) to provide homeless outreach within the community.

City of Paramount

City of Paramount General Plan

The Housing Element of the *Paramount General Plan* (City of Paramount 2007) establishes goals, policies, and programs to address housing needs within Paramount during the 2014–2021 planning period. The goals and policies in the Housing Element are intended to maintain and upgrade the quality of existing neighborhoods and housing and increase the supply of a diversity of housing types, including affordable housing and housing for individuals with special needs. The Housing Element includes the following goals and policies for the 2014–2021 planning period.

Issue Area No. 3 The City of Paramount will remain committed to the identification of prospective development sites for a continued variety and diversity of new housing.

- **Policy 3.3:** The City will continue to provide a balance in the types of housing available, promoting development for moderate income households as well as lower income households.

Housing Programs

Emergency Shelter Rezoning Program/Housing and Urban Development (HUD) Emergency Shelter Grants – This program provides for the creation of an overlay zone within a specific area of the city where an emergency shelter would be permitted by right.

Transitional Housing Program – The definition of *transitional housing* will be changed in order to consider transitional housing as a residential use in all zones that allow residential uses subject to those restrictions that are applicable to the other residential uses of the same type in the same zone.

City of South Gate

City of South Gate General Plan

The Housing Element of the *South Gate General Plan 2035* (City of South Gate 2009) establishes goals, policies, and programs to address housing needs within South Gate during the 2013–2021 planning period. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and increase the supply of a diversity of housing types, including affordable housing and housing for individuals with special needs. The Housing Element includes the following goals and policies for the 2013–2021 planning period.

Goal H 4: Improved housing for underserved populations.

- **Objective H 4.1:** Encourage the development of housing that caters to the special needs groups, including the elderly, persons with disabilities (including developmental disabilities), students, large families, and the homeless.
- **Policy 5:** The City of South Gate will collaborate with the Los Angeles Homeless Services Authority (LAHSA) communities within the Gateway subregion to create a continuum of care for the homeless.
- **Policy 6:** The City of South Gate will support and participate in a partnership with agencies such as the Los Angeles Homeless Services Authority (LAHSA) to provide temporary, transitional and permanent housing for the homeless.

Frame 4

Unincorporated County

Applicable regulations are described above.

City of Bell

City of Bell 2030 General Plan

The *City of Bell 2030 General Plan* (City of Bell 2018) Housing Element establishes goals, policies, and programs to address housing needs within Bell. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and to increase the supply of a diversity of housing types, including affordable housing and housing for individuals or families with special needs. The Housing Element includes the following goals and policies related to the proposed Project

Issue: To underscore the City's commitment to equal housing opportunities for all income levels

- **Housing Element Policy 30.** The City of Bell shall continue participating in the Section 8 Housing Assistance Payment program in cooperation with the Los Angeles County Housing Authority. New and existing structures shall comply with current building and safety codes. Prior to the approval of housing rehabilitation plans, building permits will only be issued following inspection of the units for compliance with current codes.
- **Housing Element Policy 11.** The City of Bell shall continue to cooperate with other public agencies and NGOs as a means to maintain and preserve the existing emergency and transitional housing in the Cheli area of the City. The City shall explore other sites for emergency shelters within the City that would be located near services and employment. Finally, the City shall cooperate with other agencies and non-governmental organizations (NGO's) involved in the provision of emergency, transitional, and supportive housing.

Housing Programs

Program 2 Emergency Shelter Program. As required by SB-2, the City will continue to provide for an Emergency Shelter Program. The City will maintain the appropriate zoning to allow the continued operation of the Salvation Army Shelter in the Cheli district.

Program 8 Transitional Housing Program. Transitional housing is a type of supportive housing used to facilitate the movement of homeless individuals and families to permanent housing. A person may live in a transitional housing unit for up to two years while receiving supportive services that enable independent living. The City intends to comply with State law regarding the provision of transitional housing. The existing Bell Salvation Army Shelter located in the City includes a transitional housing facility. The City will continue to permit the existing Bell Shelter, which includes a transitional housing facility, to operate.

Supportive Housing Program. Under this program, the City will be required to amend its Zoning Ordinance to permit such housing in its residential zone districts. The State requires this Housing Element to identify zones that allow supportive housing development and demonstrate that zoning, local regulations (standards and the permit process) encourage and facilitate supportive housing. Supportive housing may include a single-family detached unit or an apartment building. The City of Bell will permit supportive housing within all of the residential Zone districts. The City will comply with all State requirements governing supportive housing.

City of Bell Gardens

City of Bell Gardens General Plan

The City of Bell Gardens is in the process of updating the Housing Element of *City of Bell Gardens General Plan 2010* (City of Bell Gardens 2013). The Draft Housing Element establishes goals, policies, and programs to address housing needs within the City of Bell Gardens during the 2013–2021 planning period. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and to increase the supply of a diversity of housing

types, including affordable housing and housing for individuals or families with special needs. The Housing Element includes the following goals and policies for the 2013–2021 planning period.

Goal 2: Affordable and Special Needs Housing Opportunities

- **Policy2.1:** Strive to achieve a housing market that recognizes housing as shelter and not as speculative investments so as to deter rapid turnover, which leads to the deterioration of housing stock.

Goal 5: Equal Housing

- **Policy 5.2:** Promote housing that meets the special needs of large households, elderly, disabled, single-parent households, and the homeless.

Housing Programs

Program 8: Zoning Provisions for Special Needs Housing

- **Transitional and Supportive Housing:** For transitional/supportive housing developments that operate as housing developments, meeting the Health and Safety Code definition, such uses are permitted by right where housing is permitted.
- **Emergency Shelters:** Emergency shelters are permitted with approval of a ministerial permit in M-1 (Light Industrial) zone, subject to the same regulations as other uses in the M-1 zone and special development regulations.

City of Commerce

City of Commerce General Plan

The Housing Element of the *City of Commerce 2020 General Plan* (City of Commerce 2008) establishes goals and policies to address housing needs within the City of Commerce. The goals and policies in the Housing Element are intended to maintain and upgrade the quality of existing neighborhoods and housing and increase the supply of a diversity of housing types, including affordable housing and housing for individuals or families with special needs. The Housing Element includes the following goals and policies for the planning period.

5.3.5 Issue: Environmental Justice

Housing Policy 5.8: The City of Commerce will regularly assess the social service needs of the community.

Housing Programs

None of the housing programs in the Housing Element of the *City of Commerce 2020 General Plan* are applicable to the proposed Project.

City of Huntington Park

City of Huntington Park General Plan

The City of Huntington Park is in the process of updating the Housing Element of its *City of Huntington Park 2030 General Plan* (City of Huntington Park 2017) The Draft Housing Element establishes goals, policies, and programs to address housing needs within Huntington Park during the 2013–2021 planning period. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and to increase the supply of a diversity of housing types, including affordable housing and housing for individuals or families with

special needs. The Housing Element includes the following goals and policies for the 2013–2021 planning period.

Goal 5.0: Promote Equal Opportunity for All Residents to Reside in the Housing of Their Choice.

- **Policy 5.3:** Coordinate with the Los Angeles Area Homeless Services Agency (LAHSA) and other local communities in order to provide a continuum of care of services and facilities for the homeless. Support local service providers offering needed facilities and housing support services to homeless individuals and families, and persons at risk of homelessness.

Housing Programs

Program 16: Emergency Services – The City of Huntington Park currently provides funding support to two local agencies that provide services to homeless individuals and families, and persons at risk of becoming homeless – the Southeast Churches Service Center (SCSC) and the Salvation Army/Southeast Communities Corps. The SCSC provides emergency "brown bag" groceries to families, and bus tokens and taxi vouchers to link clients with other service agencies. Through their office in Huntington Park, the Salvation Army provides the following emergency services: daily meals; emergency food for families; monthly food bags for seniors; acute medical, dental, and vision care; showers; clothing vouchers; bus tokens; motel vouchers; and referrals to outside agencies. Also, a limited amount of emergency rental assistance and utility assistance is available for qualified households.

City of Maywood

City of Maywood General Plan

The City of Maywood is in the process of updating the Housing Element of its *City of Maywood General Plan* (City of Maywood 2008). The Draft Housing Element establishes goals, policies, and programs to address housing needs within Maywood during the 2014–2021 planning period. The goals and policies in the Housing Element intend to maintain and upgrade the quality of existing neighborhoods and housing and to increase the supply of a diversity of housing types, including affordable housing and housing for individuals or families with special needs. The Housing Element includes the following goals and policies for the 2014–2021 planning period.

Goal 1: The City will provide a wide range of housing types to meet the existing and future needs of Maywood area residents.

- **Policy 1.2:** The City of Maywood will encourage both the private and public sectors to produce or assist in the production of quality housing with a particular emphasis on housing that is affordable to lower income and special needs households.
- **Policy 1.6:** The City of Maywood will continue to coordinate with local social service providers to address the needs of the homeless population.

Housing Programs

Emergency Shelter Program – Under this program, the Zoning Ordinance will be amended to accommodate the requirements of Senate Bill 2 (SB 2) requires local governments to identify geographic areas where emergency shelters will be permitted by right. In response to this requirement, the City has designated a specific area located at the southeast corner of Corona Avenue and Fruitland Avenue (APNs 6312-002-001 and 6312-002-002) as the area where such facilities will be permitted by right.

Transitional Housing Program – The definition of transitional housing will be changed in order to consider transitional housing as a residential use in all zones that allow residential uses subject

to those restrictions that are applicable to the other residential uses of the same type in the same zone.

Supportive Housing Program – The City of Maywood will permit supportive housing within all the zones that permit residential uses subject to the same requirements of residential uses of the same type in the same zone. The City will comply with all State requirements governing supportive housing.

City of Vernon

City of Vernon General Plan

The Housing Element of the *City of Vernon General Plan* (City of Vernon 2013) establishes goals, policies, and programs to address housing needs within Vernon during the 2014–2021 planning period. The goals and policies in the Housing Element intend to maintain the quality of existing housing stock and to increase the supply of a diversity of housing types, including affordable housing and housing for individuals or families with special needs. The Housing Element includes the following goals and policies for the 2014–2021 planning period.

Goal H-4: Continue to promote the availability of a range in existing unit types and sizes, and equal housing opportunity in the City's housing market on the basis of age, race, sex, marital status, ethnic background, source of income, homelessness, physical disabilities, and other factors.

- **Policy H-4.2:** Address the housing needs of special populations and extremely low-income households through emergency shelters, transitional housing, supportive housing, and single-room occupancy units.

Housing Programs

Program 7: Equal Housing Opportunity – Persons in need of transitional and supportive housing can readily be accommodated within any housing development proposed in the Housing Overlay zone. In conjunction with adoption of the 2041-2021 Housing Element, the City of Vernon has amended the Zoning Ordinance to define transitional and supportive housing as a standard residential uses of property permitted within the Housing Overlay zone.

Frame 5

City of Los Angeles

Applicable regulations are described above.

Frame 6

City of Los Angeles

Applicable regulations are described above.

City of Glendale

City of Glendale General Plan

The *2014–2021 Housing Element of the General Plan* (City of Glendale 2014) establishes goals, policies, and programs to address housing needs within the City of Glendale during the 2014–2021 planning period. The goals and policies in the Housing Element are intended to provide decent, safe, sanitary, and affordable housing to current and future residents of Glendale, including the elderly,

lower-income households, and individuals and families experiencing homelessness. The Housing Element includes the following goals and policies for the 2014–2021 planning period.

Goal 4: A City with Housing Services that Address Groups with Special Housing Needs

- **Policy 4.5:** Continue to offer housing and supportive services to special needs groups such as the elderly and the homeless to enable independent living.
- **Policy 4.7:** Coordinate with local social service providers through the Continuum of Care process to address the needs of the city's homeless population, including the development of service-enriched and affordable housing.

Goal 6: A City with Housing that is Livable and Sustainable

- **Policy 6.3:** Implement the recommendations of the Open Space and Conservation Element and the Recreation Element of the General Plan to ensure an adequate amount of public open space and developed parkland for the needs of new and existing residential development.

Housing Programs

Program Strategy #2: Production of Affordable Housing – Glendale's Community Development Department will continue to be actively involved with developing and promoting other affordable housing programs. The Department of Community Development will continue to promote the development and ongoing provision of affordable housing through activities such as holding homeless fairs to connect homeless individuals with services available in the local community.

Program Strategy #3: Rental Assistance – Continue to provide Section 8 vouchers to approximately 1,553 Glendale residents and 1,493 portable vouchers, which Glendale administers on behalf of other housing agencies, to extremely low and very low income households. The goals of the program give high priority to special needs populations including: Victims of retaliation, homeless persons, and Veterans.

Program Strategy #5 – Housing Services

- **Emergency Shelters:** Provide 40 year round emergency shelter beds and 10 year round domestic violence crisis shelter beds and serve a combined total of 250 persons annually (2,000 for the 8 year period).
- **Transitional Shelters:** Provide transitional housing through 116 beds for persons in families, serving 122 persons annually (976 persons over the 8 year period.)
- **Permanent Supportive Housing:** Provide access to permanent supportive housing to 50 homeless households with disabilities through the Shelter plus Care Program. Provide stable housing for persons with special needs through permanent supportive housing. Continue to provide 22 slots for unaccompanied adults. Provide stable housing for families with special needs through Chester Street Permanent Supportive Housing Program. Continue to provide 18 beds for persons in families.
- **Homeless Prevention Services:** Provide homeless prevention services through case management, advocacy, and direct financial assistance to households at risk of homelessness to help them maintain/obtain housing. Serve 200 families annually (1,600 for the 8 year period.)
- **Street Outreach:** Provide street outreach services to the chronically homeless street population in Glendale and connect clients to the Continuum of Care.
- **Support Services:** Provide Medical Discharge Counseling services to homeless persons being discharged from Glendale Adventist Medical Center to address emergency needs and link them to homeless services under the local preference for homeless families.

Frame 7

Unincorporated County

Applicable regulations are described above

City of Los Angeles

Applicable regulations are described above

City of Burbank

City of Burbank General Plan

The Housing Element of the *Burbank 2035 General Plan* (City of Burbank 2013) establishes goals, policies, and programs to address housing needs within the City of Burbank during the 2014–2021 planning period. The goals and policies in the Housing Element intend to maintain the quality of existing housing stock and to increase the supply of a diversity of housing types, including affordable housing and housing for individuals or families with special need. The Housing Element includes the following goals and policies for the 2014–2021 planning period.

Goal 5: Equal Housing Opportunities

- **Policy 5.3:** Support continued efforts to implement the Los Angeles Area Homeless Services Authority (LAHSA) Continuum of Care program for the homeless. Policy 5.4: Continue to provide funding support to local service agencies to provide emergency housing and services to the homeless and at-risk homeless population.
- **Policy 5.5:** Collaborate with faith-based and other grassroots community efforts to provide shelter and supportive services to the homeless and those at-risk of homelessness through a comprehensive strategy.

Housing Programs

Program 12: Transitional and Supportive Housing –Consistent with State law, small transitional and supportive housing serving six or fewer people is considered a standard residential use. For other transitional and supportive housing facilities meeting the California Health and Safety Code definition, the City will amend the Zoning Ordinance for transitional and supportive housing to be considered a residential use and only subject to those restrictions that apply to other residential uses of the same type in the same zone.

Program 16: Emergency Shelter and Emergency Services – Continue to provide funding support to agencies that offer temporary emergency shelter, food, clothing and other needed services to Burbank's homeless and at-risk homeless population. Continue to collaborate with neighboring jurisdictions to address homelessness in the region. Continue to explore opportunities to implement a seasonal or year-round Street Outreach Program and other supportive services programs and economic development with the support of partnerships and leveraging of funds.

Frame 8

Frame 8 includes only the City of Los Angeles; its applicable regulations are described above in Frame 1.

Frame 9

Frame 9 includes only the City of Los Angeles; its applicable regulations are described above in Frame 1.

3.13.3 Impact Analysis

This section describes the impacts related to population and housing for the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, six kit of parts (KOP) categories, and the *2020 LA River Master Plan* in its entirety. It describes the methods used to determine impacts of the Project and lists the thresholds used to conclude whether an impact would be significant.

3.13.3.1 Methods

Potential population and employment increases due to development that could occur under the *2020 LA River Master Plan* were calculated and compared with existing and projected population data to determine potential project impacts with respect to inducing unplanned population growth. The analysis presented below also discusses whether the proposed Project would displace existing housing, residents, and homeless populations. Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.13.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.13(a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

3.13(b) Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere.

3.13.3.3 Impacts and Mitigation Measures

Impact 3.13(a): Would the proposed Project induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

Typical Projects

Common Elements Typical Project

Construction

The Common Elements Typical Project would include the construction of pavilions, cafes, hygiene facilities, restrooms, benches, emergency call boxes, water fountains, trash and recycling stations, bike racks, environmental graphics, lighting, planting, stairs/ramps, guardrails, fences and gates, stormwater best management practices (BMPs), and art/performance spaces. Construction of the Common Elements Typical Project would last approximately 10 months and would generally be completed over six phases to minimize disruption to existing operations and the community. Construction of this Typical Project would involve up to 20 construction workers per day and may include excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, and small cranes. The County has a large pool of construction labor within commuting distance of the study area. Additionally, because of the highly specialized nature of most construction projects, workers are likely to be employed on the job site only for as long as their skills are needed to complete a particular phase of the construction process. Therefore, construction workers are not expected to relocate their households to work on the Common Elements Typical Project. Therefore, construction activities would not induce substantial population growth. Impacts would be less than significant.

A project could indirectly induce growth by reducing or removing barriers to growth or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors. Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. Typically, the growth-inducing potential of a project would be considered substantial if it fosters growth or a concentration of population in excess of what is assumed in the county or city's general plan or in projections made by regional planning agencies (e.g., SCAG). Substantial growth impacts could also occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services or if it can be demonstrated that the potential growth significantly affects the physical environment in some other way. The Common Elements Typical Project does not include residential development or the extension of roads that would directly or indirectly induce substantial population growth in the study area.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Specific amenities of the Common Elements Typical Project, such as pavilions, cafes, hygiene facilities, restrooms, benches, water fountains, bike racks, environmental graphics, lighting, planting, stairs/ramps, guardrails, fences and gates, and art/performance spaces, would provide new and enhanced recreational facilities, such as outdoor seating, water fountains, and performing arts space, and opportunities for gathering and eating spaces for the visitors and neighborhoods along the river's extent. Once operational, the Common Elements Typical Project could attract up to 500 new daily users and 10 daily full-time equivalent (FTE) operations and maintenance staff. SCAG projections anticipate countywide employment growth of 19.2 percent by 2035 (23.1 percent by 2040). The increase in employee population that could occur with anticipated development under the Common Elements Typical Project would represent a miniscule percentage of the employment growth SCAG has projected for the County. Additionally, the Common Elements Typical Project does not include residential development or the extension of roads that would directly or indirectly induce substantial population growth in those areas. Therefore, growth impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways Typical Project

Construction

Impacts from construction of Multi-use Trails and Access Gateways Typical Project would be similar to the Common Elements Typical Project described above. Construction work would occur off-channel between the top of the levee and the fenceline. Construction would include a continuous path for multiple uses—such as bike trails, equestrian trails, and pedestrian trails—and easy-to-find and welcoming access gateways for river use. Construction would involve five to ten construction workers per day. Similar to construction of the Common Elements Typical Project, the County has a large pool of construction labor within commuting distance of the project site. Additionally, because of the highly specialized nature of most construction projects, workers are likely to be employed on the job site only for as long as their skills are needed to complete a phase of the construction process. Therefore, construction activities would not induce substantial population growth. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Specific amenities of the Multi-use Trails and Access Gateways Typical Project include a continuous path for multiple uses—such as bike trails, equestrian trails, and pedestrian trails—and easy-to-find and welcoming access gateways for access to the river. Once operational, Multi-use Trails and Access Gateways Typical Project could attract up to 1,000 new daily users and 3 daily FTE operations and maintenance staff. As stated above, SCAG projections anticipate County-wide employment growth of 19.2 percent by 2035 (23.1 percent by 2040). The increase in employee population that could occur with anticipated development under Multi-use Trails and Access Gateways Typical Project would represent a relatively small percentage of the employment growth SCAG has projected for the County.

Although the Multi-use Trails and Access Gateways Typical Project would change the existing circulation system by providing active transportation options within the 2-mile-wide study area, these changes would not result in direct or indirect population growth. The improvements would not increase the capacity of the roadways; nor would they facilitate additional traffic, given that the Multi-use Trails and Access Gateways Typical Project is designed for pedestrians, bicyclists, and equestrians. No new roadways or transportation facilities are proposed that would support additional population growth beyond currently anticipated population growth within the County. Therefore, the Multi-use Trails and Access Gateways Typical Project would not induce substantial population growth, either directly or indirectly. Additionally, Multi-use Trails and Access Gateways Typical Project does not include residential development that would directly or indirectly induce substantial population growth in those areas. Therefore, growth impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The design components analyzed in this section include those listed in Chapter 2, *Project Description*. Each KOP category is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. The larger projects would involve the use of cranes and jackhammers to break concrete. Staging areas for construction equipment would be located in the right-of-way (ROW) or on appropriate vacant areas for in-channel or off-channel projects. Due to the large available construction workforce in the Los Angeles region, it is assumed that construction workers would not have to travel far or add traffic to roads outside of the vicinity of the project site. Additionally, because of the highly specialized nature of most construction projects, workers are likely to be employed on the job site only for as long as their skills are needed to complete a phase of the construction process. Local construction workers that already have housing in the region would be expected to commute to the site while construction is ongoing. For construction workers located outside of the region, the temporary nature of the work would typically discourage a permanent relocation. Therefore, growth impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

KOPs Categories 1 through 5

Operation of KOP Categories 1 through 5 would include development to improve trails, access gateways, channel modifications, crossings and platforms, diversions, floodplain reclamation, and off-channel land assets.

KOP Categories 1 through 5 do not include residential development or the extension of roads that would indirectly induce substantial population growth in those areas; the structural developments associated with the KOPs are predominately flood management, recreational uses, and ecological uses. Improvements would not induce population growth in the 2-mile-wide study area, either directly or indirectly. KOP Categories 1 through 5 do not include habitable structures and would not provide new homes. In addition, the KOPs would generally be located within existing urbanized areas. Therefore, growth impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Implementation of KOP Category 6 could include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. A majority of the structural development associated with the KOP categories would be recreational and ecological improvements and would not induce population growth in the 51-mile-long and 2-mile-wide study area, either directly or indirectly. However, KOP Category 6 could include residential development. As stated in 3.13.2.2, *Regulatory*, the local jurisdictions and unincorporated Los Angeles County within the study area all have regional housing needs for very low-income, low-income, and moderate-income housing. The RHNA concludes that the 17 local jurisdictions and unincorporated Los Angeles County must provide a total of 129,678 new housing units; of these, 19,738 must be affordable units for low-income households and 32,721 for very low-income households in order to satisfy the County's share of regional housing needs for the current planning period. Development of affordable housing units under KOP Category 6 would not induce population but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness. Development of affordable housing under KOP Category 6 would encourage a mix of supportive housing, affordable rental, and affordable homeownership units in both new construction and preservation buildings, which is designed to increase affordable housing in the area rather than create new housing for people outside of the County. Therefore, KOP Category 6 would not induce substantial unplanned population growth, either directly or indirectly and impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects, ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles), would be

implemented over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Common Elements and Multi-Use Trails and Access Gateways Typical Projects that would be implemented along the river and subsequent projects composed of the KOP categories' multi-benefit design components. As described above, the temporary and specialized nature of construction work, as well as the large available construction workforce in the Los Angeles region, would not lead to a substantial population increase. Impacts would be less than significant.

The *2020 LA River Master Pla*n was created to provide clean water, native habitat, parks, recreation, multiuse trails, art, and cultural resources to improve human and ecosystem health, equity, access, mobility, and economic opportunity for the County's diverse communities, while providing flood risk management. The majority of the projects proposed under the *2020 LA River Master Plan* are intended to provide flood management, recreational uses, and ecological uses. Projects are intended to serve the local community and not intended to substantially increase population growth.

Build out of the *2020 LA River Master Plan* does include affordable housing which could increase the population. However, as stated above, the local jurisdictions and unincorporated County areas within the study area all have regional housing needs for very low-income, low-income, and moderate-income housing. The RHNA concludes that the 17 local jurisdictions and unincorporated County areas must provide a total of 129,678 new housing units; of these, 19,738 must be affordable units for low-income households and 32,721 for very low-income households in order to satisfy the designated County and local jurisdiction's share of regional housing needs for the current planning period (SCAG 2012). As of 2019, new home construction in the last decade in the SCAG region is 38 percent lower compared to the prior decade and over 50 percent lower than the decade between 1976 and 1985. Additionally, over the four major metropolitan areas in the SCAG region, over 28,000 units are at-risk of losing their affordability for low income households. Housing construction is slowing and the supply of affordable housing is shrinking (SCAG 2016). Inclusion of affordable housing in the *2020 LA River Master Plan* would not induce population, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness.

Currently, similar to the reasons described above for the KOP Categories 1 through 6, the 107 projects, when considered together, would not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) and therefore would be less than significant. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.13(b): Would the proposed Project displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?

Typical Projects

Common Elements Typical Project

Construction and Operation

The design of the Common Elements Typical Project would consider the existing land uses and would not result in the removal of housing because the distribution of the *2020 LA River Master Plan* considers the physical integrity of the communities by designing and locating facilities in areas to minimize potential impacts on population and housing from existing and planned projects.

The construction of the Common Elements Typical Project would not be expected to displace any existing permanent housing, as these projects would not include removal or construction of any permanent residences. However, construction of Common Element Typical Project could displace homeless communities. The 51-mile-long and 2-mile-wide study area includes public open space areas that are populated with individuals and families experiencing homelessness living in temporary encampments. These encampments have resulted in trash and human waste in encampment areas within or adjacent to the LA River, as well as damage to the existing natural vegetation.

It is expected that constructing the Common Elements Typical Project could result in the removal of homeless encampments and subsequent project implementation would affect the density and distribution of homeless encampments throughout the 51-mile long and 2-mile-wide study area, thus reducing the impacts associated with those encampments. For example, Common Elements Typical Project would involve the introduction of heavy equipment and personnel into possibly occupied areas. Homeless encampments and associated structures would be removed from construction areas in coordination with local jurisdictional authorities, subject to applicable local and State law, prior to the start of construction activities, consistent with existing homeless encampment removal practice. Moreover, because Common Elements Typical Project could result in greater public recreational use of areas near the LA River, the maintenance of existing encampments and the creation of new encampments would become less viable. For some heavily used homeless encampment areas, implementation of the Common Elements Typical Project could also include increased patrol of the project sites so that the impacts of these encampments are not likely to continue.

The complex issue of homeless encampments in the LA River areas requires the involvement and coordination of multiple local agencies, including the County, as well as the affected cities. The County and cities currently implement existing programs involving the relocation of transient populations to safer, more sanitary shelters or more permanent residences, including solutions for people that choose not to stay in homeless shelters for varying reasons (e.g., drug dependency or having pet(s), which are not allowed in some shelters). The removal of unpermitted structures, debris, or materials associated with homeless encampments would be environmentally beneficial for the LA River, both reducing human hazards and eliminating trash and other sources of waste in and around the area. Relocation of transient individuals, removal of homeless encampments, and cleanup of remaining refuse would be coordinated and conducted among the County and/or cities

prior to construction. For example, the County provides outreach, programs, and resources with the overall goal of reducing homelessness by providing an array of housing options and programs based on community needs, as described in Section 3.13.2.2, *Regulatory*. Given that local jurisdictions would relocate individuals and families experiencing homelessness and that encampments would be removed prior to construction activities, the construction and operation of Common Element Typical Project would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways Typical Project

Construction and Operation

Construction and implementation of the Multi-use Trails and Access Gateways Typical Project would not displace any housing because Multi-use Trails and Access Gateways Typical Project would generally be implemented along the LA River and would have no direct impact on existing homes or residents. However, similar to the Common Elements Typical Project, construction and operation of Multi-use Trails and Access Gateways Typical Project associated with project implementation could include displacement of families or individuals experiencing homelessness. The complex issue of homeless encampments in the LA River areas requires the involvement and coordination of multiple local agencies, including the County, as well as the affected cities. The County and cities currently implement existing programs involving transient populations being relocated to safer, more sanitary shelters or more permanent residences, including solutions for people that choose to not stay in homeless shelters for varying reasons. Given that local jurisdictions would relocate individuals and families experiencing homelessness and that encampments would be removed prior to construction activities, the construction of Multi-Use Trails and Access Gateways Typical Project would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Construction and Operation

KOPs Categories 1 through 5

Construction and Operation of KOP Categories 1 through 5 would include development to improve trails, access gateways, channel modifications, crossings and platforms, diversions, and floodplain reclamation.

KOP Categories 1 through 5 do not propose removal of existing housing, so they would not displace housing or people or necessitate the construction of replacement housing elsewhere. However, as stated above, projects associated with project implementation could include displacement of individuals or families experiencing homelessness. Given that local jurisdictions would relocate individuals and families experiencing homelessness, and encampments would be removed prior to construction activities, the construction and operation of KOP Categories 1 through 5 would result in a less-than-significant impact on homeless populations and would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Implementation of KOP Category 6 could include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Majority of the structural development associated with the KOPs would be recreational and ecological improvements and does not propose removal of existing housing. However, as stated above, projects associated with project implementation could include displacement of individuals or families experiencing homelessness. Given that local jurisdictions would relocate individuals and families experiencing homelessness, and encampments would be removed prior to construction activities, the construction and operation of KOP Category 6 would result in a less-than-significant impact on homeless populations and would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. Impacts would be less than significant.

Furthermore, KOP Category 6 could include affordable housing. Development of affordable housing units under KOP Category 6 would not displace a substantial number of existing people or housing, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness. Implementation of KOP Category 6

would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects, ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles), would be implemented over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Common Elements and Multi-Use Trails and Access Gateways Typical Projects that would be implemented along the river and subsequent projects composed of the KOP categories' multi-benefit design components. However, as stated above, projects associated with project implementation could include displacement of individuals or families experiencing homelessness. Given that local jurisdictions would relocate individuals and families experiencing homelessness, and encampments would be removed prior to construction activities, the construction and operation of the overall *2020 LA River Master Plan* implementation would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. In addition, development of affordable housing units would not displace a substantial number of existing people or housing, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The following impacts analysis considers whether the proposed Project would have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

The geographic context for an analysis of cumulative population and housing impacts is the area covered by the *Los Angeles County General Plan*, which identifies anticipated growth through 2035. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on population and housing if, in combination with other projects within the County, it would induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) or displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere.

Cumulative Condition

Past projects in the County (cities and unincorporated areas) have converted undeveloped and agricultural land to urban uses, resulting in residential and employment population increases. The planning documents, such as general plans prepared by cities, would be subject to regional plans such as SCAG's RCP and the RTP/SCS. The general plans of County jurisdictions have been prepared to be consistent with the population forecast of the regional planning documents. Therefore, these projects would accommodate anticipated future growth, not induce new growth. Since cumulative projects would be required to comply with applicable land use plans governing regional growth, a significant cumulative impact would not occur.

Contribution of the Project to Cumulative Impacts

As there is no significant cumulative condition with respect to population and housing, the proposed Project would not make a cumulatively considerable contribution to population and housing impacts.

Section 3.14
Public Services

3.14.1 Introduction

This section describes the geographic and regulatory setting for public services (fire, police, schools, and libraries), identifies impacts that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. This section also identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.14.2 Setting

3.14.2.1 Geographic

Regional Setting

Public services for the *2020 LA River Master Plan* and the surrounding communities are provided by the County and services from the 17 local jurisdictions. Public services have been actively developing in tandem with growth in the communities and the region. A discussion of the current provisions to deliver public services within the 51-mile-long and 2-mile-wide study area and surrounding areas is provided below. Figures 3.14-1 through 3.14-9 show the public service facilities within the 2-mile-wide study area.

Police Protection

The *2020 LA River Master Plan*'s 51-mile-long and 2-mile-wide study area is served by multiple fire and police protection providers. While some incorporated cities have their own police departments, others contract with Los Angeles County Sheriff's Department (LASD), which also provides police services to unincorporated County areas.

Table 3.14-1 shows the 17 local jurisdictions, as well as unincorporated County areas, and their designated police service providers. The Cities of Carson, Compton, Cudahy, Lynwood, Paramount, Commerce, and Maywood, as well as unincorporated County areas, do not have a dedicated police

department and instead utilize LASD for police services. The map IDs provided in Table 3.14-2 through Table 3.14-9 correspond to Figures 3.14-1 through 3.14-9.

Table 3.14-1. Police Service Providers for Jurisdictions in LA River Study Area

Jurisdiction	Service Provider
Long Beach	Long Beach Police Department
Los Angeles	Los Angeles Police Department
Carson	LASD
Compton	LASD
Cudahy	LASD
Lynwood	LASD
Downey	Downey Police Department
Paramount	LASD
South Gate	South Gate Police Department
Bell	City of Bell Police Department
Bell Gardens	Bell Gardens Police Department
Commerce	LASD
Huntington Park	Huntington Park Police Department
Maywood	LASD
Vernon	Vernon Police Department
Glendale	Glendale Police Department
Burbank	Burbank Police Department
Unincorporated County Areas	LASD

Long Beach Police Department

The Long Beach Police Department (LBPD) is the second-largest municipal police agency in the County and has over 800 sworn officers and a total staffing of over 1,200 personnel (LBPD 2020). LBPD also provides contracted law enforcement services to the Port of Long Beach, Long Beach Airport, Long Beach Transit, and Long Beach City College. Response times for LBPD average at 4.8 minutes in 2016. Table 3.14-2 shows the LBPD stations in the 2-mile-wide study area and their distance from the LA River.

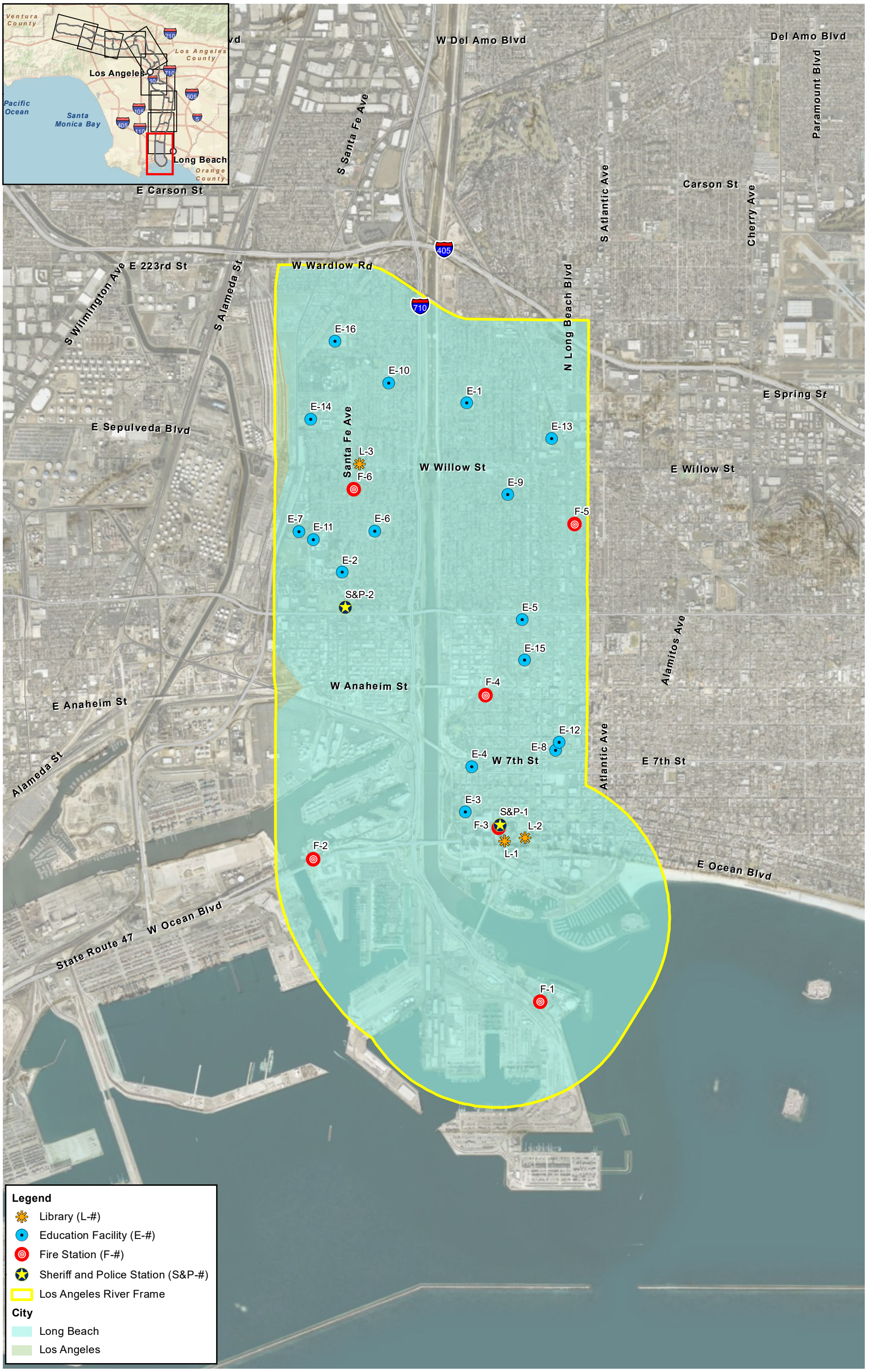

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Figure 3.14-1
Public Services within Frame 1

Source: County of Los Angeles; ESRI

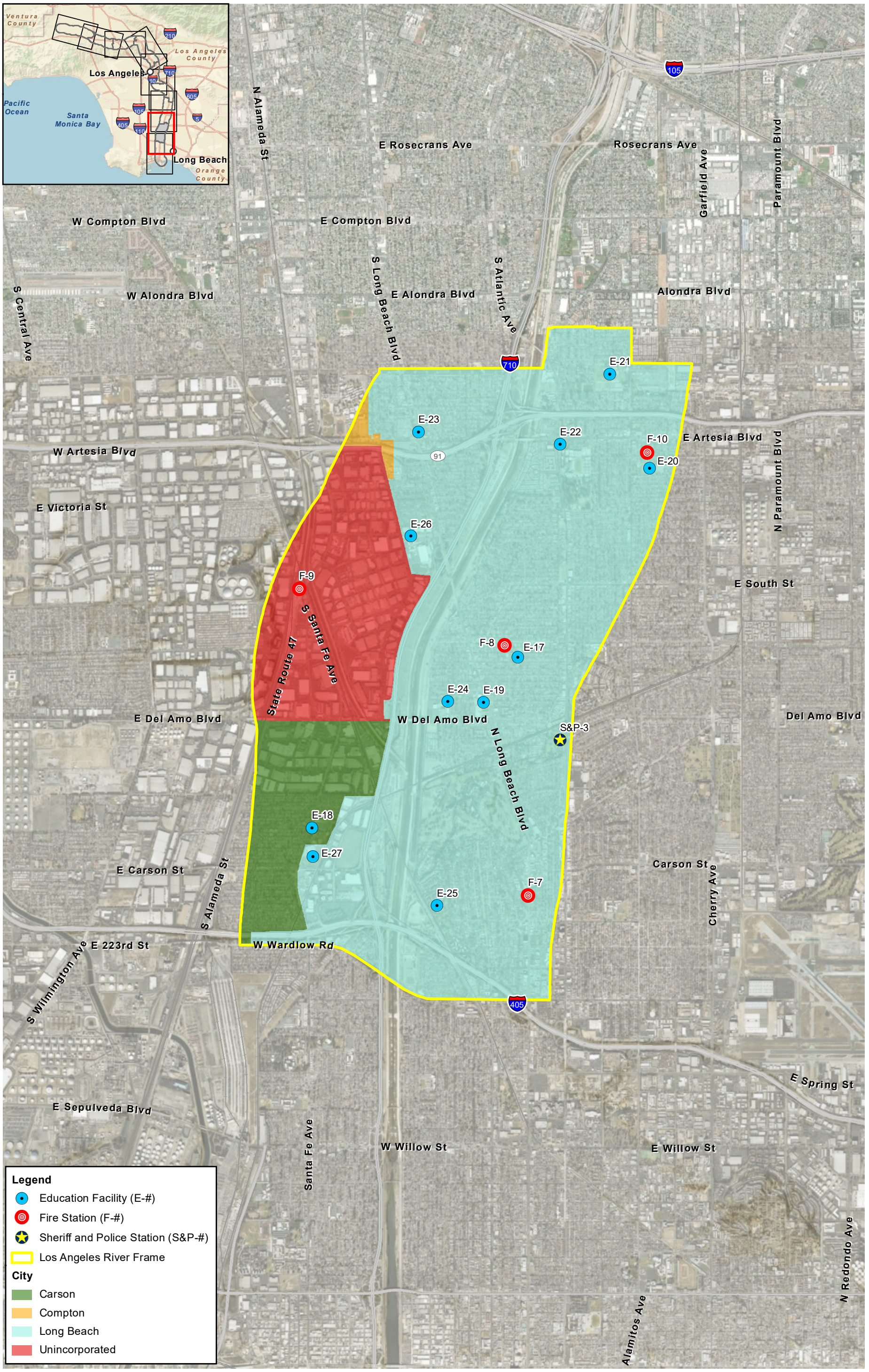

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Figure 3.14-2
Public Services within Frame 2

Source: County of Los Angeles; ESRI

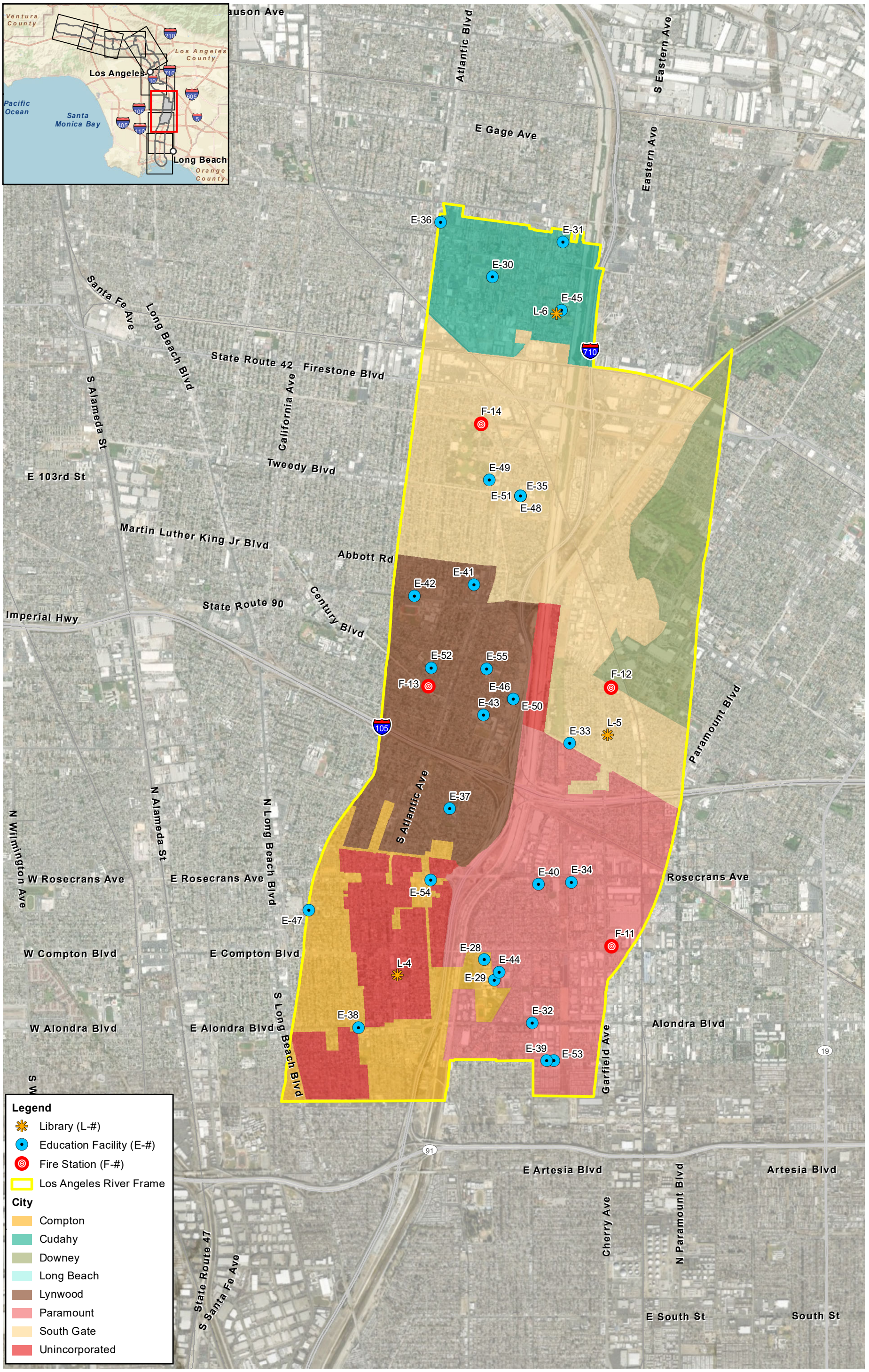
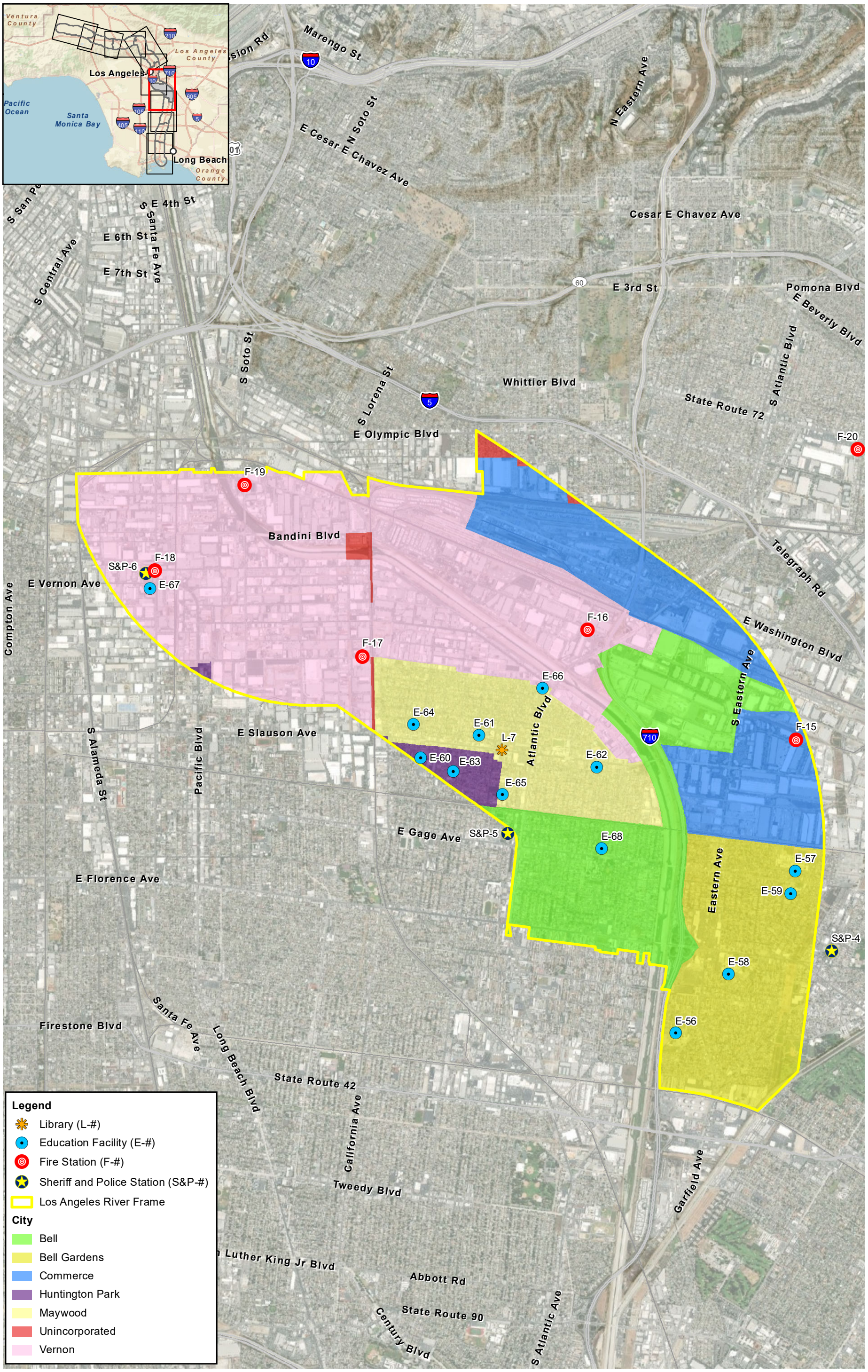


Figure 3.14-3
Public Services within Frame 3

Source: County of Los Angeles; ESRI



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Source: County of Los Angeles; ESRI

Figure 3.14-4
Public Services within Frame 4

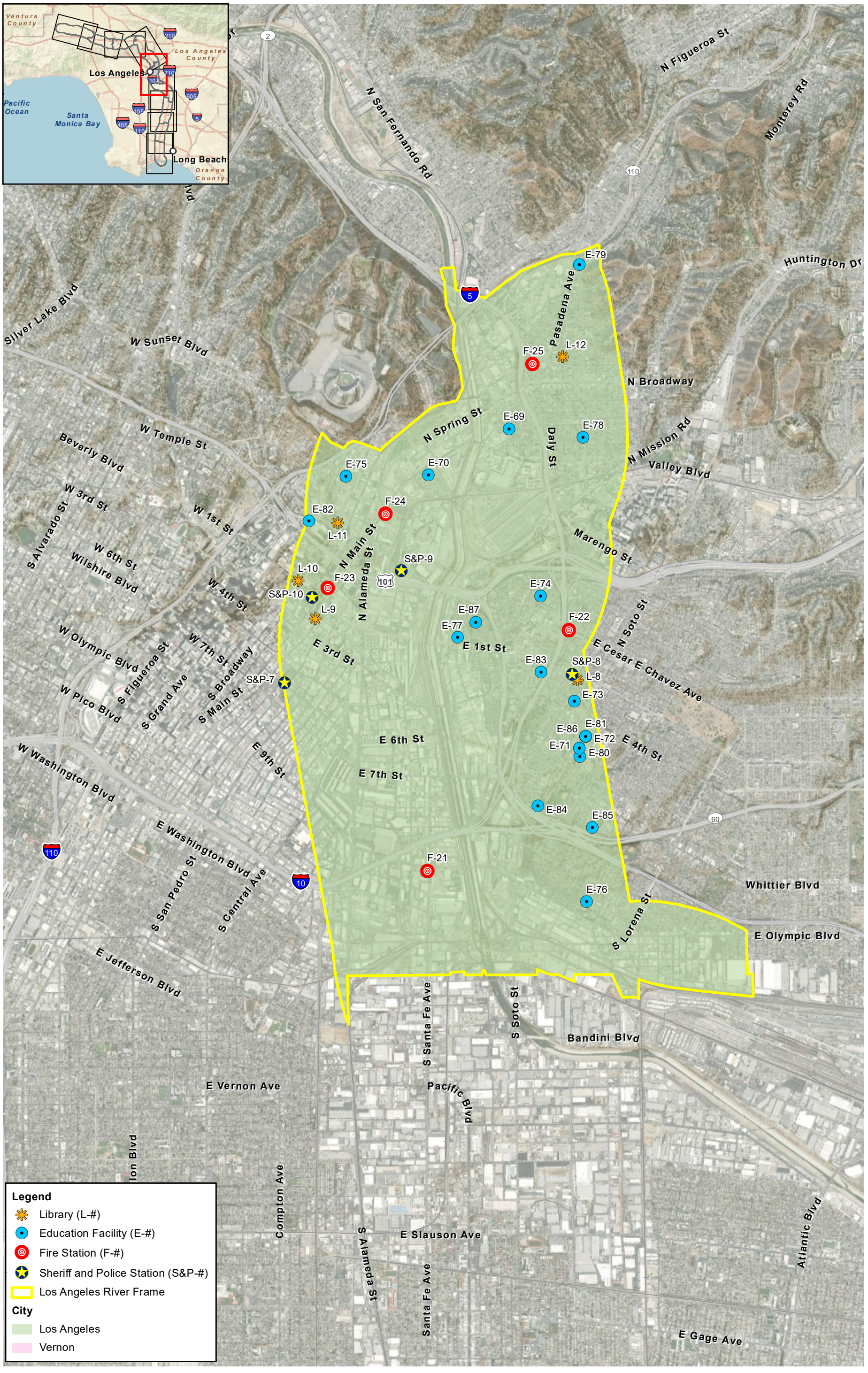

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Figure 3.14-5
Public Services within Frame 5

Source: County of Los Angeles; ESRI

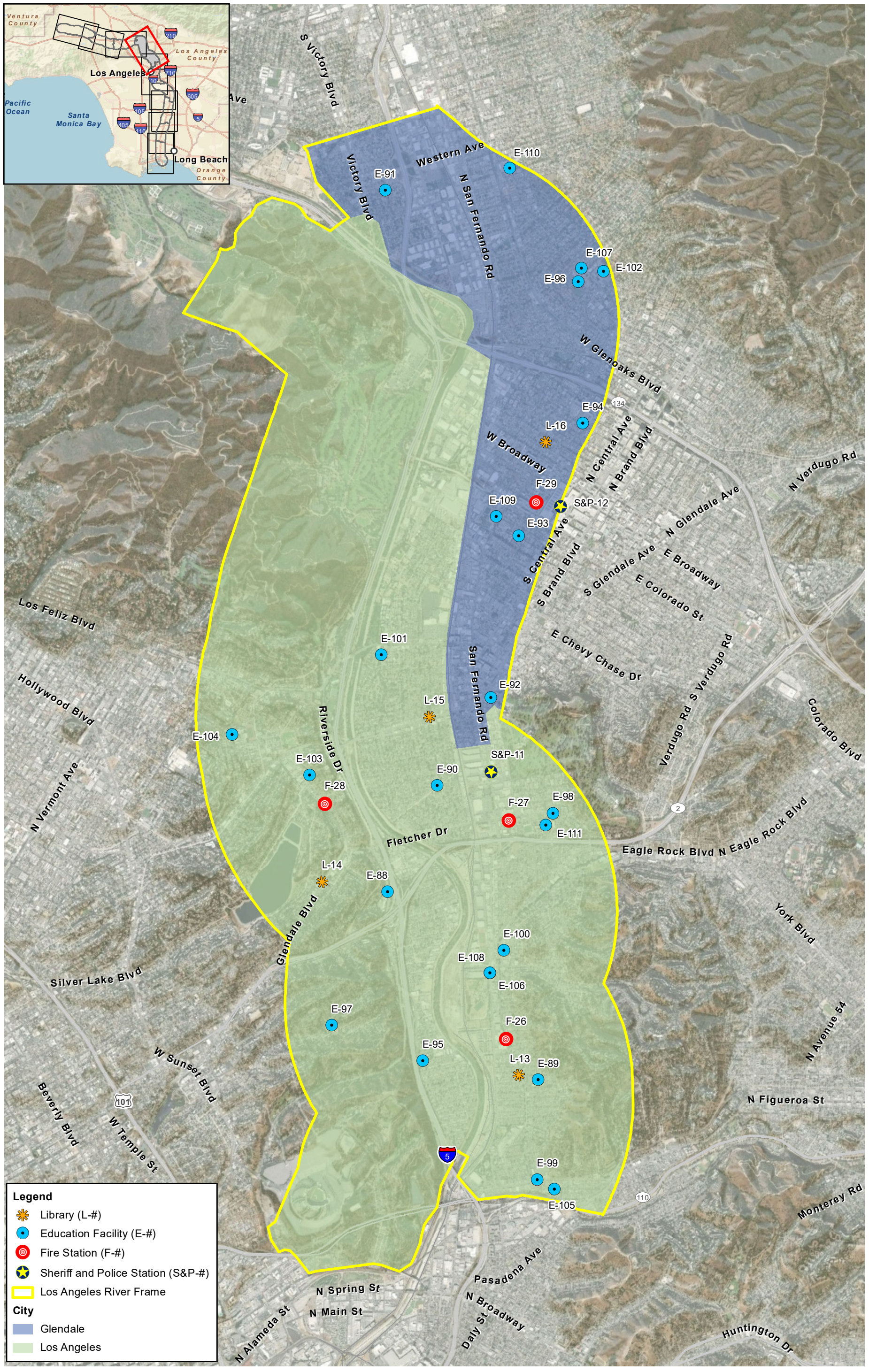

Figure 3.14-6
Public Services within Frame 6

Source: County of Los Angeles; ESRI

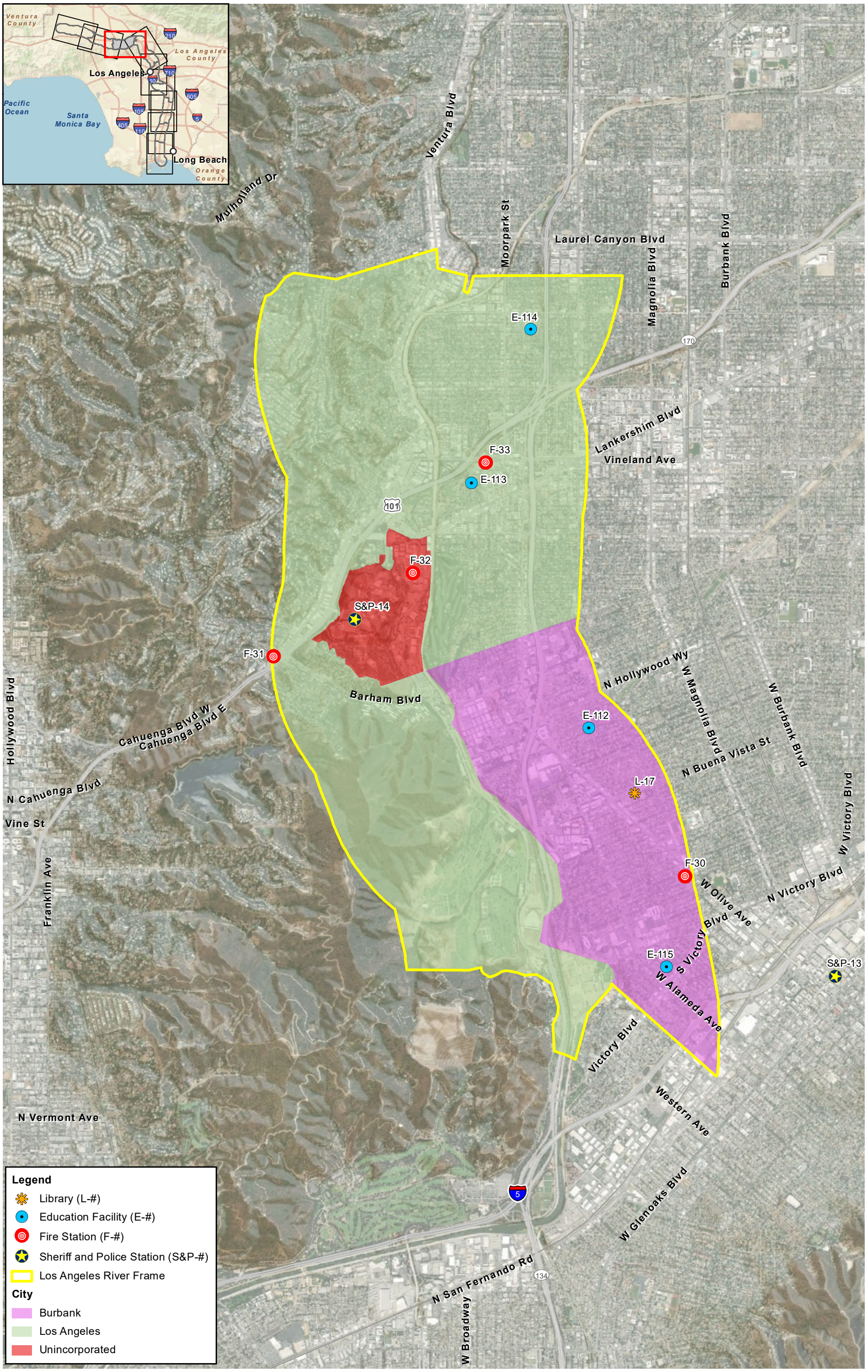

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Figure 3.14-7
Public Services within Frame 7

Source: County of Los Angeles; ESRI

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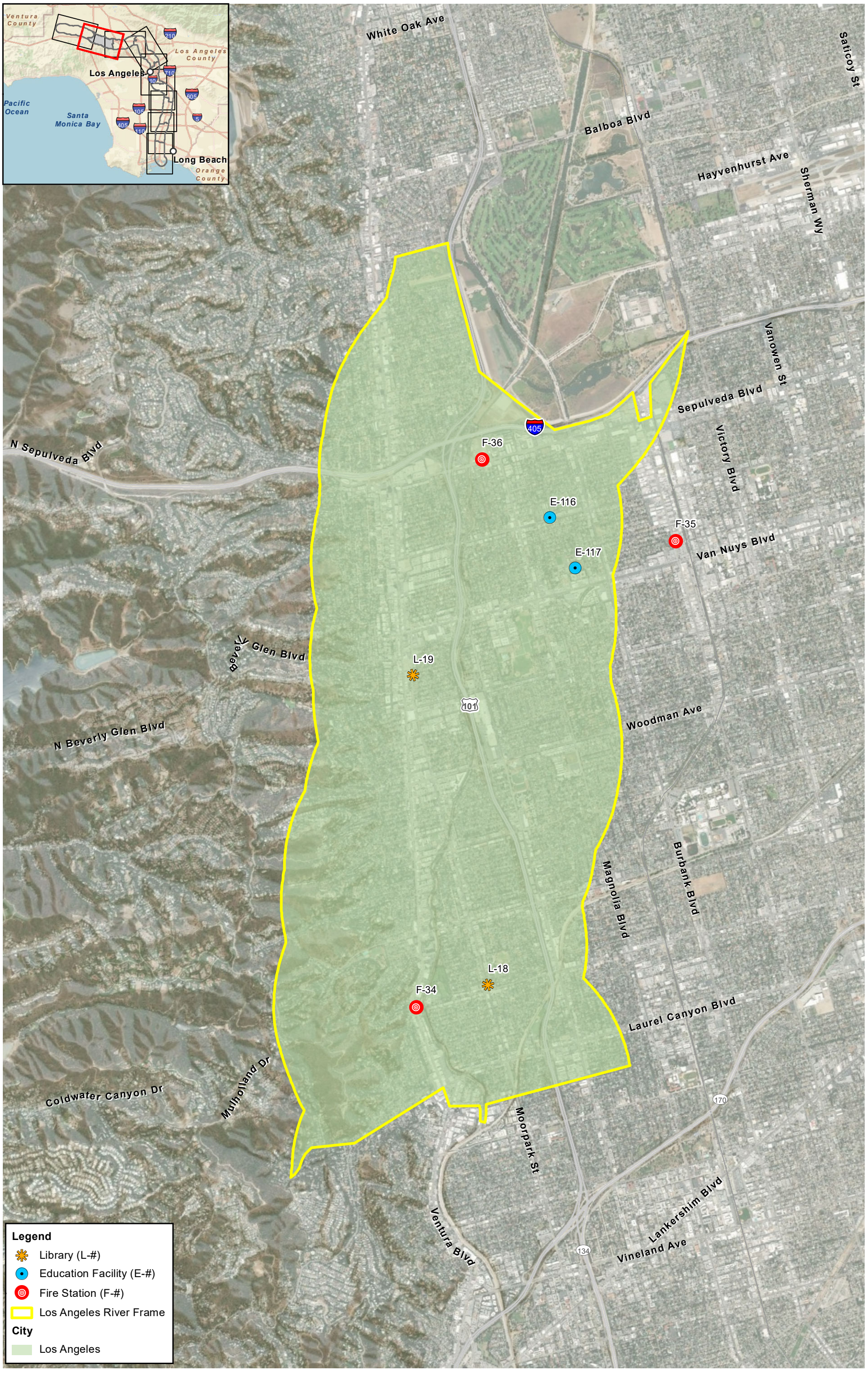

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Figure 3.14-8
Public Services within Frame 8

Source: County of Los Angeles; ESRI

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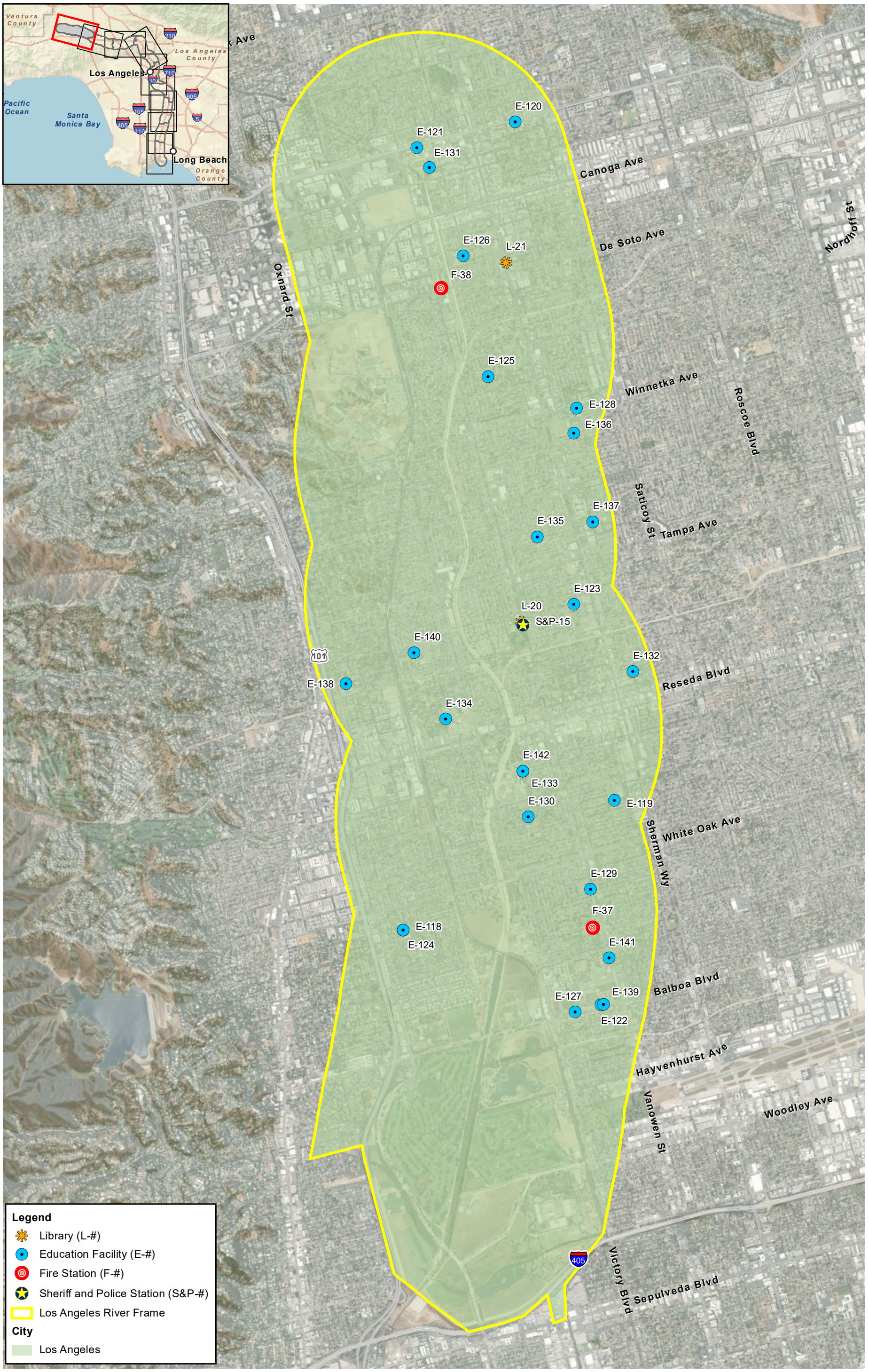

Figure 3.14-9
Public Services within Frame 9

Source: County of Los Angeles; ESRI

Table 3.14-2. Long Beach Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time[1]	Distance from LA River (miles)
S&P-1	1	LBPD	400 W. Broadway, Long Beach	4 mins, 3 secs	0.42
S&P-2	1	West Patrol Division	1835 Santa Fe Ave, Long Beach	N/A	0.57
S&P-3	2	North Patrol Division	4891 Atlantic Ave, Long Beach	N/A	1.02

City of Los Angeles Police Department

The City of Los Angeles Police Department (LAPD) is one of the largest law enforcement agencies in the world. It is responsible for providing police service to an area encompassing 468 square miles and 21 community areas, representing approximately over 4 million residents as of 2016 (LAPD 2020). There are over 10,000 sworn personnel. Table 3.14-3 shows the LAPD stations in the 2-mile-wide study area and their distance from the LA River.

Table 3.14-3. City of Los Angeles Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-7	5	Central Community Police Station	251 E. 6th St, Los Angeles	N/A	1.01
S&P-8	5	Hollenbeck Community Police Station	2111 E. 1st. St, Los Angeles	N/A	0.93
S&P-9	5	Metro Transit Services Bureau	1 Gateway Plaza Dr, Los Angeles	N/A	0.30
S&P-10	5	Headquarters	100 W. 1st St, Los Angeles	N/A	0.84
S&P-11	6	Northeast Community Police Station	3353 San Fernando Rd, Los Angeles	N/A	0.70
S&P-15	9	West Valley Community Police Station	19020 Vanowen St, Reseda	N/A	0.39

Los Angeles County Sheriff's Department

LASD maintains 23 stations across the Southern California region to patrol 40 contract cities; 90 unincorporated communities; 216 facilities, hospitals, and clinics; nine community colleges; the Metropolitan Transit Authority; and 47 Superior Courts. Its members are responsible for providing protection and service to almost 10 million people within a 4,084-square-mile area (LASD 2020). Response times for LASD are approximately 2 minutes and 54 seconds for emergency responses and

[1] Data represent fiscal year 2018 average response times for Priority 1 calls of all City of Long Beach Police Departments. Priority 1 calls are considered potentially life-threatening emergencies, such as a shooting or a robbery in progress.

43 minutes and 12 seconds for routine responses. Table 3.14-4 shows the LASD stations that are closest to/within the LA River study area.

Table 3.14-4. Los Angeles County Sheriff's Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-14	7	Universal Citywalk Substation	1000 Universal Studios Blvd, Bldg. 4505M, Universal City	N/A	0.48

Downey Police Department

Law enforcement services in Downey are provided by the Downey Police Department, except for properties owned by the County in the southwestern part of the city, which is serviced by LASD (City of Downey 2005). The department is composed of more than 160 employees, both sworn and civilian staff, and serves a diverse community of over 112,000 residents within 12.4 square miles. The estimated response times to service calls for the City of Downey Police Department are 1 to 2 minutes for emergency calls and 5 to 8 minutes for non-emergency calls. The nearest City of Downey Police station is outside of the 2-mile-wide study area and 2.5 miles from the LA River at 10911 Brookshire Avenue.

South Gate Police Department

The South Gate Police Department provides police protection services in the City of South Gate. The department operates out of its headquarters at 8620 California Avenue, which is 2.1 miles from the LA River. There are no South Gate Police Department police stations within the 2-mile-wide study area. The South Gate Police Department's emergency response time is approximately 3 minutes and 35 seconds.

Bell Police Department

Police protection and law enforcement services are provided by the Bell Police Department. The police department's authorized capacity is 36 officers (City of Bell 2018). This translates into a per-capita ratio of 0.989 officer per 1,000 residents. Table 3.14-5 shows the Bell Police Department station in the 2-mile-wide study area and its distance from the LA River.

Table 3.14-5. Bell Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-5	4	Bell Police Department	6326 Pine Ave, Bell	N/A	1.3

Bell Gardens Police Department

The Bell Gardens Police Department is a full-service police agency providing police service to the community of Bell Gardens since 1927. The Bell Gardens Police Department consists of 84 dedicated professionals including 51 sworn officers, 21 civilian staff, and 12 part-time staff (City of Bell

Gardens 2020). Table 3.14-6 shows the Bell Gardens Police Department station in the 2-mile-wide study area and its distance from the LA River.

Table 3.14-6. Bell Gardens Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-4	4	Bell Gardens Police Department	7100 Garfield Ave, Bell Gardens	N/A	1.1

Huntington Park Police Department

Police protection for the City of Huntington Park is provided by the Huntington Park Police Department that consists of 72 sworn personnel and 45 civilian employees for a total of 117 full-time employees (City of Huntington Park 2020). The department also has 25 part-time employees. According to the City of Huntington Park, the average police response times were 4 minutes and 23 seconds for emergency calls, 11 minutes and 23 seconds for high-priority calls, and 17 minutes and 19 seconds for non-emergency calls. The nearest police station in Huntington Park is at 6542 Miles Avenue, which is approximately 3 miles from the LA River and outside of the 2-mile-wide study area.

Vernon Police Department

The Vernon Police Department provides a full range of policing services to a community composed primarily of businesses and industry. Table 3.14-7 shows the Vernon Police Department station in the 2-mile-wide study area and its distance from the LA River.

Table 3.14-7. Vernon Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-6	4	Vernon Police Department	4305 S Santa Fe Ave, Vernon	3 mins, 14 secs	0.8

Source: City of Vernon 2016.

Glendale Police Department

The Glendale Police Department is composed of about 230 sworn officers. The service area of the Glendale Police Department is the City of Glendale, which has a population of 203,054 over 30.6 square miles (City of Glendale 2020a). Table 3.14-8 shows the Glendale Police Department station in the 2-mile-wide study area and its distance from the LA River.

Table 3.14-8. Glendale Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-12	6	Glendale Police Substation	2148 Glendale Galleria, Glendale	5 mins, 3 secs	1.3

Burbank Police Department

The Burbank Police Department has 160 sworn officers that serve the City of Burbank, a population of 104,709 over 17.4 square miles (City of Burbank 2013). Table 3.14-9 shows the Burbank Police Department station in the 2-mile-wide study area and its distance from the LA River.

Table 3.14-9. Burbank Police Department Stations in LA River Study Area

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
S&P-13	7	Burbank Police Department	200 N 3rd St, Burbank, CA 91502	3 mins, 12 secs	0.8

Fire Protection

The *2020 LA River Master Plan*'s 2-mile-wide study area is served by multiple fire protection providers. While some incorporated cities have their own fire departments, others contract with the Los Angeles County Fire Department (LACFD) for fire protection services. LACFD also provides fire protection services to unincorporated County areas.

As seen on Figures 3.14-1 through 3.14-9, there are fire stations located throughout the 2-mile-wide study area. Below is a description of the fire protection services in the 2-mile-wide study area by provider.

The Map IDs included in Table 3.14-13 through Table 3.14-16 correspond to Figures 3.14-1 through 3.14-9. Table 3.14-10 shows fire protection service provider for each jurisdiction within the 2-mile-wide study area. The Cities of Carson, Compton, Cudahy, Lynwood, Paramount, South Gate, Bell, Bell Gardens, Commerce, and Maywood, as well as unincorporated County areas, do not have a dedicated fire department and instead utilize LACFD for fire protection services.

Table 3.14-10. Fire Service Providers for Jurisdictions in LA River Study Area

Jurisdiction	Service Provider
Long Beach	Long Beach Fire Department
Los Angeles	Los Angeles Fire Department
Carson	LACFD
Compton	LACFD
Cudahy	LACFD
Lynwood	LACFD
Downey	Downey Fire Department
Paramount	LACFD
South Gate	LACFD
Bell	LACFD
Bell Gardens	LACFD
Commerce	LACFD
Huntington Park	LACFD
Maywood	LACFD
Vernon	Vernon Fire Department

Jurisdiction	Service Provider
Glendale	Glendale Fire Department
Burbank	Burbank Fire Department
Unincorporated County Areas	LACFD

Long Beach Fire Department

The Long Beach Fire Department (LBFD) responds to fire, medical, beach, and waterway emergencies. LBFD operates 24 fire stations throughout the City of Long Beach in addition to Fire Headquarters and Beach Operations facilities. As shown on Figures 3.14-1 and 3.14-2, LBFD services the LA River in all of Frame 1 and the majority of Frame 2. Table 3.14-11 shows the LBFD stations in the 2-mile-wide study area and their distance from the LA River.

Table 3.14-11. Long Beach Fire Department Stations

Map ID	Frame	Station Name	Address	Response Times	Distance from LA River (miles)
F-1	1	Fire Station 6	330 Windsor Way, Long Beach	N/A	1.11
F-2	1	Fire Station 20	1900 Pier D St, Long Beach	N/A	0.80
F-3	1	Fire Station 1	100 Magnolia Ave, Long Beach	N/A	0.46
F-4	1	Fire Station 3	1222 Daisy Ave, Long Beach	N/A	0.37
F-5	1	Fire Station 7	2295 Elm Ave, Long Beach	N/A	0.99
F-6	1	Fire Station 13	2475 Adriatic Ave, Long Beach	N/A	0.49
F-7	2	Fire Station 9	3917 Long Beach Blvd, Long Beach	N/A	0.90
F-8	2	Fire Station 11	160 E. Market St, Long Beach	N/A	0.51
F-10	2	Fire Station 12	6509 Gundry Ave, Long Beach	N/A	0.86

City of Los Angeles Fire Department

The City of Los Angeles Fire Department (LAFD) provides fire protection and prevention and emergency services to the City of Los Angeles. LAFD has 3,246 uniformed fire personnel and 353 professional support personnel responsible for fire prevention, firefighting, emergency medical care, technical rescue, hazardous materials mitigation, disaster response, public education, and community service (LAFD 2020a). LAFD maintains 106 fire stations across the department's 471-square-mile jurisdiction, and has continued to see rises in emergency responses, pertaining to both fire and emergency medical services (LAFD 2020b). Table 3.14-12 shows the LAFD stations in the 2-mile-wide study area and their distance from the LA River.

Table 3.14-12. City of Los Angeles City Fire Department Stations

Map ID	Frame	Station Name	Address	Response Times	Distance from LA River (miles)
F-23	6	LAFD	200 N Main St, Los Angeles	N/A	1.11

Los Angeles County Fire Department

LACFD provides fire, safety, and emergency medical services to 58 cities and all unincorporated County areas with 174 fire stations (LACFD 2020a). Multiple cities within the study area contract with LACFD for fire protection services, including the Cities of Carson, Cudahy, Lynwood, Paramount, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, and Maywood. Table 3.14-13 summarizes LACFD stations and their distance from the LA River (LACFD 2020b).

Table 3.14-13. Los Angeles County Fire Department Stations

Map ID	Frame	Station Name	Address	Response Time[2]	Distance from LA River (miles)
F-14	3	Station #54	4867 Southern Ave, South Gate	5 mins, 49 secs	0.74
F-9	3	Station #105	18915 S. Santa Fe Ave, Compton	N/A	0.91
F-13	3	Station #148	4264 Martin Luther King Jr. Blvd, Lynwood	N/A	1.03
F-20	4	Station #22	928 S. Gerhart Ave, Commerce	5 mins, 34 secs	2.51
F-15	4	Station #27	6031 Rickenbacker Rd, Commerce	N/A	0.98
F-11	4	Station #31	7521 E. Somerset Blvd, Paramount	5 mins, 38 secs	0.94
F-12	4	Station #57	5720 Gardendale St, South Gate	5 mins, 44 secs	0.50
F-35	5	Station #39	14615 Oxnard St, Los Angeles	5 mins, 31 secs	1.56
F-19	5	Station #3	2800 Soto Ave, Vernon	5 mins, 25 secs	0.13
F-24	6	Station #4	800 N. Main St, Los Angeles	5 mins, 55 secs	0.48
F-21	6	Station #17	1601 S. Santa Fe Ave, Los Angeles	5 mins, 58 secs	0.13
F-25	6	Station #1	2230 Pasadena Ave, Los Angeles	6 mins, 47 secs	0.45
F-28	7	Station #56	2759 Rowena Ave, Los Angeles	6 mins, 8 secs	0.26
F-26	7	Station #44	1410 Cypress Ave, Los Angeles	7 mins, 12 secs	0.28
F-27	7	Station #50	3036 Fletcher Dr, Los Angeles	6 mins, 30 secs	0.53
F-32	8	Station #51	3900 Lankershim Blvd, Universal City	5 mins, 19 secs	0.13
F-30	8	Station #15	1420 W. Verdugo Ave, Burbank	5 mins, 11 secs	0.97

[2] Data represent average response times for Advanced Life Support Critical Incidents between January 2020 and June 2020. Advanced Life Support Critical Incidents are critical incidents marked for immediate dispatch.

Map ID	Frame	Station Name	Address	Response Time[2]	Distance from LA River (miles)
F-33	8	Station #86	4305 Vineland Ave, North Hollywood	8 mins, 8 secs	0.34
F-31	8	Station #76	3111 N. Cahuenga Blvd, Los Angeles	5 mins, 39 secs	1.00
F-34	9	Station #78	4041 Whitsett Ave, Studio City	5 mins, 35 secs	0.04
F-36	9	Station #88	5101 N. Sepulveda Blvd, Sherman Oaks	5 mins, 4 secs	0.09
F-37	9	Station #100	6751 Louise Ave, Van Nuys	5 mins, 49 secs	0.60

Downey Fire Department

Fire services in Downey are provided by the City of Downey Fire Department, except for properties owned by the County in the southwestern part of the city, which is serviced by LACFD (City of Downey 2005). The City of Downey Fire Department Operations Division's primary responsibility is the protection of life, property, and the environment. Its workforce is distributed over three platoons and is currently composed of 63 sworn firefighters, 18 of which are licensed paramedics. It is the department's largest division, accounting for approximately 75 percent of fire department personnel staff (City of Downey 2020). Fire service delivery is evenly divided throughout the city by four strategically located fire stations capable of arriving to the scene of an emergency within 5 minutes of the call. Each fire station houses an engine company, staffed with three personnel. Additionally, two paramedic units are dedicated to providing immediate advanced medical aid. Two firefighter/paramedics are assigned to each paramedic unit. A four-person ladder truck also responds to structure fires and rescues within the city. A technical rescue unit is available for specialized rescue incidents. There are no City of Downey Fire Department fire stations within the 2-mile-wide study area.

Vernon Fire Department

The Vernon Fire Department has four fire stations within the 5.2-square-mile City of Vernon. There are three fire stations within 1 mile of the LA River, as shown in Table 3.14-14 below.

Table 3.14-14. Vernon Fire Department Stations

Map ID	Frame	Station Name	Address	Response Time[3]	Distance from LA River (miles)
F-16	5	Station 4	4530 Bandini Blvd, Vernon	3 mins, 14 secs	0.37
F-17	5	Station 1	3375 Fruitland Ave, Vernon	N/A	0.67
F-18	5	Station 2	4301 Santa Fe Ave, Vernon	N/A	0.69

[3] These data represent average response time for Priority 1 Calls in 2016 throughout all fire departments in the City of Vernon.

Glendale Fire Department

The Glendale Fire Department is composed of 274 sworn and non-sworn personnel (City of Glendale 2020b). As shown in Table 3.14-15, there is one fire station within 1 mile of the LA River.

Table 3.14-15. Glendale Fire Department Stations

Map ID	Frame	Station Name	Address	Response Time	Distance from LA River (miles)
F-29	7	Station 21	421 Oak St, Glendale	N/A	0.86

Burbank Fire Department

The Burbank Fire Department consists of six divisions: Fire Prevention, Suppression, Emergency Medical Services, Disaster Preparedness, Equipment Maintenance, and Training and Safety (City of Burbank 2020). These divisions function in a manner that allows the fire department to effectively serve the community in emergency and nonemergency situations. The Burbank Fire Department operates six fire stations and has jurisdiction over all fires and life-threatening incidents in the City of Burbank with a total of 136 personnel. There are no fire stations within the 2-mile-wide study area.

Schools

The *2020 LA River Master Plan*'s 2-mile-wide study area contains various public school districts. While some incorporated cities have their own school districts, others are serviced by Los Angeles Unified School District (LAUSD). In total, LAUSD enrolls more than 600,000 students in kindergarten through 12th grade (LAUSD 2020). LAUSD covers 710 square miles and includes Los Angeles, as well as all or parts of 31 smaller municipalities, plus several unincorporated County areas. LAUSD services 66 percent of the 2-mile-wide study area.

As seen on Figure 3.14-1, there are public schools located throughout the 2-mile-wide study area, described below by district. The Cities of Carson, Cudahy, Downey, Bell, Commerce, Huntington Park, Maywood, and Vernon, as well as unincorporated County areas, do not have a dedicated school district and instead utilize LAUSD for school services. Table 3.14-16 shows designated school districts for each jurisdiction within the 2-mile-wide study area.

The Map IDs provided in Table 3.14-17 through Table 3.14-24 correspond to Figure 3.14-1 through Figure 3.14-9.

Table 3.14-16. School Providers for Jurisdictions in LA River Study Area

Jurisdiction	Service Provider
Long Beach	Long Beach Unified School District
Los Angeles	LAUSD
Carson	LAUSD
Compton	Compton Unified School District
Cudahy	LAUSD
Lynwood	Lynwood Unified School District
Downey	LAUSD

Jurisdiction	Service Provider
Paramount	Paramount School District
South Gate	Paramount School District
Bell	LAUSD
Bell Gardens	Montebello Unified School District
Commerce	LAUSD
Huntington Park	LAUSD
Maywood	LAUSD
Vernon	LAUSD
Glendale	Glendale Unified School District
Burbank	Burbank Unified School District
Unincorporated County Areas	LAUSD

Long Beach Unified School District

Long Beach Unified School District educates more than 72,000 students, from preschool to high school, in 85 public schools (LBUSD 2020). Table 3.14-17 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility. Their locations are shown on Figure 3.14-1. The Map ID corresponds to Figure 3.14-1.

Table 3.14-17. Long Beach Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-1	1	Birney Elementary School	710 W. Spring St	Public Elementary School	621	0.26
E-2	1	Cabrillo High School	2001 Santa Fe Ave	Public High School	2,124	0.59
E-3	1	Chavez Elementary School	730 W. Third St	Public Elementary Schools	371	0.23
E-6	1	Edison Elementary School	625 Maine Ave	Public Elementary School	564	0.28
E-7	1	Educational Partnership High School	1794 Cedar Ave	Public High School	805	0.63
E-9	1	Garfield Elementary School	2240 Baltic Ave	Public Elementary School	706	0.37
E-11	1	Hudson K-8	2335 Webster Ave	Public Elementary School	629	0.89
E-12	1	International Elementary School	700 Locust Ave	Public Elementary School	694	0.85
E-13	1	Lafayette Elementary School	2445 Chestnut Ave	Public Elementary School	912	0.54
E-15	1	Muir K-8	3038 Delta Ave	Public Elementary School	1,077	0.28

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-17	1	Reid High School	2153 W. Hill St	Public High School	208	0.79
E-18	1	Renaissance High School for the Arts	235 E. Eighth St	Public High School	442	0.88
E-19	1	Robinson Academy	2750 Pine Ave	Public Elementary School	929	0.83
E-21	1	Stephens Middle School	1830 W. Columbia St	Public Middle School	797	0.81
E-23	1	Washington Middle School	1450 Cedar Ave	Public Middle School	1,061	0.64
E-24	1	Webster Elementary School	1755 W. 32nd Way	Public Elementary School	565	0.65
E-28	2	Addams Elementary School	5320 Pine Ave	Public Elementary School	909	0.63
E-30	2	Dooley Elementary School	5075 Long Beach Blvd	Public Elementary School	1,001	0.49
E-34	2	Grant Elementary School	1225 E. 64th St	Public Elementary School	1,119	0.93
E-35	1	Hamilton Middle School	1060 E. 70th St	Public Middle School	932	0.52
E-37	1	Jordan High School	6500 Atlantic Ave	Public High School	2,465	0.27
E-38	2	King Elementary School	145 E. Artesia Blvd	Public Elementary School	734	0.68
E-39	2	Lindsey Academy	5075 Daisy Ave	Public Middle School	762	0.24
E-41	2	Los Cerritos Elementary School	515 W. San Antonio Dr	Public Elementary School	527	0.28
E-44	2	Powell Academy for Success	150 Victoria St	Public Elementary School	1,079	0.39

Sources: California Department of Education 2020; Child Care Center US 2020; Great Schools 2020.

Los Angeles Unified School District

LAUSD serves over 600,000 students in kindergarten through 12th grade at over 1,000 schools. Table 3.14-18 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility. Their locations are shown on Figure 3.14-1.

Table 3.14-18. Los Angeles Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-46	2	Rancho Dominguez Preparatory	4110 Santa Fe Ave, Long Beach	Public High School	813	0.59
E-29	3	Dominguez Elementary School	21250 Santa Fe Ave, Carson	Public Elementary School	529	0.61
E-57	3	Elizabeth Learning Center	4811 Elizabeth St, Los Angeles	Public High School	1,750	0.62
E-58	3	Ellen Ochoa Learning Center	5027 Live Oak St, Cudahy	Public Elementary School	1,304	0.18
E-62	3	International Studies Learning Center at Legacy High School Complex	5225 Tweedy Blvd, South Gate	Public High School	859	0.25
E-63	3	Jaime Escalante Elementary School	4443 Live Oak St, Cudahy	Public Elementary School	587	1.02
E-72	3	Park Avenue Elementary School	8020 Park Ave, Cudahy	Public Elementary School	698	0.12
E-75	3	Science, Technology, Engineering, Arts and Mathematics at Legacy High School Complex	5225 Tweedy Blvd, South Gate	Public High School	608	0.25
E-79	3	Tweedy Elementary School	9724 Pinehurst Ave, South Gate	Public Elementary School	636	0.25
E-81	3	Visual and Performing Arts at Legacy High School Complex	5225 Tweedy Blvd, South Gate	Public High School	454	0.25
E-91	4	Chester W. Nimitz Middle School	6021 Carmelita Ave, Huntington Park	Public Middle School	1,431	1.0
E-95	4	Fishburn Avenue Elementary School	5701 Fishburn Ave, Maywood	Public Elementary School	464	0.64
E-96	4	Heliotrope Avenue Elementary School	5911 Woodlawn Ave, Maywood	Public Elementary School	627	0.32

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-98	4	Huntington Park Elementary School	6055 Corona Ave, Huntington Park	Public Elementary School	392	0.94
E-99	4	Loma Vista Elementary School	3629 E. 58th St, Maywood	Public Elementary School	738	0.84
E-104	4	Vernon City Elementary School	2360 E. Vernon Ave, Los Angeles	Public Elementary Schools	207	0.13
E-100	4	Maywood Academy High School	6125 Pine Ave, Maywood	Public High School	1,225	0.87
E-101	4	Maywood Elementary School	5200 Cudahy Ave, Maywood	Public Elementary School	511	0.13
E-105	4	Woodlawn Avenue Elementary School	6314 Woodlawn Ave, Bell	Public Elementary School	703	0.45
E-106	5	Albion Street Elementary School	322 S. Avenue 18, Los Angeles	Public Elementary School	201	0.22
E-109	5	Ann Street Elementary School	2210 Riverside Dr, Los Angeles	Public Elementary School	95	0.24
E-113	5	Boyle Heights Continuation	544 S. Mathews St, Los Angeles	Public High School	70	0.89
E-114	5	Boyle Heights STEM High School	456 S. Mathews Blvd, Los Angeles	Public High School	207	0.94
E-115	5	Breed Street Elementary School	2226 E. Third St, Los Angeles	Public Elementary School	332	0.91
E-116	5	Bridge Street Elementary School	605 N. Boyle Ave, Los Angeles	Public Elementary School	195	0.61
E-118	5	Castelar Street Elementary School	840 N. Yale St, Los Angeles	Public Elementary School	641	0.77
E-119	5	Christopher Dena Elementary School	1314 Dacotah St, Los Angeles	Public Elementary School	448	0.74
E-125	5	Felicitas and Gonzalo Mendez High School	1200 Plaza Del Sol, Los Angeles	Public High School	1,044	0.19

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-127	5	Griffin Avenue Elementary School	2025 Griffin Ave, Los Angeles	Public Elementary School	426	0.73
E-128	5	Hillside Elementary School	120 E. Avenue 35, Los Angeles	Public Elementary School	124	0.90
E-129	5	Hollenbeck Middle School	2510 E. Sixth St, Los Angeles	Public Middle School	1,118	0.88
E-143	5	Ramon C. Cortines School of Visual and Performing Arts	450 N. Grand Ave, Los Angeles	Public High School	1,224	1.0
E-132	5	Math, Science, and Technology Magnet Academy at Roosevelt High School	456 S. Mathews St, Los Angeles	Public High School	530	0.94
E-147	5	Second Street Elementary School	1942 E. Second St, Los Angeles	Public Elementary School	317	0.72
E-149	5	Soto Street Elementary School	1020 S. Soto St, Los Angeles	Public Elementary School	206	0.53
E-152	5	Sunrise Elementary School	2821 E. Seventh St, Los Angeles	Public Elementary School	335	0.88
E-153	5	Theodore Roosevelt Senior High School	456 S. Mathews St, Los Angeles	Public High School	1,278	0.94
E-154	5	Utah Street Elementary School	255 Gabriel Garcia Marquez St, Los Angeles	Public Elementary School	393	0.28
E-158	6	Allesandro Elementary School	2210 Riverside Dr, Los Angeles	Public Elementary School	368	0.36
E-161	6	Aragon Avenue Elementary School	1118 Aragon Ave, Los Angeles	Public Elementary School	280	0.40
E-163	6	Atwater Avenue Elementary School	3271 Silver Lake Blvd, Los Angeles	Public Elementary School	299	0.44
E-177	6	Dorris Place Elementary School	2225 Dorris Pl, Los Angeles	Public Elementary School	306	0.24

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-180	6	Elysian Heights Elementary School	1562 Baxter St, Los Angeles	Public Elementary School	316	0.72
E-181	6	Fletcher Drive Elementary School	3350 Fletcher Dr, Los Angeles	Public Elementary School	243	0.80
E-182	6	Florence Nightingale Middle School	3311 N. Figueroa St, Los Angeles	Public Middle School	891	0.54
E-183	6	Glassell Park Elementary School	2211 W. Avenue 30, Los Angeles	Public Elementary School	338	0.34
E-186	6	Glenfeliz Boulevard Elementary School	3955 Glenfeliz Blvd, Los Angeles	Public Elementary School	298	0.16
E-190	6	Ivanhoe Elementary School	2828 Herkimer St, Los Angeles	Public Elementary School	465	0.30
E-191	6	John Marshall Senior High School	3939 Tracy St, Los Angeles	Public High School	2,381	0.79
EE-193	6	Loreto Street Elementary School	3408 Arroyo Seco Ave, Los Angeles	Public Elementary School	321	0.68
EE-195	6	Los Angeles River at Sonia Sotomayor Learning Academies	2050 San Fernando Rd, Los Angeles	Public High School	492	0.33
E-200	6	School of History and Dramatic Arts at Sonia Sotomayor Learning Academies	2050 San Fernando Rd, Los Angeles	Public High School	283	0.33
E-205	6	Washington Irving Middle School Math, Music and Engineering Magnet	3010 Estara Ave, Los Angeles	Public Middle School		0.72
E-241	7	Bertrand Avenue Elementary School	7021 Bertrand Ave, Reseda	Public Elementary School	389	0.81

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-213	7	Rio Vista Elementary School	4243 Satsuma Ave, North Hollywood	Public Elementary School	467	0.25
E-216	7	Walter Reed Middle School	4525 Irvine Ave, North Hollywood	Public Middle School	1,672	0.52
E-229	8	Kester Avenue Elementary School	5353 Kester Ave, Van Nuys	Public Elementary School	1,037	0.53
E-237	8	Van Nuys Middle School	5435 Vesper Ave, Van Nuys	Public Middle School	1,048	0.76
E-238	9	Academy for Enriched Sciences	17551 Miranda St, Encino	Public Elementary School	312	0.67
E-244	9	Canoga Park Elementary School	7438 Topanga Canyon Blvd, Canoga Park	Public Elementary School	640	0.74
E-245	9	Canoga Park Senior High School	6850 Topanga Canyon Blvd, Canoga Park	Public High School	1,439	0.19
E-249	9	Daniel Pearl Journalism and Communications Magnet	6649 Balboa Blvd, Van Nuys	Public High School	330	0.73
E-250	9	Diane S. Leichman Special Education Center	19034 Gault St, Reseda	Public High School	210	0.74
E-255	9	Fred E. Lull Special Education Center	17551 Miranda St, Encino	Public Elementary Schools	0 (school is closed)	0.67
E-256	9	Fullbright Avenue Elementary School	6940 Fullbright Ave, Winnetka	Public Elementary School	458	0.20
E-258	9	Hart Street Elementary School	21040 Hart St, Canoga Park	Public Elementary School	732	0.14
E-259	9	Independence Continuation	6501 Balboa Blvd, Van Nuys	Public High School	112	0.57
E-260	9	John A. Sutter Middle School	7330 Winnetka Ave, Canoga Park	Public Middle School	822	0.84
E-262	9	Lemay Street Elementary School	17520 Vanowen St, Van Nuys	Public Elementary School	394	0.60

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-270	9	Newcastle Elementary School	6520 Newcastle Ave, Reseda	Public Elementary School	352	0.29
E-272	9	Owensmouth Continuation	6921 Jordan Ave, Canoga Park	Public High School	106	0.08
E-275	9	Reseda Elementary School	7265 Amigo Ave, Reseda	Public Elementary School	392	0.89
E-276	9	Reseda Senior High School	18230 Kittridge St, Reseda	Public High School	1,362	0.16
E-277	9	Sherman Oaks Center for Enriched Studies	18605 Erwin St, Reseda	Public High School	2,087	0.43
E-278	9	Shirley Avenue Elementary School	19452 Hart St, Reseda	Public Elementary School	435	0.49
E-282	9	Stanley Mosk Elementary School	7335 Lubao Ave, Winnetka	Public Elementary School	545	0.86
E-283	9	Sven Lokrantz Special Education Center	19451 Wyandotte St, Reseda	Public Elementary School	57	0.88
E-284	9	Tarzana Elementary School	5726 Topeka Dr, Tarzana	Public Elementary School	333	0.85
E-287	9	Valley Alternative Magnet	6701 Balboa Blvd, Van Nuys	Public High School	582	0.75
E-288	9	Vanalden Avenue Elementary School	19019 Delano St, Reseda	Public Elementary School	418	0.34
E-293	9	William Mulholland Middle School	17120 Vanowen St, Van Nuys	Public Middle School	1,385	0.74
E-295	9	Zane Grey Continuation	18230 Kittridge St, Reseda	Public High School	99	0.16

Sources: California Department of Education 2020; Great Schools 2020.

Compton Unified School District

Table 3.14-19 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility. Their locations are shown on Figure 3.14-1.

Table 3.14-19. Compton Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-53	3	Clinton Elementary School	6500 Compton Blvd, Compton	Public Elementary School	882	0.78
E-55	3	Dominguez High School	15301 S. San Jose Ave, Compton	Public High School	1.787	0.61
E-65	3	Kelly Elementary School	2320 E. Alondra Blvd, Compton	Public Elementary School	950	0.58
E-74	3	Roosevelt Elementary School	700 N. Bradfield Ave, Compton	Public Elementary School	825	0.72
E-84	3	Whaley Middle School	14401 S. Gibson Ave, Compton	Public Middle School	582	0.30

Source: Great Schools 2020.

Lynwood Unified School District

Lynwood Unified School District serves more than 15,000 students through 12 elementary schools, three middle schools, three high schools, and preschool, adult, and independent study programs. Table 3.14-20 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility.

Table 3.14-20. Lynwood Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-64	3	Janie P. Abbott Elementary School	5260 E. Clark St, Lynwood	Public Elementary School	620	0.47
E-68	3	Lugo Elementary School	4345 Pendleton Ave, Lynwood	Public Elementary School	372	0.50
E-69	3	Lynwood High School	4050 E. Imperial Hwy, Lynwood	Public High School	2,154	0.89
E-70	3	Marco Antonio Firebaugh High School	5246 Martin Luther King Blvd, Lynwood	Public High School	1,693	0.35
E-73	3	Pathway Independent Study	11300 Wright Rd, Lynwood	Public High School	146	0.15
E-80	3	Vista High School	11300 Wright Rd, Lynwood	Public High School	163	0.15
E-82	3	Washington Elementary	4225 Sanborn Ave, Lynwood	Public Elementary School	667	0.73

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
		School				
E-85	2	Will Rogers Elementary School	11220 Duncan Ave, Lynwood	Public Elementary School	730	0.35

Sources: California Department of Education 2020; Great Schools 2020.

Paramount School District

Paramount School District, unified in 1953, encompasses approximately 7 square miles and serves most of the City of Paramount. Table 3.14-21 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility.

Table 3.14-21. Paramount Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-59	3	Frank J. Zamboni	15733 S. Orange Ave, Paramount	Public Middle School	941	0.59
E-60	3	Hollydale	5511 Century Blvd, South Gate	Public Elementary School	1,003	0.26
E-61	3	Howard Tanner	7210 Rosecrans Ave, Paramount	Public Elementary School	507	0.49
E-66	3	Leona Jackson	7220 Jackson St, Paramount	Public Middle School	816	0.72
E-67	3	Los Cerritos	14626 Gundry Ave, Paramount	Public Elementary School	544	0.30
E-71	3	Mark Keppel	6630 E. Mark Keppel St, Paramount	Public Elementary School	471	0.32
E-83	3	Wesley Gaines	7340 E. Jackson St, Paramount	Public Elementary School	448	0.76

Source: California Department of Education 2020

Montebello Unified School District

Montebello Unified School District serves the City of Bell Gardens. Table 3.14-22 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility. Their locations are shown on Figure 3.14-1.

Table 3.14-22. Montebello Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-87	4	Bell Gardens Elementary School	5620 Quinn St, Bell Gardens	Public Elementary School	965	0.20
E-88	4	Bell Gardens High School	6119 Agra St, Bell Gardens	Public High School	2,628	0.88
E-89	4	Bell Gardens Intermediate	5841 Live Oak St, Bell Gardens	Public Middle School	1,155	0.51
E-90	4	Cesar E. Chavez Elementary School	6139 Loveland St, Bell Gardens	Public Elementary School	916	0.86

Sources: California Department of Education 2020; Great Schools 2020.

Glendale Unified School District

Glendale Unified School District is composed of 32 schools serving more than 26,000 students in transitional kindergarten through 12th grade. Table 3.14-23 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility. Their locations are shown on Figure 3.14-1.

Table 3.14-23. Glendale Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-165	6	Benjamin Franklin Elementary School	1610 Lake St, Glendale	Public Elementary School	656	0.36
E-168	6	Cerritos Elementary School	120 E. Cerritos Ave, Glendale	Public Elementary School	452	0.95
E-169	6	College View	440 W. Lomita Ave, Glendale	Public High School	107	0.82
E-170	6	Columbus Elementary School	425 W. Milford St, Glendale	Public Elementary School	536	0.96
E-179	6	Eleanor J. Toll Middle School	700 Glenwood Rd, Glendale	Public Middle School	1,169	0.79
E-187	6	Herbert Hoover High School	651 Glenwood Rd, Glendale	Public High School	1,605	0.97
E-197	6	Mark Keppel Elementary School	730 Glenwood Rd, Glendale	Public Elementary School	1,028	0.84
E-203	6	Thomas Edison Elementary School	435 S. Pacific Ave, Glendale	Public Elementary School	907	0.63

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-204	6	Thomas Jefferson Elementary School	1540 Fifth St, Glendale	Public Elementary School	676	0.97

Sources: California Department of Education 2020; Great Schools 2020.

Burbank Unified School District

Table 3.14-24 lists schools near the LA River and provides the addresses, school type, and most recent enrollment information for each individual facility.

Table 3.14-24. Burbank Unified School District Schools in LA River Study Area

Map ID	Frame	School Name	Address	School Type	2018–2019 Enrollment	Distance from LA River (miles)
E-212	7	R. L. Stevenson Elementary School	3333 Oak St, Burbank	Public Elementary School	626	0.78
E-218	7	William McKinley Elementary School	349 W. Valencia Ave, Burbank	Public Elementary School	492	0.72

Source: Great Schools 2020.

Parks

The County's park system, including facilities that are owned, operated, and maintained by the County, totals approximately 70,000 acres. While there are 26 community regional parks and regional parks within the study area, over 80 percent of these parks are confined to Frames 5 through 9. The *Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment* final report (Los Angeles County Department of Parks and Recreation 2016) documents existing parks and recreation facilities in cities and unincorporated communities and uses these data to determine the scope, scale, and location of park need in the County. The needs assessment found there are many areas in the County with high park need and a lack of vacant land for new traditional parks. Per the *Los Angeles County General Plan*, 12 of 14 communities directly adjacent to the river do not meet the County's adopted goal of 4 acres of local parkland per 1,000 people.

For additional information regarding parks and recreational facilities, please see Section 3.15, *Recreation*, of this PEIR. Parks will be analyzed in this section only with respect to provision of public services.

Libraries

Los Angeles County Public Library

The Los Angeles County Public Library service area extends over 3,000 square miles. The libraries provide service to over 3.4 million residents living in unincorporated County areas and to residents of 49 of the 88 incorporated cities in the County (Los Angeles County Public Library 2020). Supplementing the 7.5-million-volume book collection, Los Angeles County Public Library also offers

magazines, newspapers, government publications, and many specialized materials including online databases. Table 3.14-25 shows the Los Angeles County Public Library locations within 1 mile of the LA River. Their locations, which correspond with the Map ID provided below, are shown on Figures 3.14-1 through 3.14-9.

Table 3.14-25. Los Angeles County Public Library Branches in LA River Study Area

Map ID	Frame	Library Name	Address	Distance from LA River (miles)
L-1	1	L A Law Library - Long Beach Branch	415 W. Ocean Blvd, Long Beach	0.50
L-6	3	Cudahy Library	5218 Santa Ana St., Cudahy	0.16
L-4	3	East Rancho Dominguez Library	4420 E Rose St, East Rancho Dominguez	0.37
L-5	3	Hollydale Library	12000 Garfield Ave, South Gate	0.51
L-7	4	Maywood Library	4323 Slauson Ave, Maywood	0.63
L-10	5	LA Law Library	301 W. 1st St, Los Angeles	0.96
L-8	5	Benjamin Franklin Branch	2200 E. 1st St, Los Angeles	0.96
L-9	5	Little Tokyo Branch	203 S. Los Angeles St, Los Angeles	0.79
L-11	5	Chinatown Branch	639 N. Hill St, Los Angeles	0.81
L-12	5	Biblioteca Del Pueblo De Lincoln Heights	2530 Workman St, Los Angeles	0.66
L-14	6	Silverlake Branch	2411 Glendale Blvd, Los Angeles	0.56
L-15	6	Atwater Village Branch	3379 Glendale Blvd, Los Angeles	0.56
L-13	6	Cypress Park Branch	1150 Cypress Ave, Los Angeles	0.27
L-18	8	Studio City Branch	12511 Moorpark St, Studio City	0.39
L-19	8	Sherman Oaks Martin Pollard Branch	14245 Moorpark St, Sherman Oaks	0.31
L-20	9	West Valley Regional Branch	19036 Vanowen St, Reseda	0.39
L-21	9	Canoga Park Branch	20939 Sherman Way, Los Angeles	0.41

Long Beach Public Library

The Long Beach Public Library operates 12 libraries across Long Beach, providing access to essential services and amenities. Table 3.14-26 and Figure 3.14-1 show Long Beach Public Library facilities near the LA River.

Table 3.14-26. Long Beach Public Library Branches in LA River Study Area

Map ID	Frame	Library Name	Address	Distance from LA River (miles)
L-2	1	Long Beach Public Library	101 Pacific Ave, Long Beach	0.64
L-3	1	Long Beach Public Library - Bret Harte Neighborhood Library	1595 W. Willow St, Long Beach	0.46

Burbank Public Library

The Burbank Public Library operates three branch libraries to provide services to residents within the City of Burbank. As shown in Table 3.14-27 and Figure 3.14-1, there is one Burbank Public Library branch within 1 mile of the LA River.

Table 3.14-27. Burbank Public Library Branches in LA River Study Area

Map ID	Frame	Library Name	Address	Distance from LA River (miles)
L-13	7	Buena Vista Branch Library	300 N Buena Vista St, Burbank	0.77

Glendale Library, Arts and Culture

The Glendale Library, Arts and Culture Department includes six neighborhood libraries to provide services to residents within the City of Glendale. As shown in Table 3.14-28 and Figure 3.14-1, there is one Glendale Library, Arts and Culture branch within 1 mile of the LA River.

Table 3.14-28. Glendale Library Branches in LA River Study Area

Map ID	Frame	Library Name	Address	Distance from LA River (miles)
L-12	6	Pacific Park Branch Library	501 N Pacific Ave, Glendale	0.50

3.14.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of public services in this PEIR.

Federal

There are no federal public services regulations relevant to the Project.

State

California State Fire and Building Codes

By State law, the State Fire Marshal (SFM) is responsible for coordination of the State's fire and life safety codes. The SFM must review the proposed regulations of State agencies that promote fire and life safety before the regulations can be submitted for approval. The SFM Code Development and Analysis Program staff regularly reviews Title 19 of the California Code of Regulations, titled Public Safety (which discusses fire safety standards), for relevancy, necessity, conflict, duplication, and overlap. They also implement legislative mandates to develop regulations related to fire and life safety involving the various occupancy classifications under the authority of the California SFM. This encompasses the actual administrative processing of regulations from concept to promulgation in the California Code of Regulations (California Building Standards Commission 2014).

Government Code 51175-89 directs the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas of fire hazard severity zones (FHSZ) within State Responsibility Areas (SRAs) and Local Responsibility Areas (LRAs). Within SRAs, fire hazard areas are designated as moderate, high, and very high FHSZ and are based on relevant factors such as fuels, terrain, and weather. These zones provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires (CAL FIRE 2007). Within LRAs, mapping of Very High Fire Hazard Severity Zones (VH FHSZ) is based on data and models of potential fuels over a 30- to 50-year time horizon and their associated expected fire behavior, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure (including firebrands) to buildings (CAL FIRE 2011).

In late 2005, and effective as of 2008, the California Building Commission adopted California Building Code Chapter 7A requiring new buildings in VH FHSZs to use ignition-resistant construction methods and materials. These new codes include provisions to improve the ignition resistance of buildings, especially from firebrands. The updated VH FHSZs are used by building officials for new building permits in LRAs. The updated zones will also be used to identify property whose owners must comply with natural hazards disclosure requirements at time of property sale and 100-foot defensible space clearance (CAL FIRE 2011).

Senate Bill 50, the Leroy F. Greene School Facilities Act of 1998

The Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50) was signed into law August 1998 and became fully effective with the approval of Proposition 1A on November 3, 1998. Senate Bill 50 describes three levels of fees that can be statutorily levied against a project for mitigation of impacts on school facilities and declares that payment of the specified development fees, where necessary, is full and complete mitigation for impacts on school facilities. It also prohibits a public agency from denying a legislative or adjudicative act on the basis of refusal to provide school facilities mitigation that exceeds the amounts authorized under the bill.

Regional

Los Angeles Municipal Code

Titles 13, 15, and 17 of the Los Angeles County Municipal Code contain ordinances related to preserving public health and safety. Title 13 contains regulations for public peace, morals, and

welfare. Title 15 includes regulations for vehicles and traffic. Title 17 contains provisions for parks, beaches, and other public areas.

Los Angeles County Fire Code

Title 32 of the Los Angeles County Municipal Code details the Los Angeles County Fire Code. The Los Angeles County Fire Code adopts by reference the 2016 Edition of the California Fire Code and portions of the 2015 Edition of the International Fire Code. The purpose of the Los Angeles County Fire Code is to ensure life safety and property protection from the hazards of fire, explosion, panic, or dangerous conditions in buildings, structures, and premises. It is also intended to provide a reasonable level of safety to firefighters and emergency responders during emergency operations. In addition to LACFD, the County Health Hazardous Materials Division and the County Forestry Division are authorized to enforce the Los Angeles County Fire Code. The Los Angeles County Fire Code includes ordinances pertaining to prevention of fires; suppression or extinguishment of dangerous or hazardous fires; storage, use, and handling of hazardous materials; fire alarm systems; fire-extinguishing equipment; fire escapes; elimination of fire hazards on land and in structures; means of egress; and brush clearance.

Los Angeles County General Plan

The *Los Angeles County General Plan* provides the policy framework for how and where the unincorporated County areas will grow through 2035 and establishes goals, policies, and programs to foster healthy, livable, and sustainable communities (Los Angeles County 2015). Table 3.14-29 describes goals and policies from the general plan that would be applicable to this PEIR.

Table 3.14-29. Los Angeles County General Plan Goals and Policies

Plan/Element	Goals and Policies
Parks and Recreation Element	**Goal P/R 1:** Enhanced active and passive park and recreation opportunities for all users. • **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible. • **Policy P/R 1.7:** Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities. • **Policy P/R 2.7:** Increase communication and partnerships with local law enforcement, neighborhood watch groups, and public agencies to improve safety in parks.
Safety Element	**Goal S 4:** Effective County emergency response management capabilities. • **Policy S 4.2:** Support County emergency providers in reaching their response time goals. • **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning. • **Policy S 4.5:** Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.
Public Services and Facilities Element	**Goal PS/F 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development. • **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.

Plan/Element	Goals and Policies
	• **Policy PS/F 1.3:** Ensure coordinated service provision through collaboration between County departments and service providers.

Source: Los Angeles County 2015.

Local

City of Long Beach (Frame 1 and Frame 2)

City of Long Beach General Plan

The *City of Long Beach General Plan* includes goals and policies within the Public Safety Element (City of Long Beach 2002) to meet the public service needs of the city. Table 3.14-30 describes goals and policies from the general plan that would be applicable to this PEIR.

Table 3.14-30. City of Long Beach Goals, Policies, and Objectives

Plan/Element	Goals, Policies, and Objectives
City of Long Beach General Plan	
Public Safety Element	**Development Goals** **Goal 9.** Encourage development that would augment efforts of other safety-related Departments of the City (i.e. design for adequate access for firefighting equipment and police surveillance). **Goal 11.** Critically evaluate proposed public or private actions, which may pose safety hazards to residents or visitors. **Protection Goals** **Goal 3.** Reduce public exposure to safety hazards. **Goal 10.** Provide the maximum feasible level of public safety protection services.

Sources: City of Long Beach 2002.

City of Los Angeles (Frames 1, 5, 6, 7, 8, and 9)

City of Los Angeles Fire Code

Article 7 of the Los Angeles Municipal Code contains the Los Angeles Fire Code, which adopts by reference portions of the 2016 California Fire Code and the 2015 International Fire Code. The Los Angeles Fire Code establishes requirements and practices to ensure life safety and property protection from the hazards of fire, explosion, panic, or dangerous conditions in buildings, structures, and premises. It is also intended to provide a reasonable level of safety to firefighters and emergency responders during emergency operations.

City of Los Angeles General Plan

The *City of Los Angeles General Plan* includes goals, objectives, policies, and programs within the Public Facilities and Services Element (1968)—including the Public Schools Plan (1968) and the Public Libraries Plan (1968)—the Framework Element (1995), and the Safety Element (1996a). Table 3.14-31 describes goals, policies, and objectives from the general plan that would be applicable to the *2020 LA River Master Plan*.

The City of Los Angeles also maintains 35 community plans, one for each of its Community Plan Areas. The community plans establish neighborhood-specific goals and implementation strategies to

achieve the broad objectives laid out in the *City of Los Angeles General Plan*. Together, the 35 community plans compose the general plan's Land Use Element, which plays an important role in maintaining the City of Los Angeles' public service needs. Table 3.14-31 presents the community plan policies that are applicable to public services as it pertains to the proposed *2020 LA River Master Plan*.

Table 3.14-31. City of Los Angeles General Plan Goals, Policies, and Objectives

Plan/Element	Goals, Policies, and Objectives
City of Los Angeles General Plan	
Framework Element (1995)	**Objective 9.13** Monitor and forecast demand for existing and projected police service and facilities. • **Policy 9.13.1** Monitor and report police statistics, as appropriate, and population projections for the purpose of evaluating police service based on existing and future needs. **Objective 9.14** Protect the public and provide adequate police services, facilities, equipment and personnel to meet existing and future needs. • **Policy 9.14.1** Work with the Police Department to maintain standards for the appropriate number of sworn police officers to serve the needs of residents, businesses, and industries. **Objective 9.16** Monitor and forecast demand for existing and projected fire facilities and service. • **Policy 9.16.1** Collect appropriate fire and population development statistics for the purpose of evaluating fire service needs based on existing and future conditions. **Objective 9.20** Adopt a citywide library service standard by the year 2000. • **Policy 9.20.1** Develop library standards dealing with the facilities' net floor area, the appropriate number of permanent collection books per resident, and their service radius. **Objective 9.21** Ensure library services for current and future residents and businesses. • **Policy 9.21.1** Seek additional resources to maintain and expand library services. • **Policy 9.21.2** Encourage the expansion of non-traditional library services, such as book mobiles and other book sharing strategies, where permanent facilities are not adequate. • **Policy 9.21.3** Encourage the inclusion of library facilities in mixed-use structures in community and regional centers, at transit stations, and in mixed-use boulevards.
Public Schools Plan (1968)	**Objective:** To make available a full range of public educational facilities from the elementary grades through the junior college level within the Los Angeles City area.
Safety Element (1996)	**Emergency Response Goal 2:** A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs. **Objective 2.1:** Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs. • **Policy 2.1.1 Coordination**. Coordinate program formulation and implementation between City agencies, adjacent jurisdictions and appropriate private and public entities so as to achieve, to the greatest extent feasible and within the resources available, the maximum mutual benefit with the greatest efficiency of funds and

Plan/Element	Goals, Policies, and Objectives
	staff. [All EOO response programs involving cooperative efforts between entities implement this policy.] • **Policy 2.1.5 Response**. Develop, implement and continue to improve the City's ability to respond to emergency events. [All EOO emergency response programs and all hazard mitigation and disaster recovery programs related to protecting and reestablishing communications and other infrastructure, service and governmental operations systems implement this policy.]
Public Libraries Plan (1968)	**Objective:** To develop standards for library service distances, size of site, and the number of parking spaces required for each type of library. **Policy PS/F 8.1:** Ensure a desired level of library service through coordinated land use and facilities planning.
City of Los Angeles Community Plans (General Plan Land Use Element)	
Canoga Park-Winnetka-Woodland Hills-West Hills (Frame 9)	**Goal 6** Public schools that provide a quality education for all of the city's children, including those with special needs, and adequate school facilities to serve every neighborhood in the city. **Objective 6-1** Work constructively with LAUSD to promote the siting and construction of adequate school facilities phased with growth. • **Policy 6-1.1** Explore creative alternatives for providing new school sites in the city, where appropriate. Program: develop plans to address issues of siting and joint use of facilities including strategies for expansion in transit-rich locations. Program: use the city's "annual growth report" to monitor locations for growth and potential new school sites. **Goal 7** Ensure adequate library facilities and services are provided to the area's residents. **Objective 7-1** To encourage the City's Library Department to provide adequate library service which responds to the needs of the community. • **Policy 7-1.1** Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian-oriented areas, transit stations, office buildings, and similarly accessible facilities. **Objective 8-1:** to provide adequate police facilities and personnel to correspond with population and service demands. • **Policy 8-1.1** coordinate with the police department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. ○ **Program:** a decision-maker should include a finding which considers the impact on police service demands of the project or land use plan change. This consultation with the police department is currently in effect for plan amendments which must be reviewed by the general plan advisory board which includes representation from the police department. **Goal 9** Protect the community through a comprehensive fire and life safety program. **Objective 9-1** Ensure that fire facilities and protective services are sufficient for the existing and future population and land uses. • **Policy 9-1.1** coordinate with the fire department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. ○ **Program:** require a decision maker to include a finding as to the impact on fire service demands for all plan amendments within five years of adoption.
Reseda – West Van Nuys (Frame 9)	**Goal 4** Public schools that provide a quality education for all of the city's children, including those with special needs, and adequate school facilities to serve every neighborhood in the city. **Objective 4-1** Work constructively with LAUSD to promote the siting and

Plan/Element	Goals, Policies, and Objectives
	construction of adequate school facilities phased with growth. **Goal 7** Ensure that adequate library facilities are provided for the community's residents. **Objective 7-1** To encourage the City's Library Department to provide adequate library service which responds to the needs of the community. • **Policy 7-1.1** Support construction of new libraries and the rehabilitation and expansion of the existing library as required to meet the changing needs of the community. • **Policy 7-1.2** Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian-oriented areas, office buildings, and similarly accessible facilities. **Goal 8** A community with adequate police facilities and services to protect the community's residents from criminal activity, reduce the incidence of crime and provide other necessary law enforcement services. **Objective 8-1:** To provide adequate police facilities and personnel to correspond with population and service demands in order to provide adequate police protection. • **Policy 8-1.1:** Consult with the police department as part of the review of new development projects and proposed land use changes to determine law enforcement needs and demands. ○ **Program:** The decision-maker shall include a finding as to the impact on police protection service demands of the proposed project or land use change. Currently, the police department is consulted with regard to the impacts of plan amendments on law enforcement needs and demands by the plan amendment review process of general plan advisory board, of which the police department is a member. **Goal 9** Protect the community through a comprehensive fire and life safety program. **Objective 9-1:** ensure that fire facilities and protective services are sufficient for the existing and future population and land uses. • **Policy 9-1.1** coordinate with the fire department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands. Program: Require a decision maker to include a finding as to the impact on fire service demands of the proposed project or land uses plan change.
Encino-Tarzana (Frames 8 and 9)	**Goal 6** Public schools that provide a quality education for all of the city's children, including those with special needs, and adequate school facilities to serve every neighborhood in the city. **Goal 7** Ensure adequate library facilities and services are provided to the area's residents by expanding existing facilities and/or locating new sites when funding becomes available. **Objective 7-1** To encourage the city's Library Department to provide adequa**te** library service which responds to the needs of the community. • **Policy 7-1.1** Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian oriented areas, office buildings, and similarly accessible facilities. **Goal 8** A community with adequate police facilities and services to protect the community's residents from criminal activity, reduce the incidence of crime and provide other necessary law enforcement services. **Objective 8-1:** To provide adequate police facilities and personnel to correspond with population and service demands. • **Policy 8-1.1** Coordinate with the police department as part of the review of significant development projects and general plan amendments affecting land use

Plan/Element	Goals, Policies, and Objectives
	to determine the impact on service demands. ○ **Program:** a decision maker should include a finding which considers the impact on police service demands of the project or land use plan change. **Objective 9-1** To protect the community through a comprehensive fire and life safety program. • **Policy 9-1.1** Coordinate with the fire department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. ○ **Program:** Require a decision maker to include a finding as to the impact on fire service demands for all plan amendments within 5 years of adoption.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass (Frames 7 and 8)	**Goal 6** appropriate locations and adequate facilities for schools to serve the need of existing and future population. **Objective 6-1** to site schools in locations complementary to existing land uses, recreational opportunities and community character. **Goal 7** Ensure that adequate library facilities are provided for the community's residents. **Objective 7-1** To encourage the City's Library Department to provide adequate library service which responds to the needs of the community. • **Policy 7-1.1** Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian-oriented areas, office buildings, and similarly accessible facilities. **Goal 8:** a community with adequate police facilities and services to protect the community's residents from criminal activity, reduce the incidence of crime and provide other necessary law enforcement services. **Objective 8-1:** to provide adequate police facilities and personnel to correspond with population and service demands. • **Policy 8-1.1:** coordinate with the police department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. **Goal 9:** protect the community through a comprehensive fire and life safety program. **Objective 9-1:** ensure that fire facilities and protective services are sufficient for the existing and future population and land uses. • **Policy 9-1.1:** coordinate with the fire department as part of the review of significant development projects and general Plan Amendments affecting land use to determine the impact on service demands. Program: Require a decision-maker to include a finding as to the impact on fire service demands for all plan amendments within 5 years of adoption.
Van Nuys - North Sherman Oaks (Frame 8)	**Goal 7** Public schools that provide a quality education for all of the city's children, including those with special needs, and adequate school facilities to serve every neighborhood in the city. **Goal 8** Ensure adequate library facilities and services are provided to the area's residents. **Objective 8-1** To assist the City Library Department in providing adequate library service which responds to the needs of the community. • **Policy 8-1.1** Support construction of new libraries and rehabilitation and expansion of existing libraries as required to meet the changing needs of the community. • **Policy 8-1.2** Encourage flexibility in siting libraries and similarly accessible facilities in mixed use projects and transit-oriented districts.

Plan/Element	Goals, Policies, and Objectives
	Goal 9 A community with adequate police facilities and services to provide for the public safety needs of the community. **Objective 9-1:** To provide adequate police facilities and personnel to correspond with population and service demands. • **Policy 9-1.1:** Coordinate with Police Department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands. ○ **Program:** A decision-maker should include a finding which considers the impact on police service demands of the proposed project or land use plan change. **Goal 10** Protect the community through a comprehensive fire and life safety program. **Objective 10-1** ensure that fire facilities and protection services are sufficient for the existing and future population and land uses. • **Policy 10-1.1** Coordinate with the Fire Department as part of the review of significant development projects and the General Plan Amendments affecting land use to determine the impact on service demands. ○ **Program:** Require a decision maker to include a finding as to the impact on fire service demands of the proposed project or land use plan change.
North Hollywood - Valley Village (Frames 7 and 8)	**Objective 5** To provide a basis for the location and programming of public facilities services and utilities and to coordinate the phasing of public facilities with private development by enlarging and expanding library facilities and services to better serve the community.
Hollywood (Frames 6 and 7)	**Policy:** Library facilities, procedures, programs and resources be continually evaluated and tailored to the social, economic and cultural needs of local residents.
Silver Lake-Echo Park-Elysian Valley (Frame 6)	**Goal 6** Public schools that provide a quality education for all of the city's children, including those with special needs, and adequate school facilities to serve every neighborhood in the city. **Goal 7** Ensure that adequate library facilities are provided for the community's residents. **Objective 7-1** To encourage the City's Library Department to provide adequate library service which responds to the needs of the community. • **Policy 7-1.1** Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian-oriented areas, office buildings, and similarly accessible facilities. **Goal 8** A community with adequate police facilities and services to protect the community's residents from criminal activity, reduce the incidence of crime and provide other necessary law enforcement services. **Objective 8-1** To provide adequate police facilities and personnel to correspond with population and service demands. • **Policy 8-1.1** Coordinate with the police department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. ○ **Program:** a decision-maker should include a finding which considers the impact on police service demands of the project or land use plan change. **Goal 9** Protect the community through a comprehensive fire and life safety program. **Objective 9-1:** Ensure that fire facilities and protective services are sufficient for the existing and future population and land uses.

Plan/Element	Goals, Policies, and Objectives
	• **Policy 9-1.1** Coordinate with the fire department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. ○ **Program:** Encourage decision-makers to include a finding as to the impact on fire service demands for all plan amendments within five years of adoption.
Northeast Los Angeles (Frames 5 and 6)	**Goal 7** Adequate library facilities and services for the area's residents. **Objective 7-1** To assist the City Library Department in providing adequate library service which responds to the needs of the community. • **Policy 7-1.1** Support construction of new libraries and rehabilitation and expansion of existing libraries as required to meet the changing needs of the community. • **Policy 7-1.2** Encourage flexibility in siting libraries and similarly accessible facilities in mixed-use projects and transit-oriented districts. • **Goal 6** Appropriate locations and adequate facilities for schools to serve the needs of existing and future population. **Goal 8** Adequate police facilities and services to provide for the public safety needs of the community **Objective 8-1:** To provide adequate police facilities and personnel to correspond with population and service demands. • **Policy 8-1.1** Coordinate with police department as part of the review of significant development projects and general plan amendments affecting land use to determine the impact on service demands. ○ **Program:** a decision-maker should include a finding which considers the impact on police service demands of the proposed project or land use plan change. **Goal 9** Adequate community protection through a comprehensive fire and life safety program. **Objective 9-1:** ensure that fire facilities and protective services are sufficient for the existing and future population and land uses. • **Policy 9-1.2** Review adequacy of fire stations.
Central City (Frame 5)	**Objective 5-1** To provide adequate police facilities and personnel to correspond with population and service demands in order to provide adequate police protection. • **Policy 5-1.1** Consult with the Police Department as part of the review of significant development projects and General Plan amendments affecting land use to determine the impact on law enforcement service demands. ○ **Program:** Require the decision-maker to include a finding which considers the impact on police service demands of the proposed project or land use plan change. Currently, the Police Department is consulted with regard to impacts of Plan amendment review process of the General Plan Advisory Board of which the Police Department is a member. • **Policy 5-1.2** Promote the establishment of Police facilities and programs which provide police protection at a neighborhood level. ○ **Program:** Coordinate with Business Improvement District security patrols. Continue and expand bike patrols, neighborhood beats, or other community-based policing appropriate to the District. **Objective 5-2** To inform developers, design professionals, and the public of the possible reduction of criminal opportunities when crime prevention principles are developed during the initial planning stages of a development. • **Policies 5-2.1** Promote the safety and security of personal property through proper design and effective use of the built environment which can lead to a

Plan/Element	Goals, Policies, and Objectives
	reduction in the incidence and fear of crime, reduction in calls for police service, and to an increase in the quality of life. ○ **Program:** Incorporate whenever possible the design guidelines contained in the City's Crime Prevention Through Environmental Design "Design Out Crime" Guidelines and published by the City Planning Department. **Objective 6.1** To ensure that fire facilities and protective services are sufficient for the existing and future population and land uses of Central City. • **Policies 6.1.1** Coordinate with the Fire Department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands. **Program:** Require the decision-maker to include a finding as to the impact on fire service demands of the proposed project or land use plan change. Currently, the Fire Department is consulted with respect to impacts of fire and life safety needs resulting from proposed subdivision of land or airspace. In addition, Plan amendments are also evaluated through the review process of the General plan Advisory Board of which the Fire Department is a member. **Objective 7-1** To site schools in locations complementary to existing land uses, recreational facilities, and community identity and as a re-use of historic structures. • **Policies 7-1.1** Encourage compatibility in school locations, site layout, and architectural design with adjacent land uses and community character and, as appropriate, use schools to create a logical buffer between different land uses. ○ **Program**: Require that the decision- maker involved in a discretionary review for a proposed school, adopt a finding which supports the application of this objective. Program: The Los Angeles Unified School District and the City's Department of Recreation and Parks should develop programs for shared use of school sites for recreation and park sites for education.
Central City North (Frame 5)	**Goal 6** Appropriate locations and adequate facilities for schools to serve the needs of the existing and future population. • **Policy 6-1.2** Encourage cooperation between the Los Angeles Unified School District, and the Los Angeles County Parks and Recreation Department to provide recreation facilities for the community. **Goal 7** Ensure that adequate library facilities are provided for the community's residents. **Objective 7-1** To encourage the City's Library Department to provide adequate library service which responds to the needs of the community. • **Policy 7-1.1** Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian-oriented areas, transit stations, office buildings, and similarly accessible facilities. **Goal 8** A community with adequate Police facilities and services to protect the Community's residents from criminal activity, reduce the incidence of crime and provide other necessary law enforcement services. **Objective 8-1** To provide adequate police facilities and personnel to correspond with population and service demands in order to provide adequate police protection. • **Policy 8-1.1** Consult with the Police Department as part of the review of new development projects and proposed land use changes to determine law enforcement needs and demands. ○ **Program:** Require a decision-maker to include a finding as to the impact on police protection service demands of the proposed project or land use change. Currently, the Police Department is consulted with regard to the impacts of plan amendments on law enforcement needs and demands by the plan amendment review process of General Plan Advisory Board, of which the Police

Plan/Element	Goals, Policies, and Objectives
	Department is a member. **Objective 8-2** To increase the community's and the Police Departments ability to minimize crime and provide adequate security. **Goal 9** Protect the community through a comprehensive fire and life safety program. **Objective 9-1** Ensure that fire facilities and fire protection services are sufficient for the existing and future population and land uses of Central City North. • **Policy 9-1.1** Coordinate with the Fire Department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands. ○ **Program:** Require a decision-maker to include a finding as to the impact on fire service demands for all plan amendments within five years of Plan adoption.
Boyle Heights (Frame 5)	Schools **Objectives** 1. To secure appropriate locations and adequate facilities for schools to serve the needs of the existing and future population. 2. To site schools in locations complementary to existing land uses and in locations which will enhance community identity. **Policies** • Encourage compatibility in school locations, site layout and architectural design with adjacent land uses and community character and, as appropriate, use schools to create a logical transition and buffer between different uses. Police Protection **Objectives** 1. To protect the community's residents from criminal activity, reduce the incidence of crime and provide other necessary services. 2. To provide adequate police facilities and personnel to correspond with population and service demands. **Policies** • Consult with Police Department as part of the review of significant development projects and major land use plan changes to determine service demands. **Program** • Require a decision maker to include a finding as to the impact on police service demands of the proposed project or land use plan change. Fire Protection **Objectives** 1. To protect the community through a comprehensive fire and life safety program. 2. To ensure that fire facilities and protective services are sufficient for the existing and future population and land uses. **Policies** • Consult with the Fire Department as part of the review of significant development projects and major land use plan changes to determine service demands. Libraries **Objectives** 1. To ensure adequate library facilities are provided to the area's residents. 2. To encourage the City Library Department to provide adequate library service which responds to the needs of the community. **Policies** • Support construction of new libraries and rehabilitation and expansion of existing libraries as required to meet the changing needs of the community.

Plan/Element	Goals, Policies, and Objectives
	• Encourage flexibility in siting libraries in mixed use projects, pedestrian oriented areas, transit-oriented districts, and similarly accessible facilities.
Southeast Los Angeles (Frame 5)	**Goal CF1:** Sufficient police facilities and services to provide for public safety needs. • **CF1.1** Neighborhood Level Police Protection. Maintain police facilities and services at a level that is adequate to protect the Southeast Los Angeles community. **Goal CF2:** Sufficient fire facilities to provide fire protection and emergency medical services to residents, visitors and businesses. • **CF2.3** Evaluate Land Use Impacts on Fire Service Demand. Support the review of significant development projects affecting land use by the Fire Department to determine the impacts on service demand. **Goal CF4:** Schools that are sited in locations complementary to existing land uses and community character. **Goal CF7:** Existing recreation and park facilities that are conserved, maintained, and better utilized to promote the recreational needs of the community. • **CF7.1** Maintain and Improve Existing Facilities. Preserve, maintain and enhance existing recreational facilities and park space. **Goal CF8**: Open space, parkland and recreational facilities that are attractive, safe and inviting for the enjoyment of all. • **CF8.3** Adequate Police Patrols. Coordinate between the Department of Recreation and Parks and the Police Department to ensure adequate police patrols and promote enforcement of codes restricting illegal activity.
Wilmington – Harbor City (Frame 3)	**4-1.1:** Preserve and improve the existing recreational facilities and park space. **4-2.1:** Flood control channels and other appropriate public lands should be considered for open space purposes. Bicycle trails in Wilmington Harbor City should connect these facilities with the local and regional system. **4-4.1:** Develop new neighborhood parks and new community parks to help offset Wilmington-Harbor City's parkland deficit for its current 1990 population and its projected year 2010 population. **4-4.4:** All park and recreation facilities should be designed, landscaped, and maintained to promote a high-quality recreational experience.

Sources: City of Los Angeles 1968, 1995, 1996a, 1996b, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 1999d, 2000, 2003, 2004, 2014, 2017b.

City of Carson (Frame 2)

City of Carson Fire Prevention Code

Section 3100 of the Carson Municipal Code constitutes the Fire Prevention Code of the City of Carson. This section adopts by reference Title 32 of the Los Angeles County Code, as amended and in effect on January 24, 2017. Title 32 of the Los Angeles County Code is an amended version of the 2016 California Fire Code. The Fire Prevention Code of the City of Carson echoes the Los Angeles County Code in its intent to ensure life safety and property protection from the hazards of fire, explosion, panic, or dangerous conditions in buildings, structures, and premises. It is also intended to provide a reasonable level of safety to firefighters and emergency responders during emergency operations.

City of Carson General Plan

The *Carson General Plan* contains two elements that are relevant to this section: the Safety Element (City of Carson 2004a) and the Parks, Recreation and Human Services Element (City of Carson 2004b). Table 3.14-32 presents the policies from these elements that are relevant to the proposed Project.

Table 3.14-32. City of Carson General Plan Goals, Policies, and Implementation Measures

Element	Goals, Policies, and Implementation Measures
Safety Element	**G SAF-5:** Minimize the public hazard from fire emergencies. • **SAF-5.1** Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service. • **SAF-5.2** Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes. • **SAF-6:** Strive to provide a safe place to live, work and play for Carson residents and visitors. • **SAF-6.1** Coordinate with the Sheriff's Department to provide sheriff service at standard levels of service. • **SAF-6.2** Continue to involve the Sheriff's Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes. To this end, promote the development of defensible spaces, or Crime Prevention Through Design (CPTD), through the use of site and building lighting, visual observation of open spaces, and secured areas.
Parks, Recreation and Human Services Element	**Goal P-11**: Improve library facilities and services for the citizens of Carson. • **P-11.1** Determine the projected need for library facilities and services. • **P-11.2** Investigate the most effective way to provide for the needs of the City. • **P-11.3** Implement plans for improved library service. • **P-12:** Encourage the school districts to provide enhanced school facilities to serve the youth of Carson. • **P-12.1** Work with the school districts to determine the projected need for school facilities and services.

Sources: City of Carson 2004a, 2004b.

City of Compton (Frames 2 and 3)

City of Compton Fire Prevention Code

Chapter XXII of the Compton Municipal Code contains the Fire Prevention Code of the City of Compton, which adopts the 2010 California Fire Code, including all provisions of the 2010 International Fire Code. The intent of the Fire Prevention Code of the City of Compton is to regulate and govern the safeguarding of life and property from fire and explosion hazards arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises.

City of Compton General Plan

The City of Compton *General Plan Vision 2010* (1991) contains the Land Use Element, Public Safety Element, and the Conservation/Open Space/Parks and Recreation Element. In 2011, the City of Compton began an update of the general plan to serve as a guide for development to 2030. The *Draft*

Compton General Plan 2030 (City of Compton 2011) contains the Public Safety Element. Applicable goals and policies from both plans are described in Table 3.14-33.

Table 3.14-33. City of Compton General Plan Goals and Policies

Plan/Element	Goals and Policies
City of Compton General Plan (1991)	
Land Use Element	**Goal 4.0:** Provide infrastructure systems and public services that adequately meet the demands created by land use policy. • **Policy 4.3 (L):** Involve the Fire and Police Departments in the review of development proposals to ensure that these agencies' needs and concerns are accounted for in project design.
Conservation/Open Space/Parks and Recreation Element	**Goal 4.0(L):** Develop and maintain a balanced system of open space, public parks, and recreational facilities.
Public Safety	**Goal 3.0(L):** Protect life and property in Compton from urban fires. • **Policy 3.3(L):** Maintain mutual aid agreements with surrounding jurisdictions for fire protection**.**
City of Compton Draft General Plan (2011)	
Public Safety Element	**Goal 3.** Protect life and property in Compton from urban fires with efficient fire protection services. • **Policy 3.4.** The City of Compton will maintain mutual aid agreements with surrounding jurisdictions for fire protection. **Goal 5**. Protect residents, visitors, and workers in an emergency and provide continuity of vital services and functions. • **Policy 5.5.** The City of Compton will assess the impacts of incremental increases in development density and traffic congestion on emergency response time, and ensure, through the design review process, that new development will not result in reduced emergency services below acceptable levels.

Sources: City of Compton 1991, 2011.

City of Cudahy (Frame 3)

City of Cudahy Fire Code

Chapter 8.08 of the Cudahy Municipal Code adopts the 2016 California Fire Code as amended by Title 32 of the 2017 Los Angeles County Fire Code. The purpose of the code is to provide minimum standards to safeguard the life, limb, health, property, and public welfare within the City of Cudahy.

City of Cudahy General Plan

The *Cudahy 2040 General Plan* (2018) includes goals and policies within the Safety Element and Economic Development Element. Table 3.14-34 presents the goals and policies that would be applicable to the proposed Project.

Table 3.14-34. City of Cudahy General Plan Goals and Policies

Element	Goals and Policies
Safety Element	**Goal SE-2:** Enhanced resources for public safety • **Policy SE 2.1:** Provide the highest possible quality of fire, police, and health

Element	Goals and Policies
	protection for all Cudahy residents. • **Policy SE 2.6:** Work with the Sheriff's Department and the Los Angeles County Fire Department to determine and meet community needs for services.
Economic Development Element	• **Policy ED-3.8:** Encourage the local Los Angeles County library facility to be equipped with the proper technologies and tools to support evolving methods of research and learning; support lifelong learning for adults through computer training, programs, and library collections; collection materials, programs, and information sources to respond to community needs, interests, and modern technologies; and to achieve and maintain a state-of-the-art children's library collection and facility.

Source: City of Cudahy 2018.

City of Downey (Frame 3)

City of Downey Fire Code

Chapter 3 of the Downey Municipal Code contains the Downey Fire Code, which adopts the 2016 California Fire Code based on the 2015 International Fire Code. The purpose of the Downey Fire Code is to prescribe regulations governing conditions hazardous to life and property from fire, hazardous conditions, or explosion. The Fire Prevention Division of the City of Downey currently enforces the 2016 California Fire Code and the Downey Municipal Code. The goal of the Fire Prevention Division is to protect the community from fire, life-safety, and environmental hazards by utilizing a balance of education and enforcement.

City of Downey General Plan

The *Downey Vision 2025 General Plan* (2005) includes goals, policies, and programs within the Safety Element and Open Space Element. Table 3.14-35 presents the goals and policies that would be applicable to the proposed Project.

Table 3.14-35. City of Downey General Plan Goals, Policies, and Programs

Element	Goals, Policies, and Programs

Safety Element	**Goal 5.3.** Maintain and improve fire protection services.
	• **Policy 5.3.1**. Provide adequate response to fire emergencies.
	  ○ **Program 5.3.1.1.** Identify and maintain an acceptable response time for fire emergency service calls.
	Goal 5.4 Promote the protection of life and property from criminal activities.
	• **Policy 5.4.1.** Prepare for adequate response to crime.
	  ○ **Program 5.4.1.2.** Maintain an acceptable response time for police emergency service calls.

Open Space Element	**Goal 7.2.** Optimize the use of established public parks to meet the needs of residents**.** • **Policy 7.2.2.** Upgrade existing park facilities. ○ **Program 7.2.2.1.** Maintain an adequate level of recreational staffing at park facilities.

Source: City of Downey 2005.

City of Lynwood (Frame 3)

City of Lynwood Fire Code

Chapter 12 of the Lynwood Municipal Code adopts the County of Los Angeles Fire Code, as adopted by the County as of the date of commencement of County fire service in the City of Lynwood. The Lynwood Municipal Code provides several amendments to the County of Los Angeles Fire Code containing regulations regarding fireworks, fire-extinguishing systems, and flammable and combustible liquids. Chapter 12 of the Lynwood Municipal Code also contains regulations concerning duties of the Bureau of Fire Prevention, zoning restrictions for the storage of hazardous materials, and information regarding permitting requirements.

City of Lynwood General Plan

The *City of Lynwood General Plan* (2003) includes goals, policies, and programs within the Infrastructure/Public Services Element, the Public Health and Safety Element, and the Open Space and Conservation Plan. Table 3.14-36 presents the goals and policies that would be applicable to the proposed Project.

Table 3.14-36. City of Lynwood General Plan Goals, Policies, and Implementation Measures

Element	Goals, Policies, and Implementation Measures
Infrastructure/ Public Services Element	**Goal SCH-1:** Provide appropriate school facilities to adequately serve the population. **Implementation Measure 1.0:** The City shall coordinate with the School District to review development proposals and to assess the need for additional facilities pursuant to the District Master Plan, as may be amended. **Goal PR-1:** Provide a variety of recreational opportunities to serve the needs of all segments of the population. • **Policy PR 1.4:** The City shall promote the development of park facilities that allow for both active and passive, as well as commercial recreation. **Implementation Measure 5.0:** The Sheriff Department shall be given the opportunity to comment on the location and design of all parks with regard to security and safety. **Goal LIB-1** Provide for sufficient and convenient library services for the community. • **Policy LIB-1** Increase Library Standards: The City shall work with Los Angeles County Library Services to meet minimum standards. • **Policy LIB-2** Develop Additional Library Facilities: The City shall plan for the development of additional library facilities.
Public Health and Safety Element	**Goal EP-1**: Provide planning, response, and recovery capabilities to deal with the range of natural and manmade disasters that could impact the community. • **Policy EP-1.2:** Ensure that the City's basic emergency plan meets current federal, state and local emergency requirements Education • **Policy EP-1.3:** Ensure that the City's emergency response teams are prepared to respond to the public's needs in any emergency situation
Open Space and Conservation Plan	• **Goal OS-1:** Ensure the public enjoyment of open space by providing open space recreational opportunities, preserving sensitive natural resources, and promoting the use of open space within public and private developments.

Source: City of Lynwood 2003.

City of Paramount (Frame 3)

City of Paramount Fire Code

Chapter 19 of the Paramount Municipal Code adopts Title 32 of the Los Angeles County Code as the Fire Code of the City of Paramount. No further information is provided.

City of Paramount General Plan

The *Paramount General Plan* (2007) includes policies within the Resources Management Element and the Health and Safety Element. Table 3.14-37 presents the policies that would be applicable to the proposed Project.

Table 3.14-37. City of Paramount General Plan Policies

Element	Policies
Resource Management Element	• **Policy 7.** The City of Paramount will maintain a recreation program that is responsive to the interests and needs of the City. • **Policy 8.** The City of Paramount will maintain existing park and recreation facilities in such a manner so as to protect the public's investment and facilitate their use. • **Policy 9.** The City of Paramount will maintain and improve the existing park facilities in the City for the benefit and enjoyment of the community.
Health and Safety Element	• **Policy 17.** The City of Paramount will continue to provide efficient fire protection services. ○ **Health and Safety Program:** The City will regularly review the adequacy of law enforcement services, fire protection, and emergency services in the City. This review effort will be a component of the annual budget review of the contract with the Departments, and the City will work with the County Sheriff's Department and the Fire Department to correct any identified deficiencies. Local law enforcement officials and Fire Department representatives will also continue their review of any proposed development plans. Annual reports concerning each Department will be submitted to the City Council for consideration.

Source: City of Paramount 2007.

City of South Gate (Frame 3)

City of South Gate Fire Code

Chapter 10.12 of the South Gate Municipal Code contains the City of South Gate Fire Code, which adopts the 1991 Edition of the Uniform Fire Code, including amendments set forth in Title 24 of the California Code of Regulations. The South Gate Municipal Code also includes regulations regarding fireworks and smoke detectors.

City of South Gate General Plan

The *South Gate General Plan 2035* (2009) includes policies within the Public Facilities and Services Element and the Community Design Element, which contain goals and policies to provide efficient and responsive public services to the city. Table 3.14-38 presents the policies that would be applicable to the proposed Project.

Table 3.14-38. City of South Gate General Plan Goals, Objectives, and Policies

Element	Goals, Objectives, and Policies
Public Facilities and Services Element	**Goal PF 1:** Excellent law enforcement and improved public safety **Objective PF 1.1:** Provide courteous, responsive and efficient police services. • **P.3** The Police Department will maintain adequate police staffing, performance levels and facilities to serve the existing South Gate population as well as its future growth. **Objective PF 1.2:** Promote coordination between land-use planning and urban design, and law enforcement • **P.3** New development in the City will be required to mitigate project-related impacts to police services. Individual development projects will pay any fees required by a Public Safety Impact Fee, once established by the City. **Goal PF 2:** Increased fire safety and high-quality Emergency Medical Services (EMS) **Objective PF 2.1:** Provide professional, efficient fire protection and EMS services. • **P.1** The City should work with the County of Los Angeles Fire Department to continuously improve the performance and efficiency of fire protection services for the City of South Gate. • **P.7** The City will work with the Fire Department to proactively plan for increases in population and employment growth and changes in the use and types of buildings in South Gate. **Objective PF 2.2:** Ensure that all new development includes adequate provision for fire safety. • **P.3** All new development will provide adequate access for fire service vehicles and personnel. • **P.4** While seeking to maintain access, fire safety, and adequate response times, the City and the Fire Department will work together to develop creative solutions that allow for mixed-use and compact development, pedestrian-friendly streets, and other elements of a walkable, bikeable, and safe city. **Goal PF 3:** Enhance the community with an educational infrastructure that offers diverse, high-quality educational opportunities to residents of all ages, and enhances community. **Objective PF 3.1:** Ensure all residents have access to high-quality education. • **P.2** The City will work with the LAUSD to anticipate potential increases in the City's population and the impact on school enrollment **Objective CD 2.5:** Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations. **Objective CD 2.6:** Ensure that existing and future development is adequately serviced by infrastructure and public services. • **P.2** New development should pay its fair share of required improvements to public facilities and services. **Objective CD 2.5:** Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations. **Objective CD 2.6:** Ensure that existing and future development is adequately serviced by infrastructure and public services. • **P.2** New development should pay its fair share of required improvements to public facilities and services.
Community Design Element	**Objective CD 2.5:** Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations.

Element	Goals, Objectives, and Policies
	Objective CD 2.6: Ensure that existing and future development is adequately serviced by infrastructure and public services. • **P.2** New development should pay its fair share of required improvements to public facilities and services. **Objective CD 2.5:** Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations. **Objective CD 2.6:** Ensure that existing and future development is adequately serviced by infrastructure and public services. • **P.2** New development should pay its fair share of required improvements to public facilities and services.

Source: City of South Gate 2009.

City of Bell (Frame 4)

City of Bell Fire Code

Chapter 8.16 of the Bell Municipal Code adopts by reference the 2016 Edition of the California Fire Code, otherwise known as the 2017 County of Los Angeles Fire Code, based on the 2015 International Fire Code. The City of Bell Fire Code allows the fire chief to identify hazards and determine applicability of the code. The City of Bell Fire Code also contains modifications to the 1985 Edition of the Uniform Fire Code.

City of Bell General Plan

The *City of Bell 2030 General Plan* (2018) includes policies within the Land Use Element and the Health and Safety Element, which focus on the city's public service needs. Table 3.14-39 presents the policies that would be applicable to the proposed Project.

Table 3.14-39. City of Bell General Plan Issues and Policies

Element	Issues and Policies
Land Use Element	• **Policy 10.** Expand public facilities to meet community needs and demands. • **Policy 20.** Review City services and facilities to ensure quality levels of service and cost effectiveness.
Health and Safety Element	**Issue:** To ensure that sufficient fire department resources are provided to address any potential emergency. • **Policy 11.** The City of Bell shall establish and enforce standards that are designed to reduce the level of risk. The City shall work with the Los Angeles County Fire Department and other public agencies to discuss both risk and emergency preparation. Finally, the City shall work with the Fire Department and the larger community to review, and if necessary, develop new standards.

Source: City of Bell 2018.

City of Bell Gardens (Frame 4)

City of Bell Gardens Fire Code

The City of Bell Gardens adopts the 2019 California Fire Code, as amended by Title 32 of the Los Angeles County Fire Code. The 2019 California Fire Code provides minimum requirements and standards governing the creation and maintenance of conditions dangerous to life and property due

to hazards of fire and explosions. The City of Bell Gardens Fire Code also contains sections regarding enforcement and penalty.

City of Bell Gardens General Plan

The *City of Bell Gardens General Plan 2010* (1995) includes policies within the Safety Element and the Open Space and Recreation Element, which outline a strategy to meet the city's public service needs. Table 3.14-40 presents the policies that would be applicable to the proposed Project.

Table 3.14-40. City of Bell Gardens General Plan Policies

Element	Policies
Safety Element	• **Policy 1.** The City of Bell Gardens shall provide for the safety of the community through physical planning and maintaining an adequate level of police, fire, and emergency services facilities.
Open Space and Recreation Element	• **Policy 1.** The City of Bell Gardens shall continue to protect and maintain existing open space used for recreation and shall explore opportunities for providing additional park land.

Source: City of Bell Gardens 1995.

City of Commerce (Frame 4)

City of Commerce Fire Code

Chapter 16.04 of the Commerce Municipal Code contains the City of Commerce Fire Prevention Code, which adopts by reference the entirety of the 2017 Edition of the Los Angeles County Fire Code, inclusive of the 2016 Edition of the California Fire Code. The City of Commerce Fire Prevention Code includes an amendment regarding fire lanes and contains information regarding preexisting occupancies, and enforcement.

City of Commerce General Plan

The *City of Commerce 2020 General Plan* (2008) includes the Safety Element, which contains policies and programs related to emergency response times and public safety demands. Table 3.14-41 presents the policies that would be applicable to the proposed Project.

Table 3.14-41. City of Commerce General Plan Policies

Element	Policies
Safety Element	• **Safety Policy 1.1.** The city of Commerce will strive to respond to all in-city emergency incidents within a five-minute or less response time. • **Safety Policy 2.1.** The city of Commerce will ensure that law enforcement services continue to meet the public safety needs of the community.

Source: City of Commerce 2008.

City of Huntington Park (Frame 4)

City of Huntington Park Fire Code

Chapter 4-5.01 of the Huntington Park Municipal Code adopts County of Los Angeles Ordinance No. 2010-0060, which amends County Code Title 32, Fire Code, which adopts by reference the 2010 Edition of the California Fire Code. LACFD is responsible for enforcement for the City of Huntington

Park. The City of Huntington Park Fire Code includes zoning restrictions for the storage of hazardous materials.

City of Huntington Park General Plan

The *City of Huntington Park General Plan* (1991) includes the Public Facilities Element, which provides goals and policies related to public services. The *City of Huntington Park 2030 General Plan* (2017) includes the Land Use and Community Development Element, the Resource Management Element, and the Health and Safety Element. Table 3.14-42 presents the policies that would be applicable to the proposed Project.

Table 3.14-42. City of Huntington Park General Plan Goals and Policies

Plan/Element	Goals and Policies
City of Huntington Park General Plan (1991)	
Public Facilities Element	**Goal 1.0:** Maintain desirable levels of police, fire, and emergency medical services in the City. • **Policy 1.1:** Periodically evaluate services and service criteria to ensure the City has adequate police, fire, and emergency medical services. • **Policy 1.3:** Coordinate with the County of Los Angeles Fire Department for the continued provision of adequate fire protection. **Goal 2.0:** Provide efficient public services and utilities through interagency coordination and cooperation. • **Policy 2.1:** Notify other agencies of proposed actions and programs to permit coordination and cooperation**.** **Goal 3.0:** Provide opportunities for a quality education to all residents. **Goal 4.0:** Cooperate with the County of Los Angeles in maintaining adequate library facilities to serve City residents.
City of Huntington Park Draft General Plan (2017)	
Land Use and Community Development Element	• **Policy 21.** The City of Huntington Park shall require that new development(s) pay their "Fair Share" for the provision of the necessary infrastructure and other support services that will be required to serve the development. • **Policy 22.** The City of Huntington Park shall work with the Huntington Park Police Department and the Los Angeles County Fire Department to ensure that sufficient resources continue to be available to meet the existing and projected service demands. • **Policy 28.** The City of Huntington Park shall work with the library system to identify the service needs.
Health and Safety Element	• **Policy 10.** The City of Huntington Park shall maintain mutual aid agreements with surrounding jurisdictions for fire protection.

Sources: City of Huntington Park 1991, 2017.

City of Maywood (Frame 4)

City of Maywood Uniform Fire Code

Chapter 4-2.10 of the Maywood Municipal Code adopts the County's Ordinance No. 2014-0014, which amends the County Code, Title 32—Fire Code, to adopt by reference the 2013 Edition of the California Fire Code, a portion of the 2013 California Fire Code, and the 2012 Edition of the International Fire Code. Ordinance No. 2014-0014 is the Uniform Fire Code of the City of Maywood, and the city is included in references to unincorporated County areas in the Uniform Fire Code. The

City of Maywood Uniform Fire Code also includes information regarding penalties and fireworks regulations.

City of Maywood General Plan

The *City of Maywood General Plan* (2008) includes the Safety Element and the Land Use Element, which contain policies and programs related to public services. Table 3.14-43 presents the goals and policies that would be applicable to the proposed Project.

Table 3.14-43. City of Maywood General Plan Goals and Policies

Element	Goals and Policies
Safety Element	**Goal 1:** Protect the lives, health, and property of the residents of the City of Maywood from flooding, fire, and geologic hazards. • **Policy 1.2:** Strengthen existing safety policies, codes, and ordinances as required. • **Policy 1.5:** Review and improve emergency preparedness and response capabilities in the city.
Land Use Element	• **Goal 4:** Allow new development when public facilities and services have sufficient capacity to serve those uses. • **Policy 4.2:** Evaluate the impact of development proposals on public facilities and services.

Source: City of Maywood 2008.

City of Vernon (Frame 4)

City of Vernon Fire Code

Per Section 7.10 of the Vernon Municipal Code, the City of Vernon adopted the 2019 California Fire Code, as amended by Title 32 of the Los Angeles County Fire Code. The 2019 California Fire Code provides minimum requirements and standards governing the creation and maintenance of conditions dangerous to life and property due to hazards of fire and explosions.

City of Vernon General Plan

The *City of Vernon General Plan* (2007) includes the Safety Element, which establishes City of Vernon policies intended to assess public service needs in the city. Table 3.14-44 presents the policies that would be applicable to the proposed Project.

Table 3.14-44. City of Vernon General Plan Goals and Policies

Element	Goals and Policies
Safety Element	• **Policy S-1.2:** Cooperate with other jurisdictions in the southeast area of Los Angeles County to maintain an up-to-date emergency response system for the region. • **Policy S-3.5:** Periodically review the City's emergency service equipment to determine if it is adequate to meet the needs of changing land uses and development types. • **Policy S-4.2:** Review the design of new development projects to consider public safety and issues such as emergency access, defensible space, and overall safety.

Source: City of Vernon 2007.

City of Glendale (Frame 6)

City of Glendale Fire Code

The City of Glendale adopted the 2019 California Fire Code, as amended by Title 32 of the Los Angeles County Fire Code. The 2019 California Fire Code provides minimum requirements and standards governing the creation and maintenance of conditions dangerous to life and property due to hazards of fire and explosions.

City of Glendale General Plan

The City of Glendale General Plan includes the Safety Element (2003), Open Space and Conservation Element (1993), and Community Facilities Element (1975), all of which establish City of Glendale policies to guide public service needs in the city. Table 3.14-45 presents the policies that would be applicable to the proposed Project.

Table 3.14-45. City of Glendale General Plan Goals and Policies

Element	Goals and Policies
Safety Element	• **Policy 4-1:** The City shall ensure to the extent possible that fire services, such as fire equipment, infrastructure, and response times, are adequate for all sections of the City.
Open Space and Conservation Element	• **Implementation Program:** Review development plans to ensure the safety of residents through adequate emergency vehicle access, the spacing of hydrants and the availability of water pressure.
Community Facilities Element	• **Policy:** Preserve the high standards of library facilities in their educational and recreational role.

Source: City of Glendale 1975, 1993, 2003.

City of Burbank (Frame 7)

City of Burbank Fire Code

Article 9-1-9 of the Burbank Municipal Code adopts Part 9 of Title 24 of the California Code of Regulations, also known as the California Fire Code, which is part of the California Building Standards Code, 2019 Edition as the Fire Code for the City of Burbank. The City of Burbank Fire Code includes justification for numerous additional amendments that are required due to Burbank's unique climatic, geographical, and topographical conditions. These extensive additional regulations include items such as helicopter operations, parade floats, hazardous materials storage, premise maintenance, open burning, fire sprinklers, occupancies, and permitting requirements. Additionally, Section 9-1-9-304.1.2.1 establishes the Burbank VH FHSZ and Section 9-1-9-304.1.2.2 lists fire hazard reduction measures required in this zone.

City of Burbank General Plan

The *Burbank2035 General Plan* (2013) includes the Land Use Element, which contains policies related to open space land use, and the Safety Element, which contains policies related to public service demands and response times. Table 3.14-46 presents the policies that would be applicable to the proposed Project.

Table 3.14-46. City of Burbank General Plan Policies

Element	Policies
Land Use Element	**Policy 2.4** Provide public facilities and services in the most equitable and efficient manner possible.
Safety Element	**Policy 2.1** Maintain an average police response time of less than 4 minutes to emergency calls for service. **Policy 2.2** Ensure adequate staffing, facilities, equipment, technology, and funding for the Burbank Police Department to meet existing and projected service demands and response times. **Policy 4.1** Maintain a maximum response time of 5 minutes for fire suppression services. Require new development to ensure that fire response times and service standards are maintained. **Policy 4.2** Provide adequate staffing, equipment, technology, and funding for the Burbank Fire Department to meet existing and projected service demands and response times.

Source: City of Burbank 2013.

3.14.3 Impact Analysis

3.14.3.1 Methods

This analysis qualitatively evaluates the impacts of the proposed Project on existing public services as a result of both construction and operations of the proposed Project, which will include a range of recreational features. As described below, this includes Typical Projects (Common Elements and Multi-Use Trails and Access), kit of parts (KOP) Categories 1 through 6, and overall implementation of the *2020 LA River Master Plan*. The analysis determines if there is the potential for impacts on existing public services in the 18 jurisdictions (17 cities and unincorporated County areas) in the project study area during construction and operation. Data from the public service providers and the 18 jurisdictions' respective general plans were used to evaluate impacts on public services from implementation of the *2020 LA River Master Plan*.

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately.

3.14.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.14(a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Fire protection

Police protection

Schools

Parks[4]

Other Public Facilities

3.14.3.3 Impacts and Mitigation Measures

Impact 3.14(a): Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Fire protection?
Police protection?
Schools?
Parks?
Other Public Facilities?
Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Police Protection

Construction activities, including staging areas for construction equipment, would be located primarily in the LA River right-of-way (ROW) but could result in longer response times to areas surrounding the project site during construction. Construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would last approximately 10 and 20 months, respectively, and would generally be completed over phases to minimize disruption to existing police services. It is anticipated that existing police operations would be able to accommodate the construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects. As shown in Section 3.14.2.1, existing service ratios and response times were not publicly available for every service provider. However, it is assumed that the presence of 15 to 20 construction workers on a given site would not result in substantially increased demand for police protection services. As part of the construction permitting process, the Typical Project proponent would

[4] Parks are discussed in relation to the potential need for new facilities, the construction of which could cause a significant environmental effect. Other impacts on parks are discussed in Section 3.15, *Recreation.*

coordinate road closures or detours with the local police departments to ensure that access would not be restricted. Construction workers would be required to park in designated areas so as not to block access. While construction could temporarily increase demand for police protection services, it is unlikely that it would result in the need for new or altered police protection facilities to provide police protection services during construction of Typical Projects. Therefore, impacts would be less than significant.

Fire Protection

Construction activities, including staging areas for construction equipment, would be located primarily in the LA River ROW but could result in longer response times to areas surrounding the project site during construction. Construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would last approximately 10 and 20 months, respectively, and would generally be completed over phases to minimize disruption to existing fire services. It is anticipated that existing fire operations would be able to accommodate the construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects. As shown in Section 3.14.2.1, existing service ratios and response times were not publicly available for every service provider. However, the presence of 15 to 20 construction workers on a given site would not result in substantially increased demand for fire protection services. As part of the construction permitting process, the Typical Project proponent would coordinate road closures or detours with the local fire departments to ensure that access would not be restricted. Construction workers would be required to park in designated areas so as not to block access. While construction could temporarily increase demand for fire protection services, it is unlikely that it would result in the need for new or altered fire protection facilities to provide fire protection services during construction of Typical Projects. Therefore, impacts would be less than significant.

Schools

Construction workers are anticipated to come from the existing pool of workers in the Los Angeles region; it is not anticipated workers would move to the area to work on development projects associated with the construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects. Construction workers would not enter into the local school system. Therefore, Typical Projects would not result in an increased demand on public school services. As such, impacts would be less than significant.

Parks

Existing parks, if adjacent to a Typical Project location, could have restricted access during construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects. Construction would last 10 and 20 months, respectively, and would generally be completed in phases to minimize adverse physical impacts on surrounding parks. Staging would be located in the LA River ROW and would not affect adjacent land uses. Although construction of the Typical Projects could require temporary closures of existing access along the river, other access would be made available at different recreational sites and temporary closures would be minimized As construction impacts would be temporary and would occur totally within the ROW, construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would not result in the need for additional parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios for parks. Impacts would be less than significant.

For additional information regarding potential construction-related impacts on parks and recreational facilities, please see Section 3.15, *Recreation*, of this PEIR.

Other Public Facilities

Construction workers are anticipated to come from the existing pool of workers in the Los Angeles region; it is not anticipated workers would move to the area to work on construction of Typical Projects. Therefore, construction associated with Typical Projects would not result in an increase in the population related to construction workers that would result in an increased demand on other public facilities, such as libraries. As Typical Projects would not increase population during construction, they would not require new or physically altered government facilities in order to maintain acceptable service ratios for other public facilities, such as libraries. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Police Protection

The Common Elements Typical Project, once constructed and operational, could attract up to 500 users on a daily basis, and the Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 daily visitors, which may result in additional demand for police protection services. The Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be constructed in accordance with current building and safety ordinances and codes, including all applicable County and local jurisdiction code requirements related to construction and access. Additionally, proposed development under the Typical Projects would be generally consistent with current uses. Police services are based on the communities' needs as local departments conduct ongoing evaluations, as well as annual budgeting processes. If ongoing evaluations indicate increased response time, then the acquisition of equipment, personnel, and new stations is considered.

As part of the standard project approval process, police departments within the jurisdictions of the 2-mile-wide study area (as described in Section 3.14.2, *Setting*) would review and approve project plans to ensure compliance with applicable codes and standards, including access and facility requirements. Police departments with jurisdiction over the Typical Projects, once specific locations are identified within the study area, would also review and approve plans to ensure acceptable service ratios and response times would be maintained, thereby minimizing the risk of increased operational emergency services and impacts on performance objectives. An increase in users could result in an increased demand on police protection services because a higher density of visitors to the area could result in more incidents requiring police intervention. However, up to 500 visitors for the Common Elements Typical Project or 1,000 visitors for the Multi-Use Trails and Access Gateways

Typical Project at a given location would be dispersed throughout the day and would not be expected to materially affect service ratios for police protection. While services ratios and response times were not publicly available for every service provider in the study area, police staffing ratios are based on a per-1,000-permanent-residents ratio, and the increase in visitors to the Typical Projects would not be expected to be substantial so as to affect that ratio. In addition, most of the visitors to the Typical Projects would be existing residents, not new residents to the area. Accordingly, it is not expected that operation of the Typical Projects would require new or physically altered government facilities in order to maintain acceptable service ratios for police protection services, the construction of which could cause significant environmental impacts. Impacts would be less than significant.

Fire Protection

The Common Elements Typical Project, once constructed and operational, could attract up to 500 users on a daily basis, and the Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 daily visitors, which may result in additional demand for fire protection services. The Common Elements and Multi-Use Trails and Access Gateways Typical Projects would be constructed in accordance with current building and fire/life/safety ordinances and codes, including all applicable County and local jurisdiction code requirements related to construction, access, water mains, fire flows, and hydrants. Additionally, proposed development under the Typical Projects would be generally consistent with current uses. Fire services are based on the communities' needs as local departments conduct ongoing evaluations, as well as annual budgeting processes. If ongoing evaluations indicate increased response time, then the acquisition of equipment, personnel, and new stations is considered.

As part of the standard project approval process, fire departments within the jurisdictions of the 2-mile-wide study area (as described in Section 3.14.2, *Setting*) would review and approve project plans to ensure compliance with applicable fire codes and standards, including access and facility requirements. Fire departments with jurisdiction over the Typical Projects, once specific locations are identified within the study area, would also review and approve plans to ensure acceptable service ratios and response times would be maintained, thereby minimizing the risk of increased operational fire hazards and emergency services, and impacts on performance objectives. An increase in users could result in an increased demand on fire protection services because a higher density of visitors to the area could result in more incidents requiring fire intervention. However, up to 500 visitors for the Common Elements Typical Project or 1,000 visitors for the Multi-Use Trails and Access Gateways Typical Project at a given location would be dispersed throughout the day and would not be expected to materially affect service ratios for fire protection. While services ratios and response times were not publicly available for every service provider in the study area, fire staffing ratios are based on a per-1,000-permanent-residents ratio, and the increase in visitors to the Typical Projects would not be expected to be substantial so as to affect that ratio. In addition, most of the visitors to the Typical Projects would be existing residents, not new residents to the area. Accordingly, it is not expected that operation of the Typical Projects would require new or physically altered government facilities in order to maintain acceptable service ratios for fire protection services, the construction of which could cause significant environmental impacts. Impacts would be less than significant.

Schools

Operation of the Typical Projects would not include residential development, so there would not be new permanent residents in the project study area that would increase demand on schools. The Typical Projects would not result in significant environmental impacts from the construction of new or physically altered government facilities in order to maintain acceptable service ratios for schools. Impacts would be less than significant.

Parks

The Common Elements Typical Project would provide new and enhanced recreational facilities and opportunities for gathering spaces for the communities and neighborhoods along the river's extent. Additionally, the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would not include residential development, so there would not be new permanent residents in the study area that would increase demand on parks during operation. The Typical Projects would not result in significant environmental impacts from the construction of new or physically altered government facilities in order to maintain acceptable service ratios for parks. Impacts would be less than significant.

For additional information regarding potential operations-related impacts on parks and recreational facilities, please see Section 3.15, *Recreation*.

Other Public Facilities

Operation of the Typical Projects would not include residential development, so there would not be new permanent residents in the project study area that would increase demand on other public facilities. The Typical Projects would not result in significant environmental impacts from the construction of new or physically altered government facilities in order to maintain acceptable service ratios for other public facilities, such as libraries. Impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with the KOP categories discussed below. Therefore, for potential impacts of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, see above. The impact discussion below focuses on specific KOP categories only.

Construction (KOP Categories 1 through 6)

Police Protection

The six KOP categories include a variety of construction activities, ranging from trail modifications to development of facilities, habitat corridors, channel access ramps, channel modifications, off-channel land development, floodplain reclamation, and recreational amenities such as amphitheaters, crossings, and platforms. The presence of some construction workers at a given subsequent project location compared to the overall population would not substantially increase demand for police protection services; however, temporary lane closures and construction-related traffic could delay or obstruct the movement of emergency vehicles. Considering that the details on construction scenarios for subsequent projects under the six KOP categories are not known yet, including duration, number of construction workers, and phasing, along with the specific size, extent, and location of the KOP categories, there may be localized road closures and detours that could increase response times for emergency services. Therefore, impacts would be potentially significant.

Fire Protection

The six KOP categories include a variety of construction activities, ranging from trail modifications to development of facilities, habitat corridors, channel access ramps, channel modifications, off-channel land development, floodplain reclamation, and recreational amenities such as amphitheaters, crossings, and platforms. The presence of some construction workers at a given subsequent project location compared to the overall population would not substantially increase demand for fire protection services; however, temporary lane closures and construction-related traffic could delay or obstruct the movement of emergency vehicles. Considering that the details on construction scenarios for subsequent projects under the six KOP categories are not known yet, including duration, number of construction workers, and phasing, along with the specific size, extent, and location of the KOP categories, there may be localized road closures and detours that could increase response times for emergency services. Therefore, impacts would be potentially significant.

Schools

Construction workers are anticipated to come from the existing pool of workers in the Los Angeles region; it is not anticipated workers would move to the area to work on development projects associated with the construction of KOP categories. Therefore, construction associated with KOP categories would not result in an increase in the population related to construction workers that would result in an increased demand on public school services. As the proposed Project would not increase population during construction, it would not require new or physically altered government facilities in order to maintain acceptable service ratios for schools. Impacts would be less than significant.

Parks

Construction durations for subsequent projects under KOP categories 1 through 6 are not known. Staging for some projects could be located in the LA River ROW or in various locations in the 2-mile-wide study area, which could include existing park facilities. Construction of the KOP categories 1 through 6 could require temporary closures of existing access along the river. Other access would be made available at different recreational sites and temporary closures would be minimized.

Construction of KOP categories would not result in the need for additional parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios for parks. Impacts would be less than significant.

For additional information regarding potential construction-related impacts on parks and recreational facilities, please see Section 3.15, *Recreation*, of this PEIR.

Other Public Facilities

Construction workers are anticipated to come from the existing pool of workers in the Los Angeles region; it is not anticipated workers would move to the area to work on development projects associated with the construction of KOP categories. Therefore, construction associated with KOP categories would not result in an increase in the population related to construction workers that would result in an increased demand on other public facilities, such as libraries. As the proposed Project would not increase population during construction, it would not require new or physically altered government facilities in order to maintain acceptable service ratios for other public facilities, such as libraries. Impacts would be less than significant.

Impact Determination

Impacts would be potentially significant for fire and police protection.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations (KOP Categories 1 through 6)

Police Protection

The majority of the KOP categories include recreational components or provide opportunities for recreational uses such as parks and trails, farmer's markets, soccer fields, and amphitheaters. Operation of KOP Categories 1 through 5 could result in a substantial increase of daily users such that there could be an increase in demand on police protection services. A higher density of visitors to the area could result in more incidents that could require police intervention. Most of the visitors to the KOP categories that include recreational amenities are expected to be current residents of the service area of the providers within or in the vicinity of the study area.

KOP Category 6 could include affordable housing that could increase resident populations; however, affordable housing that could occur under the KOP category would accommodate growth that is already projected in local and regional plans. Existing residents and the potential for growth in population are accounted for in regional growth plans, such as the Southern California Association of Governments' (SCAG's) SoCal Connect, which is based on individual jurisdictions' growth projections. All police services consider staffing and facility needs on an ongoing basis and during

the annual budgeting process; they also account for projected population growth. However, increases in the number of visitors and residents could result in an increase in the number of incidents requiring police response, which could affect police provider service ratios and response times and result in a need for additional law enforcement and emergency staff. This could result in a need for increased patrols of new bicycle facilities or amenities under the KOP categories. KOP categories could also be situated in areas that have coverage issues for police protection that have not yet been addressed. Because the size, extent, and location of the projects are unknown, it is anticipated that impacts would be potentially significant.

Fire Protection

The majority of the KOP categories include recreational components or provide opportunities for recreational uses such as parks and trails, farmer's markets, soccer fields, and amphitheaters. Operation of KOP Categories 1 through 5 could result in a substantial increase of daily users such that there could be an increase in demand on fire protection services. A higher density of visitors to the area could result in more accidental fire incidents. Most of the visitors to the KOP categories that include recreational amenities are expected to be current residents of the service area of the providers within or in the vicinity of the study area.

KOP Category 6 could include affordable housing that could increase resident populations; however, affordable housing that could occur under the KOP category would accommodate growth that is already projected in local and regional plans. Existing residents and the potential for growth in population are accounted for in regional growth plans, such as SCAG's SoCal Connect, which is based on individual jurisdictions' growth projections. All fire services consider staffing and facility needs on an ongoing basis and during the annual budgeting process; they also account for projected population growth. However, increases in the number of visitors and residents could result in an increase in the number of incidents requiring fire response, which could affect fire provider service ratios and response times and result in a need for additional emergency staff. This could result in a need for increased patrols of new bicycle facilities or amenities under the KOP categories. KOP categories could also be situated in areas that have coverage issues for fire protection that have not yet been addressed. Because the size, extent, and location of the projects are unknown, it is anticipated that impacts would be potentially significant.

Schools

Operation of KOP Categories 1 through 5 would not include residential development, so there would not be new permanent residents in the study area that would increase demand on schools. KOP Category 6 could include affordable housing, which could result in a localized increase in population. These affordable housing projects would not be anticipated to result in a significant increase in population that would substantially increase school enrollment because of the anticipated relatively small-scale development of these subsequent projects in the study area. In addition, housing would accommodate growth that has been accounted for in regional and local land use plans. As with police and fire protection, each jurisdiction in the study area prepares growth projections that inform SCAG's SoCal Connect plan as well as the jurisdiction's general plan. KOP Categories 1 through 6 would not result in significant environmental impacts from the construction of new or physically altered government facilities. Impacts would be less than significant.

Parks

Operation of KOP Categories 1 through 5 would not include residential development, so there would not be new permanent residents in the study area that would increase demand on parks during operation.

Operation of KOP Categories 1 through 5 would not result in significant environmental impacts from the construction of new or physically altered government facilities in order to maintain acceptable service ratios for parks. KOP Category 6 could include affordable housing, which could result in incremental increases in resident population. However, these increases in resident population would not be anticipated to be substantial or to affect the need for parks. Each jurisdiction in the project study area prepares growth projections that inform local and regional land use plans and policies to accommodate growth. Growth projections are also considered by individual parks and recreation departments as growth continues in Southern California. Impacts would be less than significant.

Other Public Facilities

Operation of KOP Categories 1 through 5 would not include residential development, so there would not be new permanent residents in the study area that would increase demand on other public facilities, such as libraries. KOP Category 6 could include affordable housing, which could result in a localized increase in population. These affordable housing projects would not be anticipated to result in a significant increase in population that would substantially increase in need for expanded public facilities because of the anticipated relatively small-scale development of these subsequent projects in the study area. In addition, housing would accommodate growth that has been accounted for in regional and local land use plans. As with police and fire protection, each jurisdiction in the study area prepares growth projections that inform SCAG's SoCal Connect plan as well as the jurisdiction's general plan. KOP Categories 1 through 6 would not result in significant environmental impacts from the construction of new or physically altered government facilities. Impacts would be less than significant.

Impact Determination

Impacts would be potentially significant for police and fire services.

*Mitigation Measur*es

Mitigation Measure PS-1: Ensure Police and Fire Service Providers Have Adequate Resources.

During subsequent project design and development, the implementing agency will regularly notify and coordinate with police and fire service providers that have jurisdiction over subsequent project sites on project construction design, activities, and scheduling—including any street or lane closures related to subsequent projects—to ensure police and fire service providers have adequate resources to continue to serve the project area within their respective required levels of service and response times once the subsequent project is constructed.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. There may be localized road closures and detours that could increase response times for emergency services. Mitigation Measure LU-1 would minimize construction impacts; however, because the size, extent, and location of the projects are unknown, impacts would be potentially significant for police and fire services.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Construction Management Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Operations

The 107 projects under the *2020 LA River Master Plan* would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable jurisdictional code requirements related to construction, access, water mains, fire flows, and hydrants. Increases in the number of visitors and residents could result in an increase in the number of incidents requiring police response, which could affect police provider service ratios and response times and result in a need for additional law enforcement staff. Given that the proposed Project includes parks, recreation areas, and open space, it is unlikely the proposed *2020 LA River Master Plan* would result in a significant increase in the use of and demand for other park facilities. The projects pursuant to the *2020 LA River Master Plan* are not anticipated to result in a significant increase in population that would substantially increase school enrollment or library service. However, because the overall size, extent, and location of the projects are unknown, impacts would remain potentially significant for police and fire protection.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in above.

Mitigation Measure PS-1: Ensure Police and Fire Service Providers Have Adequate Resources.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts with regard to public services is the County because this context would account for the delivery of public services in the greater Los Angeles County region. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on public services if, in combination with other projects within the greater Los Angeles region, it would: result in the demand for police services at the time of the proposed Project build-out compared to the expected level of service available; result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities; or require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility to maintain service.

Cumulative Condition

Cumulative growth within the greater Los Angeles region would result in increased demand and a need for fire and police services to serve new development and populations. Many areas within the region already have inadequate public services for the existing populations and commercial businesses. Further growth, including implementation of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), would exacerbate existing needs as well as the expanded needs of cumulative programs and plans (SCAG 2020). In order to maintain adequate service capacity, the construction or expansion of public service facilities would be required, which would have the potential to result in an adverse impact on the environment. Although the majority of cumulative projects would involve discretionary actions and therefore would be required to demonstrate compliance with CEQA prior to approval, they would incrementally increase the need for public services. These impacts would be largely mitigated through local municipal and school district developer fees to fund the development of new or expansion of existing public service facilities. However, the incremental increases would have the potential to result in significant cumulative impacts. Therefore, there is a cumulative condition with respect to public services.

Contribution of the Project to Cumulative Impacts

Demand for additional public services is usually created when there is a net increase in population in an area as a result of a project. Construction of the proposed Project would not result in an increase in population because the construction workers would not require relocated housing during construction. No element of the construction activities of the proposed Project has the potential to increase the population, nor would it require the expansion of existing or construction of new fire, police, school, or park facilities. There may be localized road closures and detours that could increase response times for emergency services. While operation of the Project would not

result in permanent population increase, there would be localized visitor population increases that would increase the demand for public services, which would result in a cumulatively considerable contribution.

Section 3.15
Recreation

3.15.1 Introduction

This section describes the geographic and regulatory setting for parks and recreational facilities, discusses impacts on recreational resources that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible. The consistency analysis of the proposed Project with the applicable recreation goals and policies that are identified in Section 3.15.2.2, *Regulatory,* is presented in Section 3.10, *Land Use and Planning*.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.15.2 Setting

3.15.2.1 Geographic

Regional Setting

As described in Chapter 2, *Project Description*, the LA River passes through various unincorporated County areas and 17 different cities along its 51-mile journey from the Santa Susana Mountains to the Pacific Ocean in Long Beach. Due to the highly urbanized setting, existing open space and recreation along the LA River corridor is fragmented and limited in quantity relative to overall population. This section describes the regional setting and existing recreational resources for each frame.

The *Los Angeles County General Plan* classifies parks based on the size, use, and physical characteristics of the land, as shown in Table 3.15-1. The County further classifies parks into the local park system and regional park system. Local parks meet local needs and offer opportunities for daily recreation, while regional parks are intended to meet the parks and recreation needs of residents and visitors throughout the County. The County's total park system, including facilities that are owned, operated, and maintained by the County, totals approximately 70,000 acres. The *Los Angeles County General Plan* has an overall goal of 4 acres of local parkland per 1,000 people;

however, many cities along the LA River also have their own goals set forth in their general plans While there are 26 community regional parks and regional parks within the study area, more than 80 percent of these parks is confined to Frames 5 through 9.

Regional Trails

Trails along the LA River currently provide access to 30 of 51 miles of the river. The County-maintained portion of the LA River Trail runs 16.7 miles along the LA River (Los Angeles County Public Works 2021). The longest continuous segments of the LA River Trail are a 16-mile stretch between Imperial Highway and the mouth of the LA River at Long Beach and a 7-mile stretch along the Glendale Narrows. In the San Fernando Valley, the trail becomes more fragmented.

Figure 3.15-1 (Figures 3.15-1.1 through Figure 3.15-1.9) shows the parks, open space, and recreational facilities throughout the study area by frame for Frames 1 through 9 as discussed in detail below. Figure 3.15-2 (Figures 3.15-2.1 through Figure 3.15-2.9) shows the existing river trails and access points to the LA River.

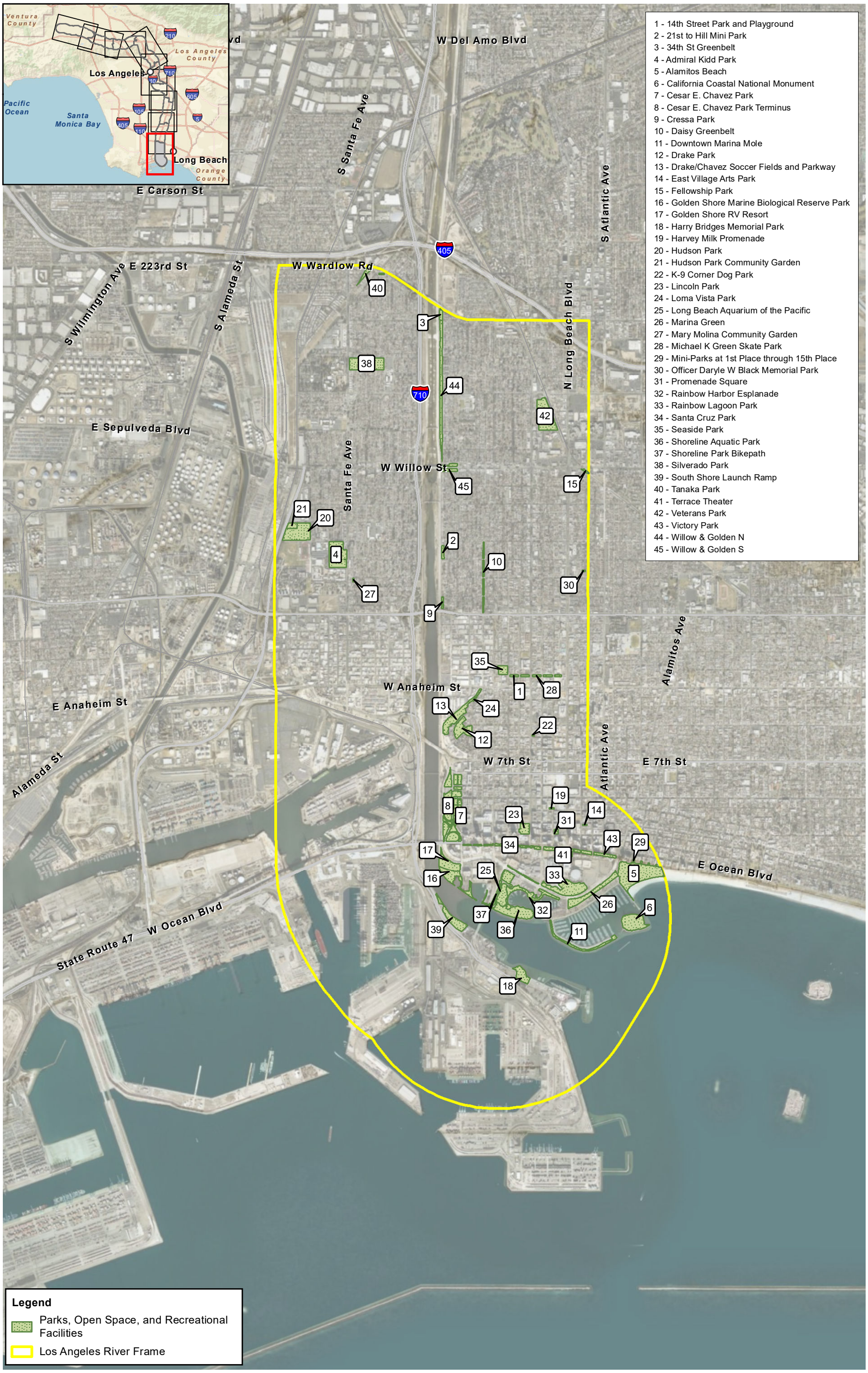

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Figure 3.15-1.1 - Frame 1
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

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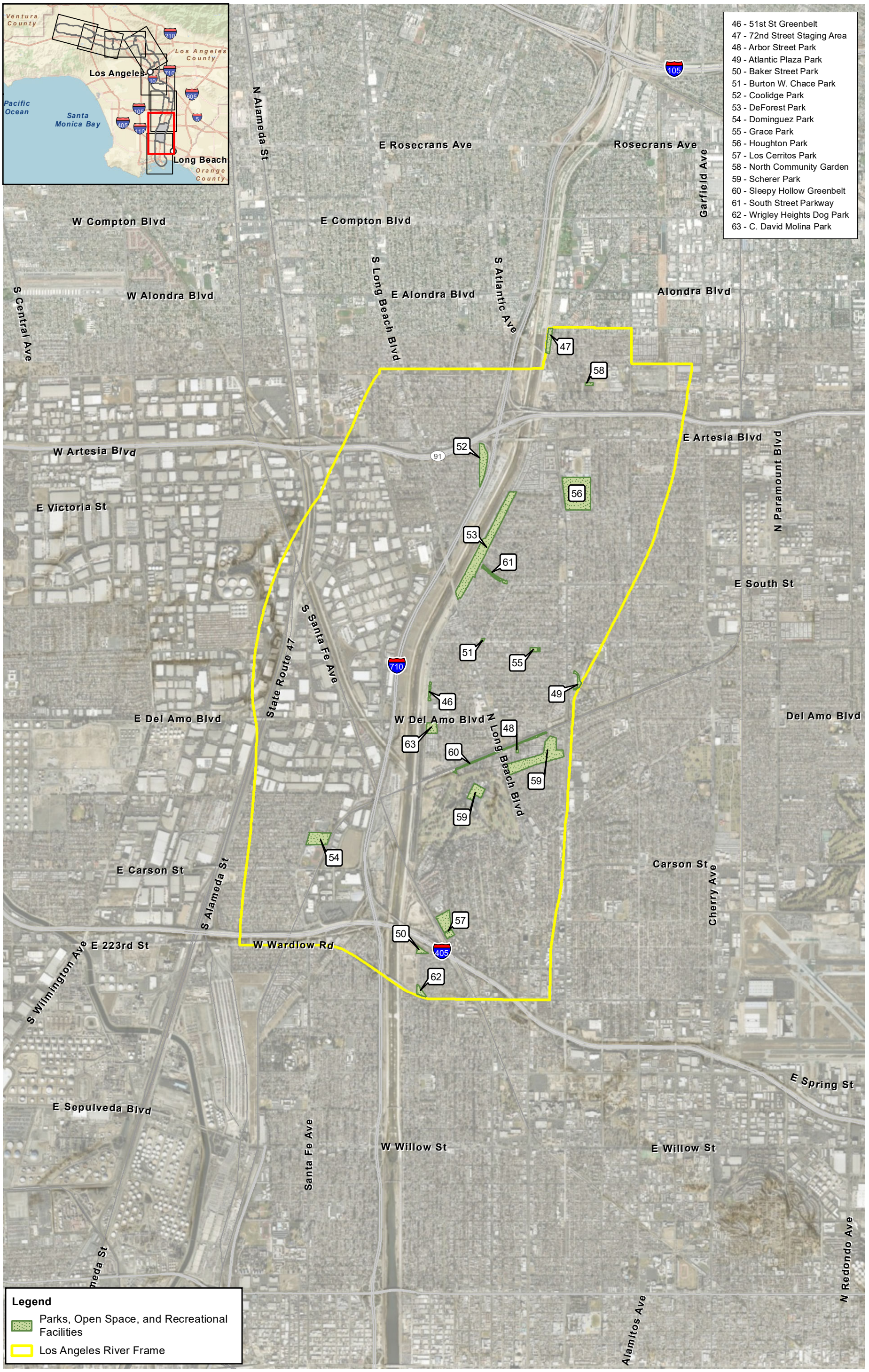


Figure 3.15-1.2 - Frame 2
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

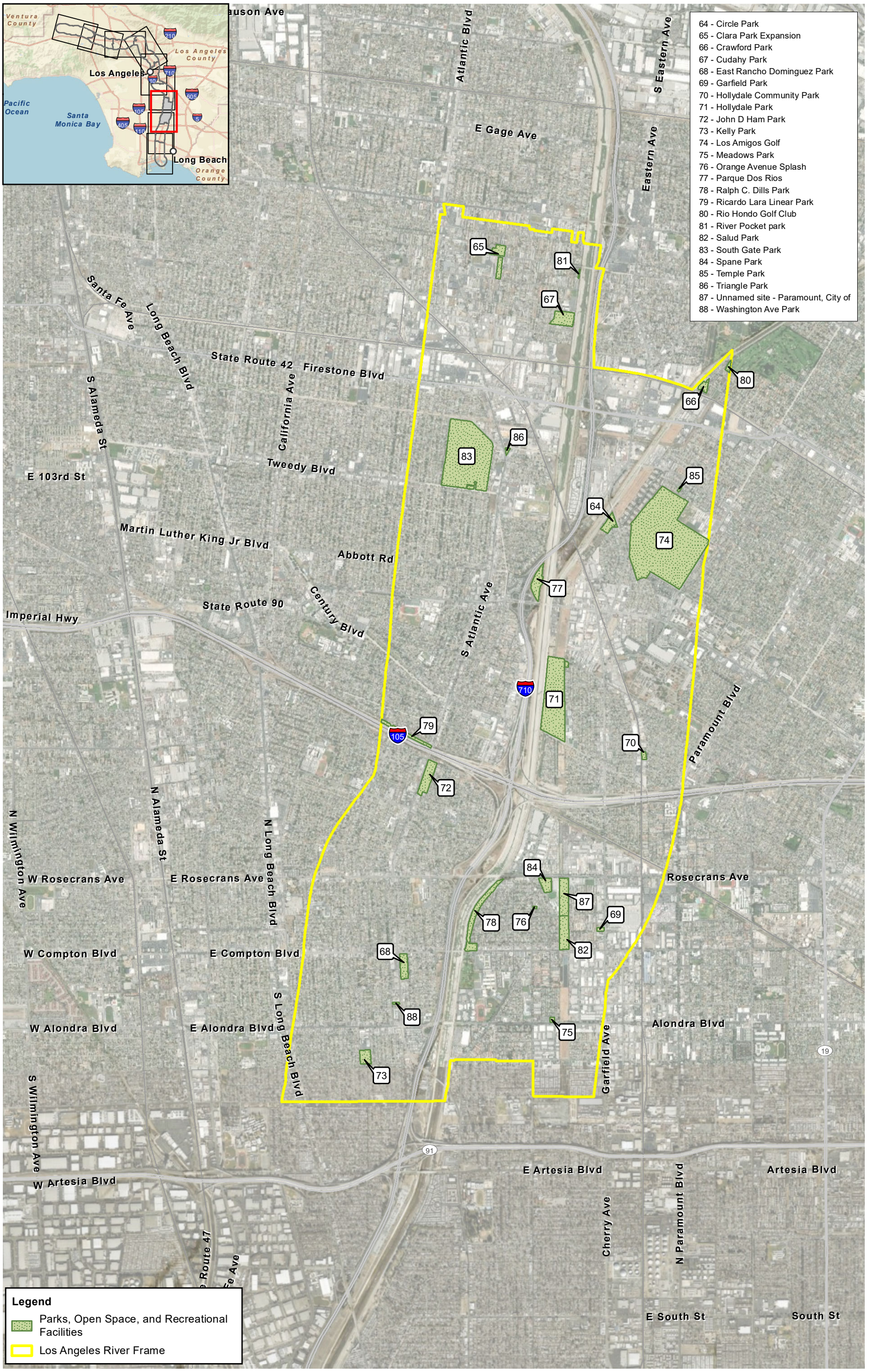
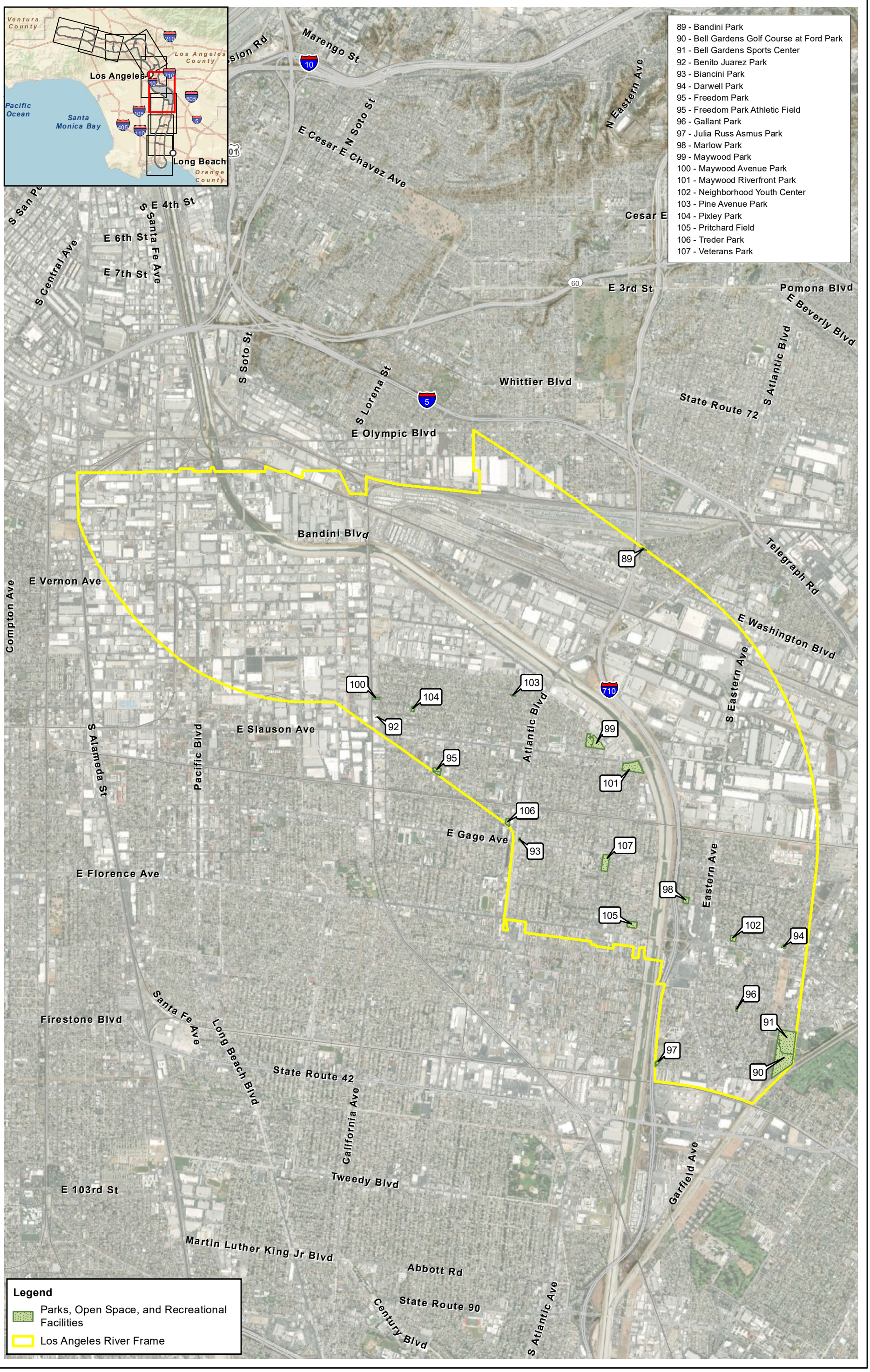


Figure 3.15-1.3 - Frame 3
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI



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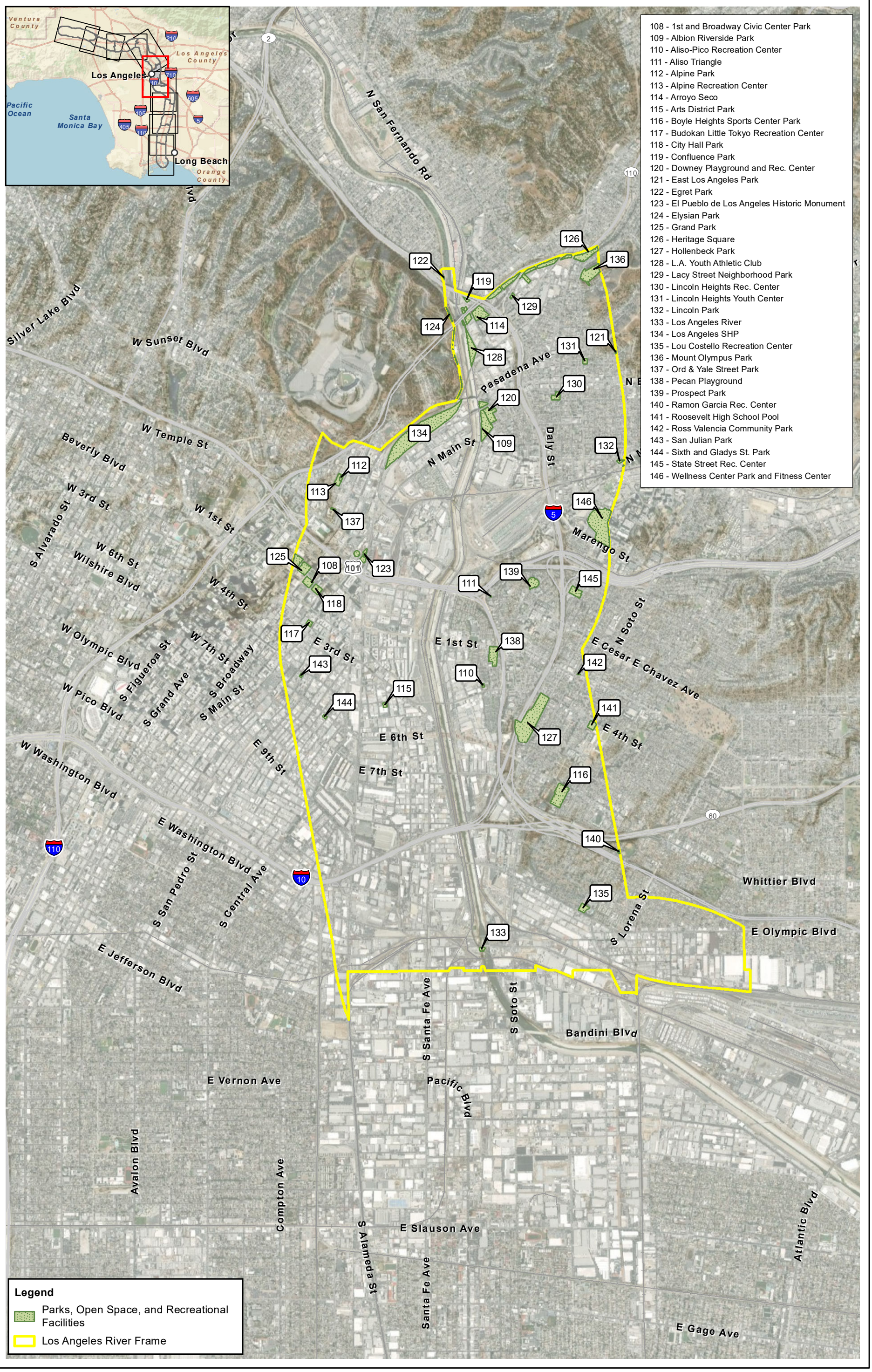
Source: County of Los Angeles; ESRI

Figure 3.15-1.4 - Frame 4
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR



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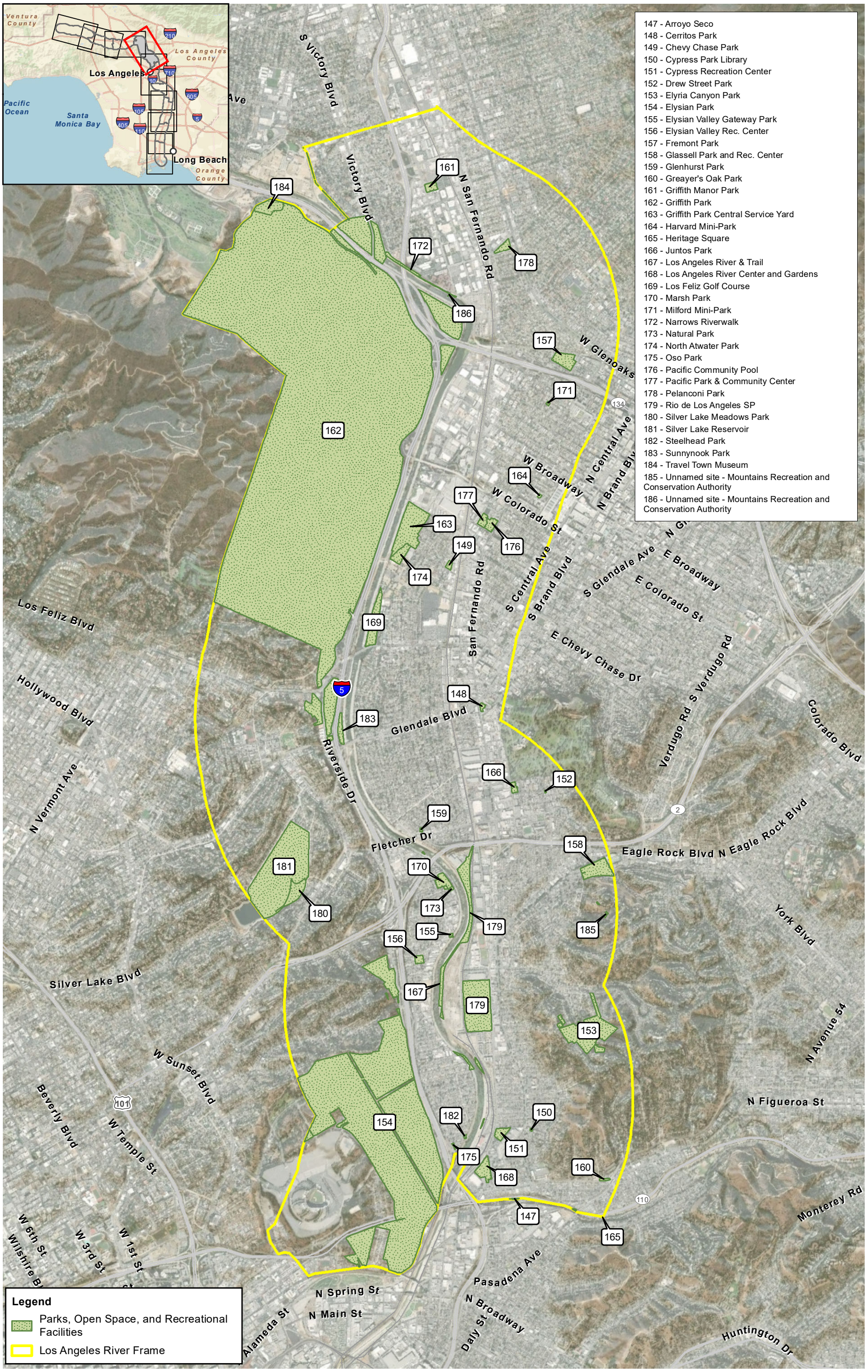
Source: County of Los Angeles; ESRI

Figure 3.15-1.5 - Frame 5
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR



147 - Arroyo Seco
148 - Cerritos Park
149 - Chevy Chase Park
150 - Cypress Park Library
151 - Cypress Recreation Center
152 - Drew Street Park
153 - Elyria Canyon Park
154 - Elysian Park
155 - Elysian Valley Gateway Park
156 - Elysian Valley Rec. Center
157 - Fremont Park
158 - Glassell Park and Rec. Center
159 - Glenhurst Park
160 - Greayer's Oak Park
161 - Griffith Manor Park
162 - Griffith Park
163 - Griffith Park Central Service Yard
164 - Harvard Mini-Park
165 - Heritage Square
166 - Juntos Park
167 - Los Angeles River & Trail
168 - Los Angeles River Center and Gardens
169 - Los Feliz Golf Course
170 - Marsh Park
171 - Milford Mini-Park
172 - Narrows Riverwalk
173 - Natural Park
174 - North Atwater Park
175 - Oso Park
176 - Pacific Community Pool
177 - Pacific Park & Community Center
178 - Pelanconi Park
179 - Rio de Los Angeles SP
180 - Silver Lake Meadows Park
181 - Silver Lake Reservoir
182 - Steelhead Park
183 - Sunnynook Park
184 - Travel Town Museum
185 - Unnamed site - Mountains Recreation and Conservation Authority
186 - Unnamed site - Mountains Recreation and Conservation Authority

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N

Source: County of Los Angeles; ESRI

Figure 3.15-1.6 - Frame 6
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

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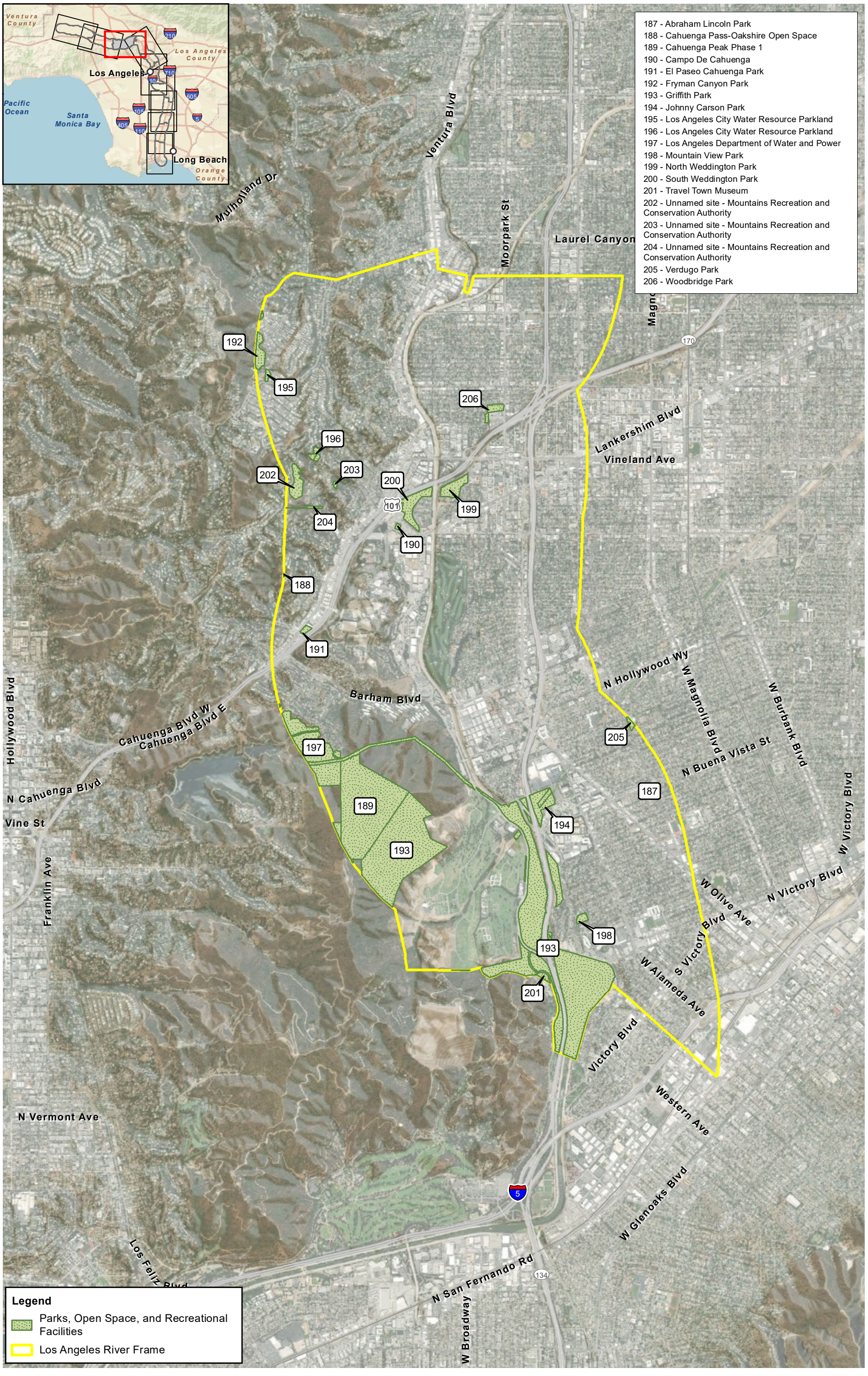

Figure 3.15-1.7 - Frame 7
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

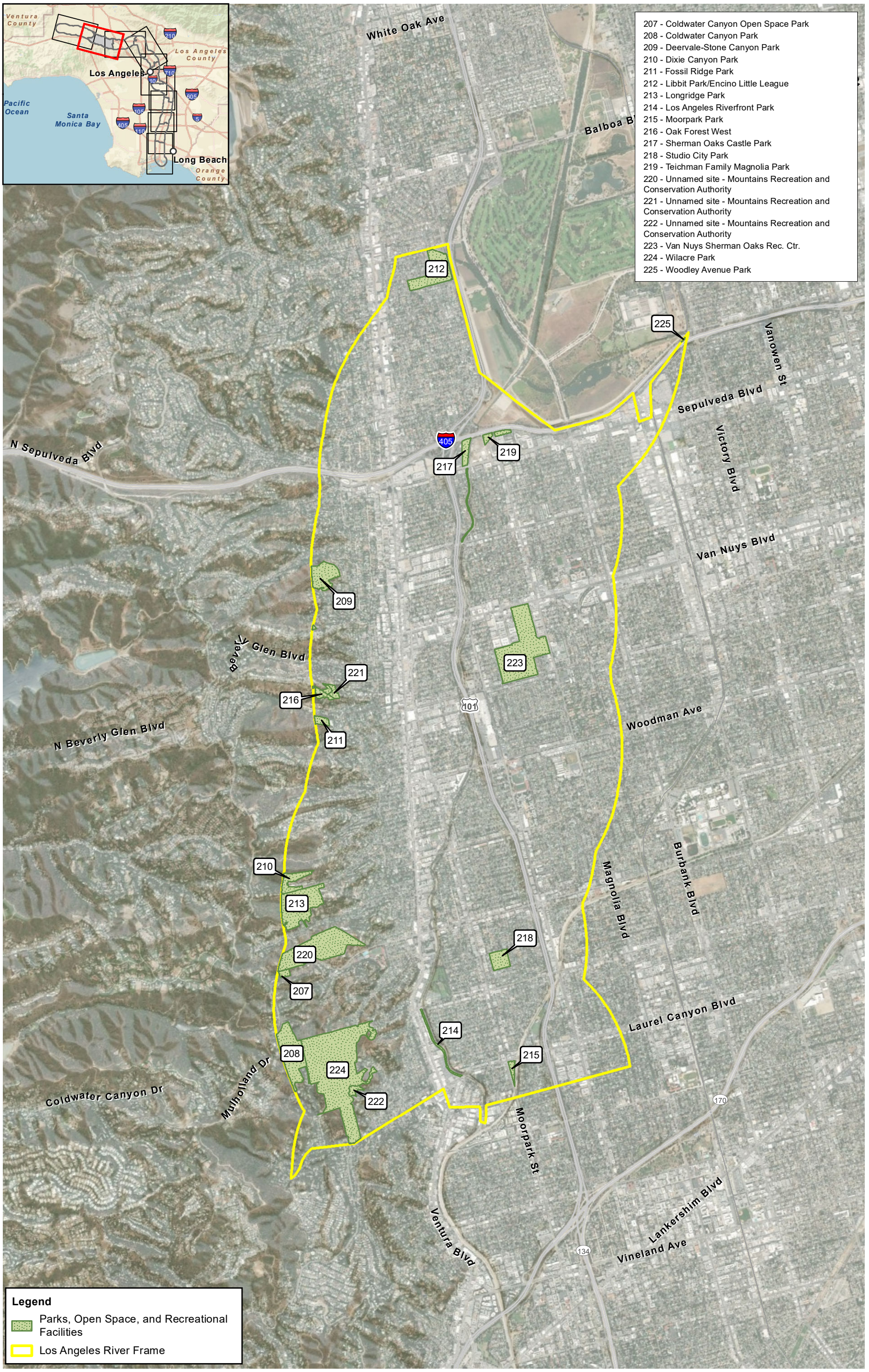

Figure 3.15-1.8 - Frame 8
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

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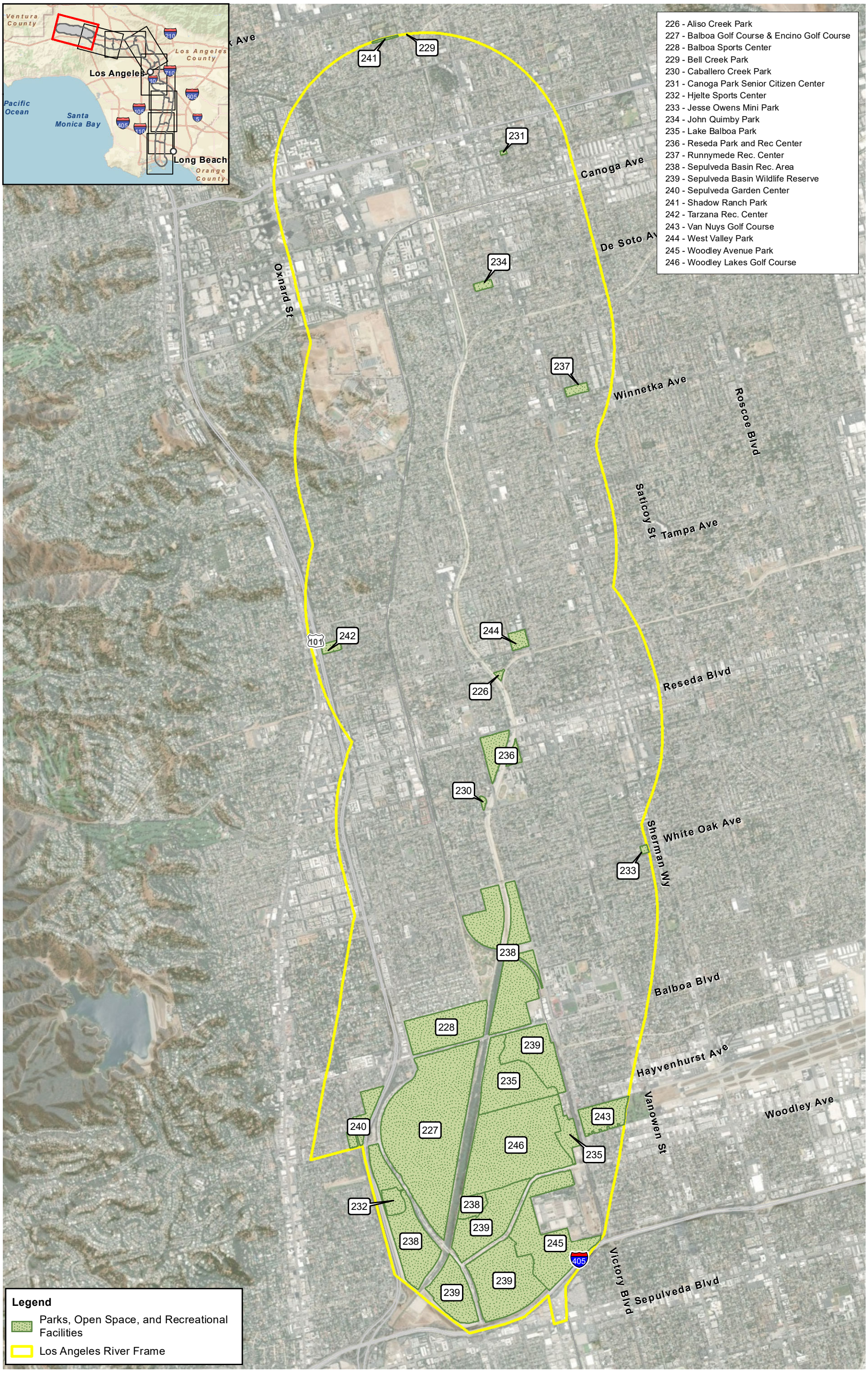

Figure 3.15-1.9 - Frame 9
Parks, Open Space, and Recreational Facilities
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

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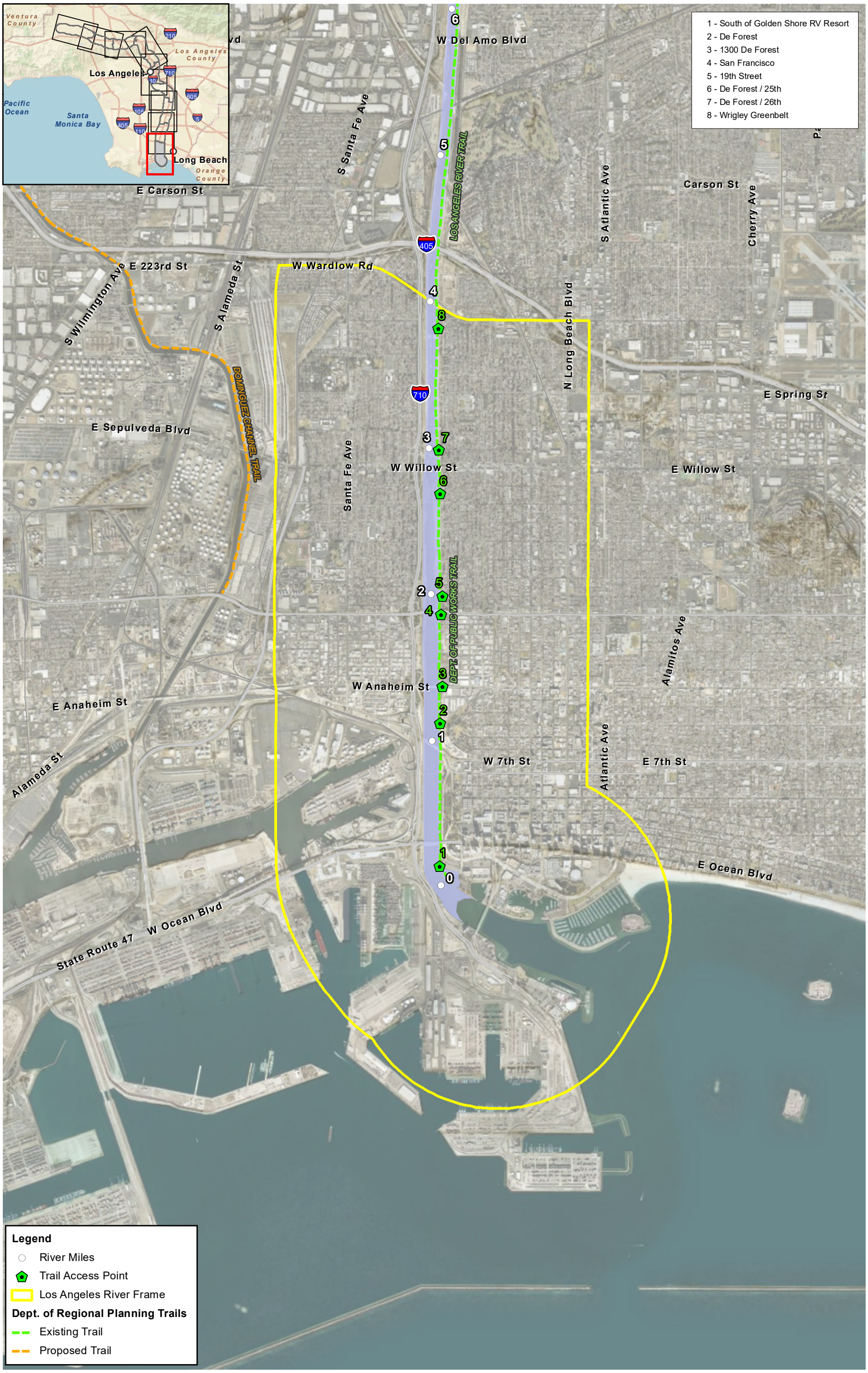

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Source: County of Los Angeles; ESRI

Figure 3.15-2.1 - Frame 1
Trails and Access Points
2020 LA River Master Plan PEIR

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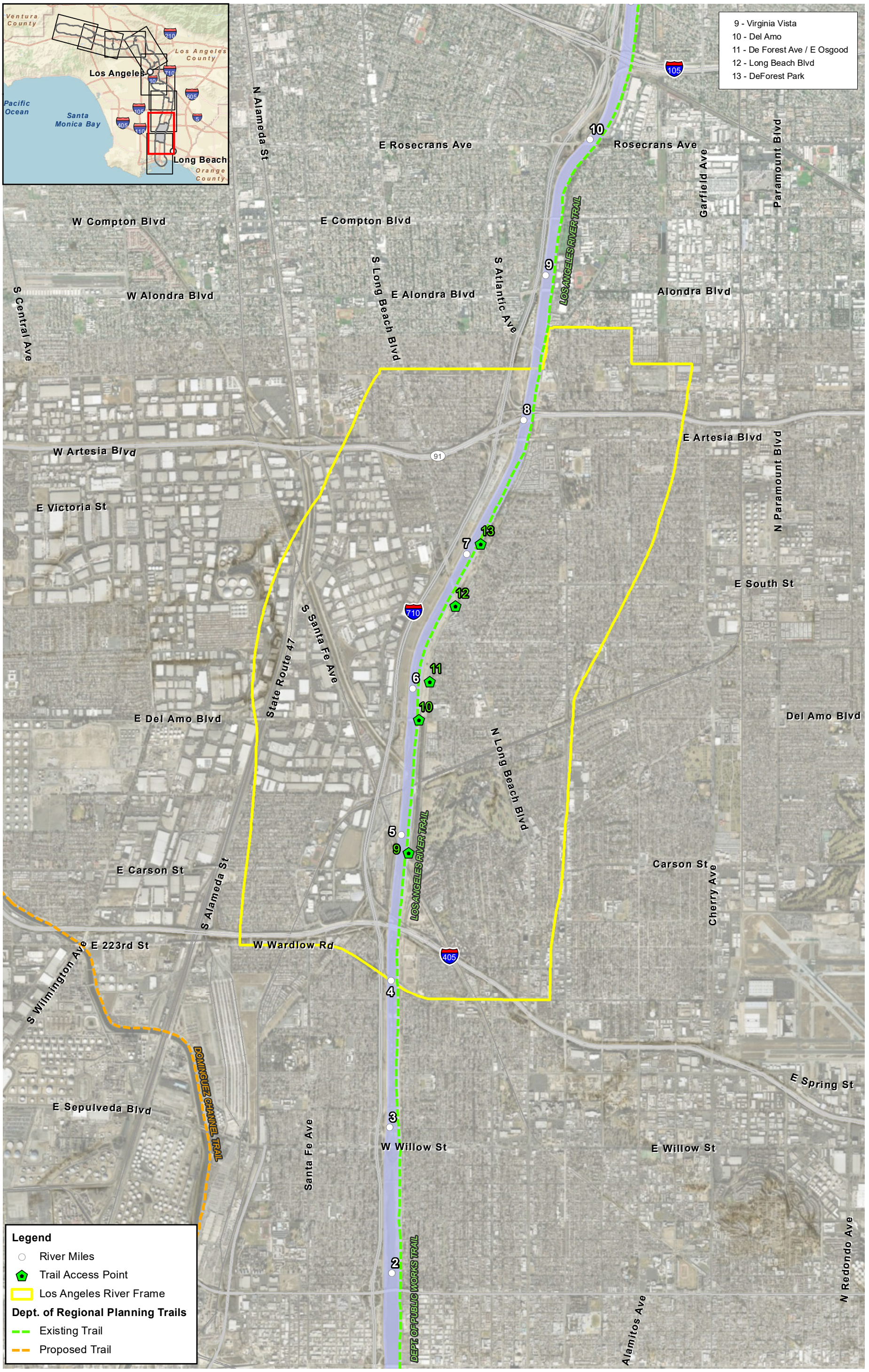

Figure 3.15-2.2 - Frame 2
Trails and Access Points
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

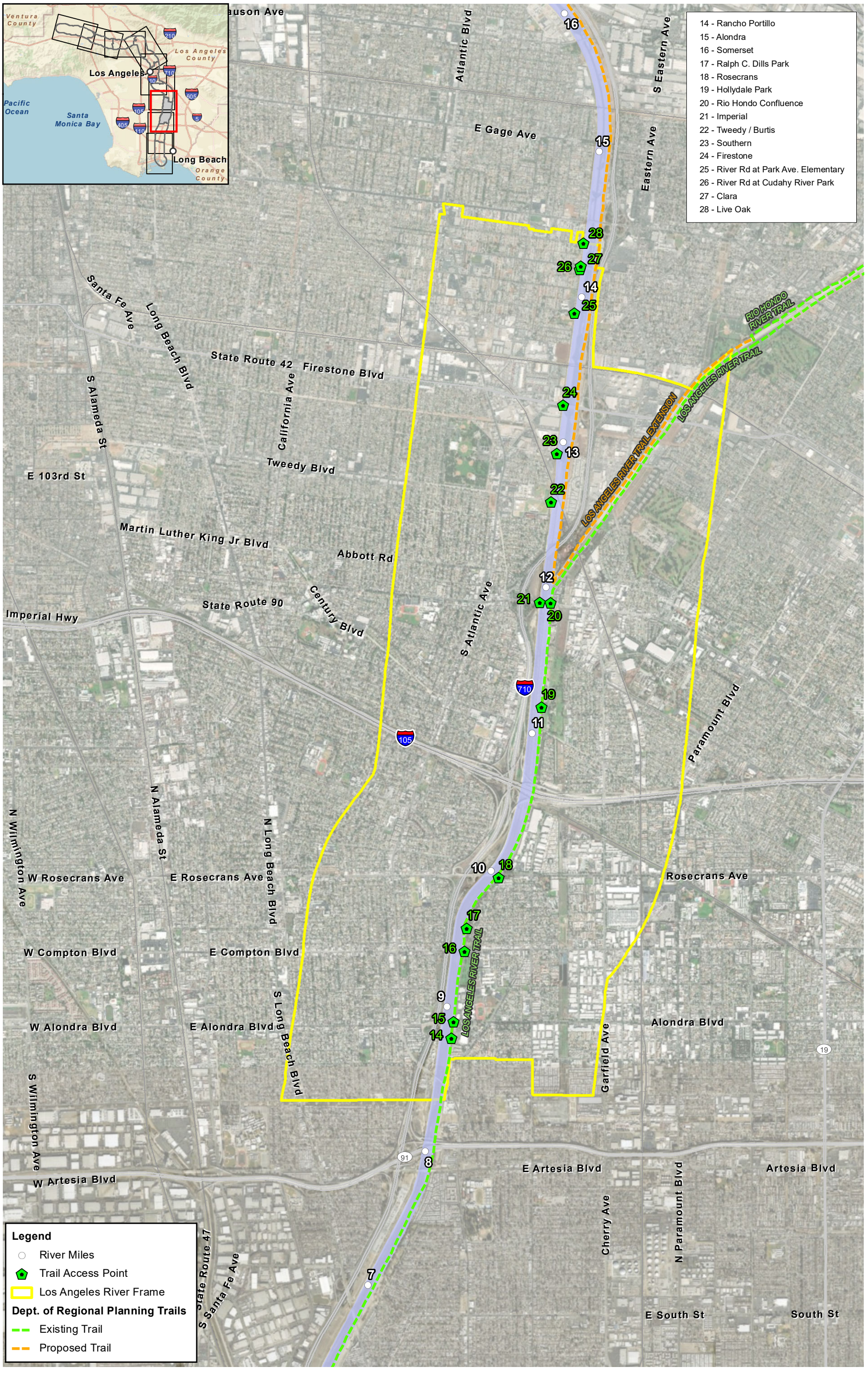

Figure 3.15-2.3 - Frame 3
Trails and Access Points
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

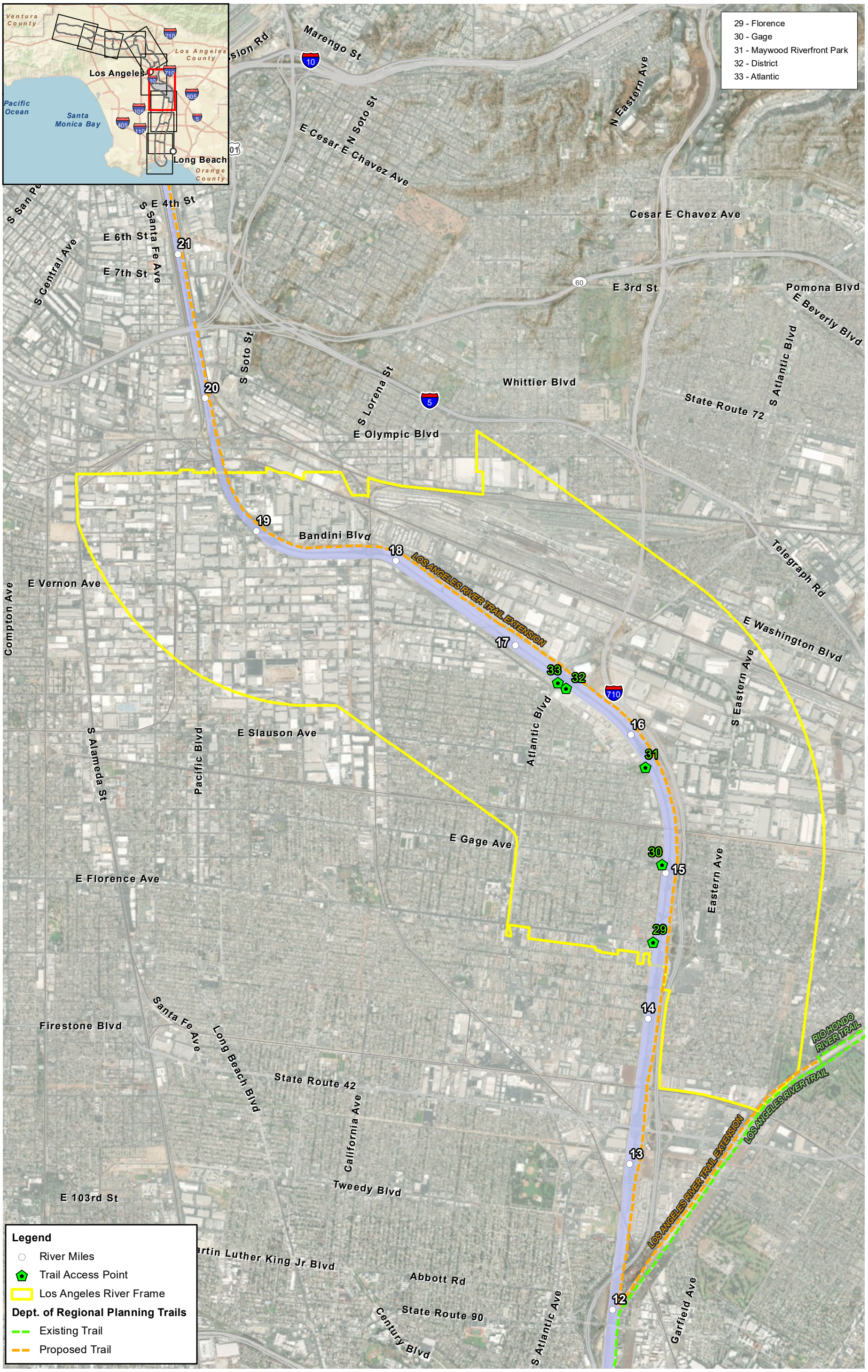

Figure 3.15-2.4 - Frame 4
Trails and Access Points
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

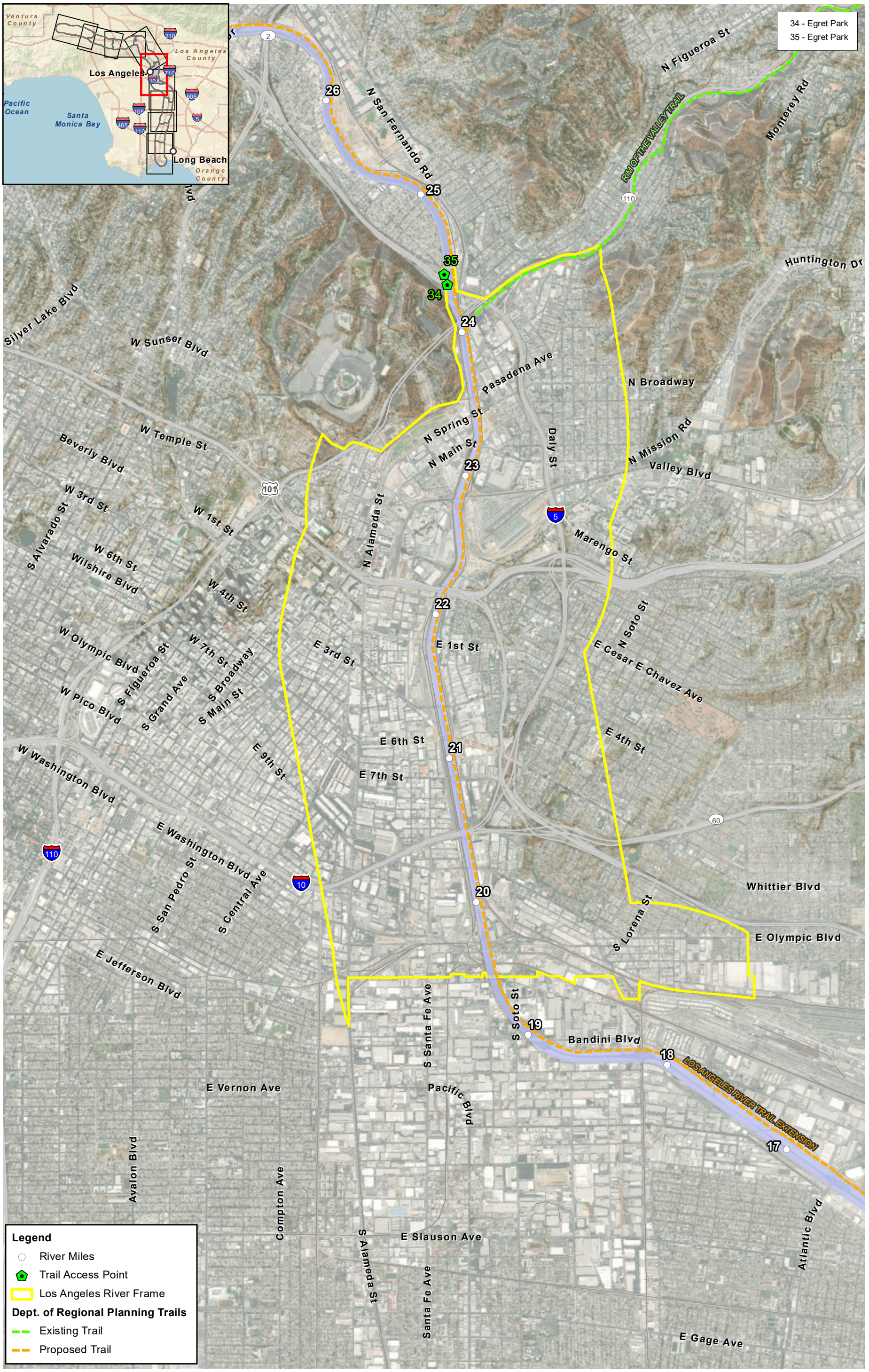

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Figure 3.15-2.5 - Frame 5
Trails and Access Points
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

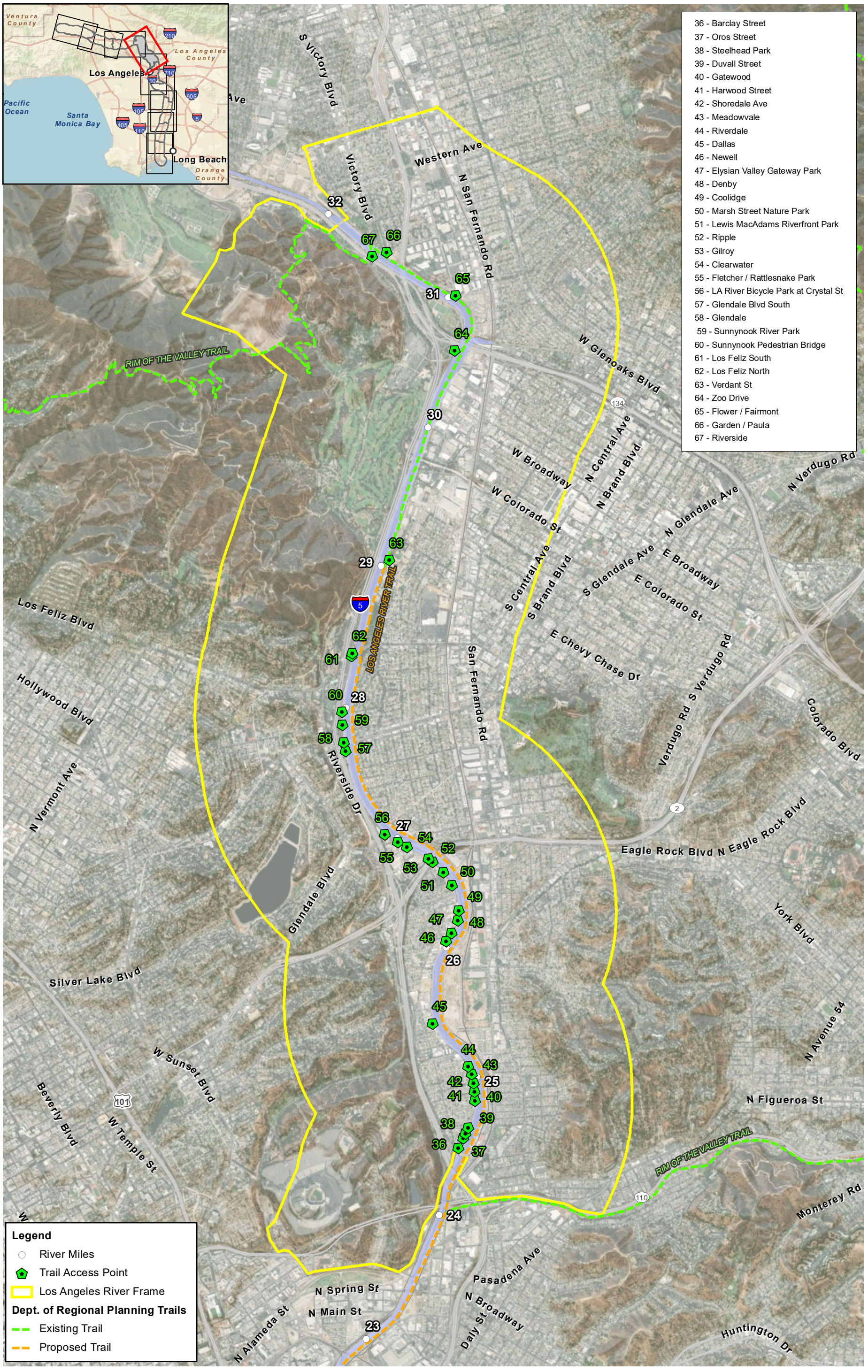
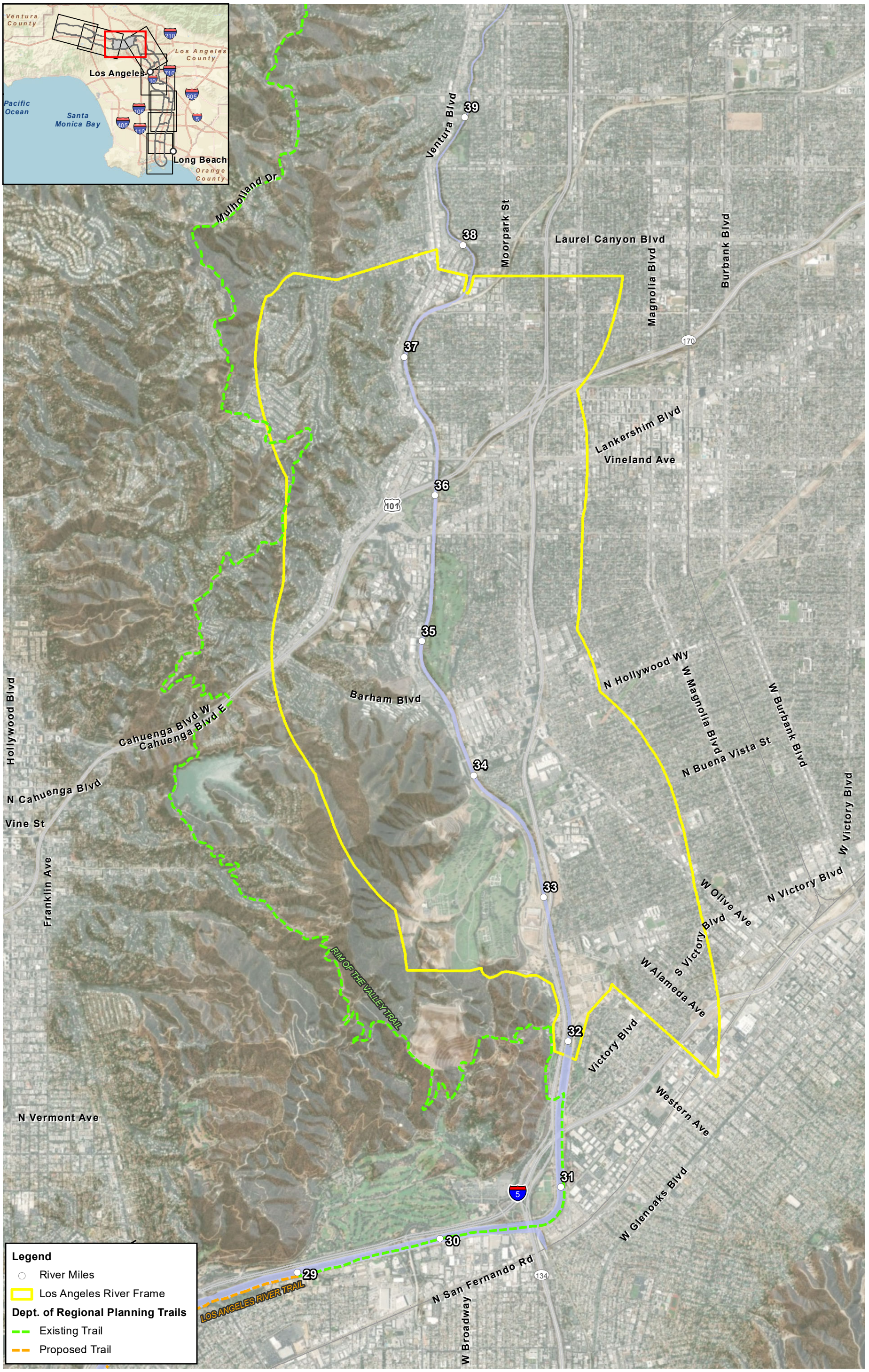


Figure 3.15-2.6 - Frame 6
Trails and Access Points
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI



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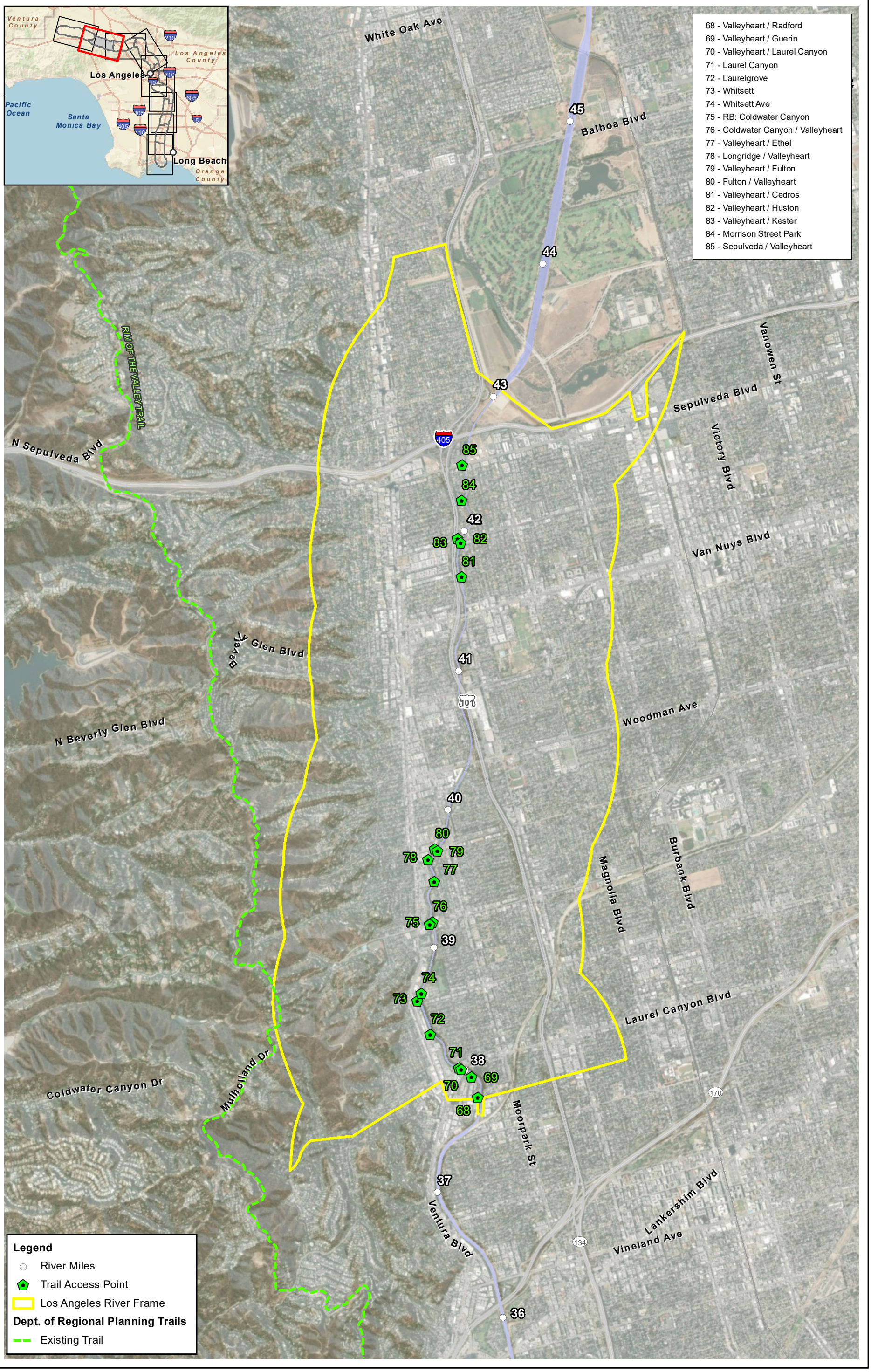
Source: County of Los Angeles; ESRI

Figure 3.15-2.7 - Frame 7
Trails and Access Points
2020 LA River Master Plan PEIR



Source: County of Los Angeles; ESRI

Figure 3.15-2.8 - Frame 8
Trails and Access Points
2020 LA River Master Plan PEIR

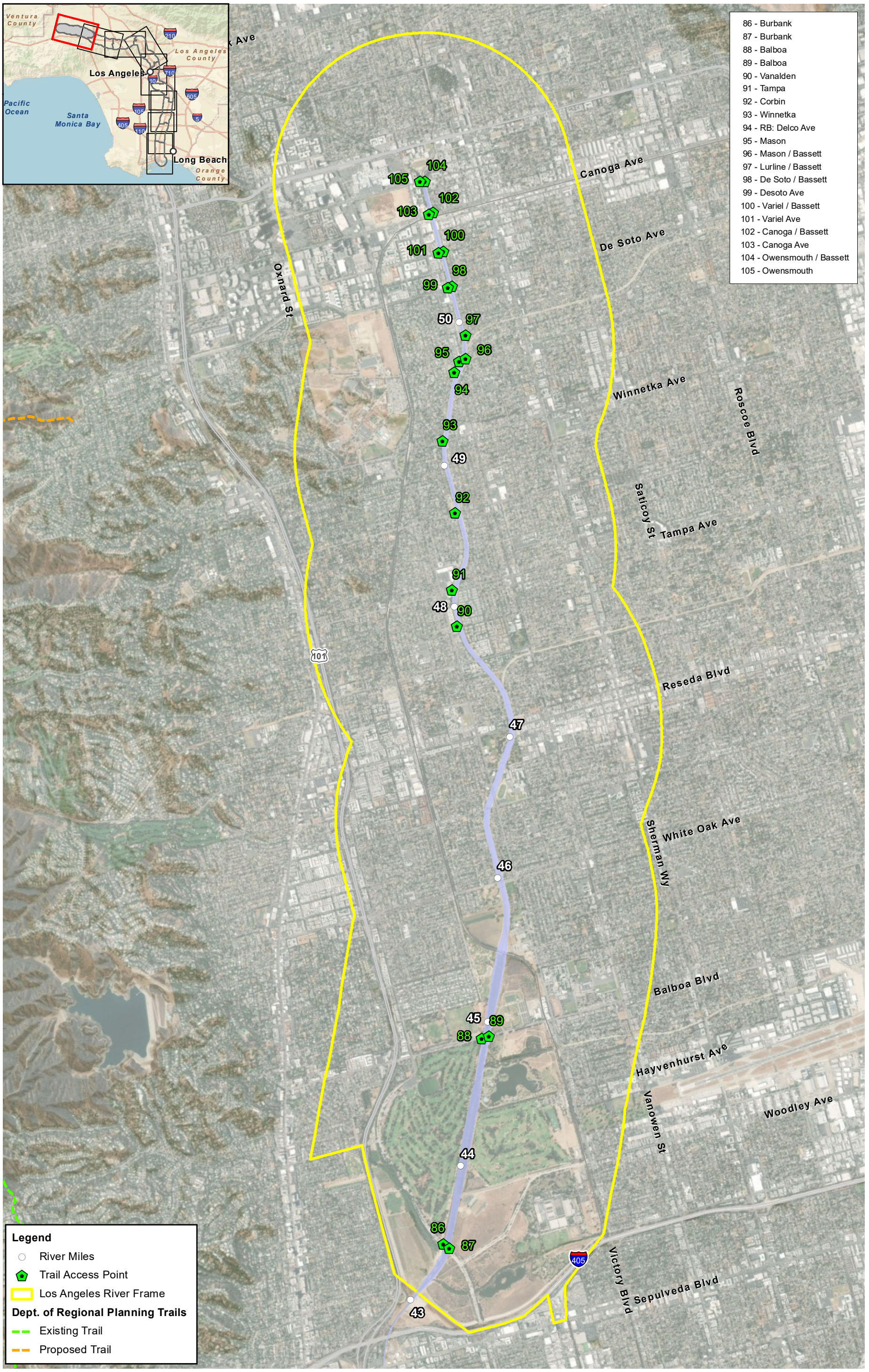


Figure 3.15-2.9 - Frame 9
Trails and Access Points
2020 LA River Master Plan PEIR

Source: County of Los Angeles; ESRI

Table 3.15-1. Los Angeles County Park Classifications

Park Type	Classifications
Local Park System	
Community Parks	Acres per Thousand Population: 4/1,000 Suggested Acreage: 10 to 20 acres Service Area: 1 to 2 miles Can Include: informal open play areas, children's play apparatus, family and group picnic areas with overhead shelters, barbecues, lighted sports fields, basketball courts, tennis courts, aquatics complex, skate park, arena soccer, roller hockey, community gardens, dog parks
Neighborhood Parks	Acres per Thousand Population: 4/1,000 Suggested Acreage: 3 to 10 acres Service Area: 1/2 mile Can Include: informal open play areas, children's play apparatus, family picnic areas with overhead shelters, barbecues, practice sports fields, basketball, tennis, and volleyball courts
Pocket Parks	Acres per Thousand Population: 4/1,000 Suggested Acreage: less than 3 acres Service Area: 1/4 mile Can Include: picnic areas, seating areas, children's play apparatus
Park Node	Acres per Thousand Population: 4/1,000 Suggested Acreage: 1/4 acre or less No service radius area Can Include: plazas, rest areas, playgrounds, landmarks, and public art installations
Regional Park System	
Community Regional Parks	Acres per Thousand Population: 6/1,000 Suggested Acreage: 20 to 100 acres Service Area: up to 20 miles Can Include: informal open play areas, children's play apparatus, family and group picnic areas with overhead shelters, barbecues, lighted sports fields, basketball courts, tennis courts, multiple sports facilities, aquatics center, fishing lake, community building, gymnasium, views and vistas
Regional Parks	Acres per Thousand Population: 6/1,000 Suggested Acreage: greater than 100 acres Service Area: 25+ miles Can Include: group picnic areas with overhead shelters and barbecues, lakes, wetlands, auditoriums, water bodies and campgrounds, water bodies for swimming, fishing and boating, and sports fields
Special Use Facilities	Acres per Thousand Population: 6/1,000 No size criteria No assigned service radius area Can Include: wilderness parks, nature preserves, botanical gardens, nature centers, performing arts, water parks, aquatic facilities, skate parks, golf driving ranges, and golf courses

Source: Los Angeles County 2016.

Project Study Area Setting

As described in Chapter 2, the project study area is divided into series of nine distinct geographical sections, or planning frames related to jurisdictional, hydraulic, and ecological zones. Recreational resources are described for each of the nine frames below.

Frame 1

The Frame 1 study area is predominantly located within the City of Long Beach with a sliver of the City of Los Angeles near its western boundary. More than 3,100 acres within the City of Long Beach's 50 square miles are developed for recreation. There are 26 City of Long Beach-owned and operated community activity centers in Long Beach. The City of Long Beach's free youth sports program provides skill development and games in six different sports, serving almost 10,000 Long Beach youth. Additionally, more than 2,800 recreational and educational classes are offered each year. The City of Long Beach currently has approximately 130 miles of bikeways (City of Long Beach 2017). The City of Long Beach has its own park classification system, as shown in Table 3.15-2.

Table 3.15-2. City of Long Beach Park Classifications

Park Type	Classifications
Community Park	Average 35 acres in size and serve neighborhoods within 1 mile
Greenway Park	A largely undeveloped green space
Mini Park	A small park serving neighbors within 1/8 mile, generally less than 2 acres in size
Neighborhood Park	Averaging 8 acres in size and serving neighbors within ¼ mile (high density areas) and ½ mile (low density areas)
Regional Park	175-acre minimum in size and serving communities within ½-hour drive time
Special Use Park	A special use park provides unique cultural heritage and/or educational features

Source: City of Long Beach 2017.

Table 3.15-3 shows the existing park acreage per 1,000 residents for the City of Long Beach and the *Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment* Study Areas (Needs Assessment Study Areas; Los Angeles County 2016) that exist within Frame 1, as well as the adopted park acreage standard per 1,000 residents according to the 2017 *City of Long Beach General Plan.*

Table 3.15-3. Frame 1: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Long Beach	5.6	8.0 (*City of Long Beach General Plan*)
City of Long Beach South – Park Needs Assessment Study Area	2.3	
City of Long Beach West – Park Needs Assessment Study Area	1.6	

Sources: Los Angeles County 2016; City of Long Beach 2017.

Existing Local Resources

The parks and recreational facilities within Frame 1 consist of park nodes, mini parks, pocket parks, neighborhood parks, community parks, special use parks, and unclassified parks and recreational facilities. The total approximate recreational acreage in Frame 1 is 235.82 acres. No acreage is developed for recreation in the City of Los Angeles. These parks and recreational facilities are largely concentrated in the southern half of Frame 1, closest to the Long Beach shoreline. Most of the recreational resources near the shoreline are classified as Special Use Parks, which includes the Long Beach Aquarium of the Pacific and the South Shore Launch Ramp. The northern half of Frame 1 contains mostly residential land uses with smaller size parks and recreation facilities relative to the southern half. There are no regional parks within the Frame 1 study area (Figure 3.15-1.1).

The California Coastal Monument is the largest recreational resource by physical size that occurs in Frame 1, totaling about 75 acres. The California Coastal National Monument includes offshore rocks and islands exposed above mean high tide and within 12 nautical miles of the mainland along the entirety of the California coastline. The Wrigley Greenbelt is a 9.8-acre Greenway Park that is located immediately to the east of the LA River and surrounded in all other directions by residences. Wrigley Greenbelt consists of green open space, which is targeted for the surrounding residents to enjoy. Silverado Park is located approximately 1,600 feet to the west of the LA River and situated in a residential area. Silverado Park is one of the more intensively active recreational parks in the City of Long Beach as it contains a swimming pool, a gymnasium, two softball fields, two baseball fields, one soccer field, two basketball courts, four tennis courts, a mini skate park, a roller hockey court, a volleyball court, a playground, and picnic areas. Silverado Park also offers recreational activities and programs for youth and seniors in the community. The LA River Trail follows the right bank of the river from Long Beach Harbor to beyond the Frame 1 study area.

Table 3.15-4 presents all of the parks and recreational facilities within Frame 1, along with the location, size, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.1. Access points to the LA River Trail within Frame 1 are shown on Figure 3.15-2.1 and described in Table 3.15-5. The map IDs in Table 3.15-5 correspond to the numbers depicting these points on Figure 3.15-2.1.

Table 3.15-4. Parks and Recreational Resources within Frame 1

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Park Nodes (<1/4 acre)					
24	Loma Vista Park	City of Long Beach	0.14	Playground	0.27
Mini Parks (<2 acres)					
14	East Village Arts Park	City of Long Beach	0.09	Park benches, open space	0.91
15	Fellowship Park	City of Long Beach	0.37	Playground	1.04
30	Officer Daryle W Black Memorial Park	City of Long Beach	0.14	Playground	1.04
29	Mini-Parks at 1st Place through 15th Place	City of Long Beach	1.51	No amenities	1.0

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Pocket Parks (<3 acres)					
1	14th Street Park and Playground	City of Long Beach	1.66	Basketball, fitness zone, playground	0.53
2	21st to Hill Mini Park	City of Long Beach	0.91	Playground	0.08
9	Cressa Park	City of Long Beach	0.61	Walking trail	0.07
23	Lincoln Park	City of Long Beach	2.81	Picnic area	0.59
31	Promenade Square	City of Long Beach	0.52	Open space area, playgrounds	0.76
35	Seaside Park	City of Long Beach	2.30	Soccer, picnic area, playground, restroom	0.45
40	Tanaka Park	City of Long Beach	1.62	Basketball, playground	0.31
Neighborhood Parks (~8 acres)					
4	Admiral Kidd Park	City of Long Beach	12.49	Basketball, soccer, fitness zone, playground, community center, restroom	0.56
12	Drake Park	City of Long Beach	6.15	Tennis, basketball, soccer, skate park, picnic areas, playground, splash pad, community center, restroom	0.15
16	Golden Shore Marine Biological Reserve Park	City of Long Beach	9.1	Interpretative signage and viewing scopes	0.04
18	Harry Bridges Memorial Park	City of Long Beach	4.1	Restroom	0.25
20	Hudson Park	City of Long Beach	11.23	Baseball, soccer, playground, restroom	0.81
26	Marina Green	City of Long Beach	7.81	Restrooms	0.47
32	Rainbow Harbor Esplanade	City of Long Beach	6.90	Eight public piers, Restrooms	0.15
Community Parks (~35 acres)					
7	Cesar E. Chavez Park	City of Long Beach	9.07	Basketball, playgrounds, gym, community center, restroom	0.13
8	Cesar E. Chavez Park Terminus	City of Long Beach	15.11	No amenities	0.08

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
38	Silverado Park	City of Long Beach	11.73	Tennis, basketball, baseball, multipurpose field, skate park, playground, pool, gym, community center, restroom	0.31
42	Veterans Park	City of Long Beach	13.02	Tennis, basketball, multipurpose field, playground, community center, restroom	0.73
Greenway Parks (No acreage designation)					
10	Daisy Greenbelt	City of Long Beach	2.32	Green space	0.35
34	Santa Cruz Park	City of Long Beach	2.10	Green space, benches	0.21
43	Victory Park	City of Long Beach	5.71	Green space, park benches	0.56
3	34th Street Greenbelt (Wrigley Greenbelt)	City of Long Beach	9.8	Walking trail	0.06
Special Use Parks (No acreage designation)					
11	Downtown Marina Mole	City of Long Beach	5.17	Restrooms	0.33
13	Drake Chavez Soccer Fields and Parkway	City of Long Beach	7.93	Soccer	0.07
17	Golden Shore RV Resort	City of Long Beach	5.16	Picnic area, pool and spa, recreation room, sand volleyball court, horseshoes, shuffleboard, children's playground, hot showers, barbecue pits, restrooms	0.04
25	Long Beach Aquarium of the Pacific	City of Long Beach	8.19	No amenities	0.15
28	Michael K Green Skate Park	City of Long Beach	0.43	Skate park	0.68
33	Rainbow Lagoon Park	City of Long Beach	11.74	Grassy areas and paths	0.41
36	Shoreline Aquatic Park	City of Long Beach	10.66	Grassy area, benches, picnic tables	0.11
39	South Shore Launch Ramp	City of Long Beach	6.54	Boat launch, restrooms, dock space, wash down stations	0.06
41	Terrace Theater	City of Long Beach	2.56	Indoor performing arts theater	0.66

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
5	Alamitos Beach	City of Long Beach	56.47	Restroom, volleyball courts	0.86
6	California Coastal National Monument	City of Long Beach	75.50	No amenities	0.81
19	Harvey Milk Promenade	City of Long Beach	0.20	Chess tables	0.80
21	Hudson Park Community Garden	City of Long Beach	1.53	Community garden	0.90
22	K-9 Corner Dog Park	City of Long Beach	0.8	Dog park	0.68
27	Mary Molina Community Garden	City of Long Beach	0.15	Community garden	0.52
37	Shoreline Park Bikepath	City of Long Beach	2.94	Bike path	0.10
44	Willow and Golden N	City of Long Beach	9.90	Green space	0.07
45	Willow and Golden S	City of Long Beach	1.120	Green space	0.09
Total approximate recreation acreage:			**346.31**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-5. Access Points to the LA River Trail in Frame 1

Map ID	Access Point Name	Address	Side of River	Additional Notes
01	South of Golden Shore RV Resort	99 Golden Shore	River Right	Adjacent to Golden Shore Biological Reserve
02	De Forest	903 De Forest Avenue	River Right	Stairs only, adjacent to Drake Park
03	1300 De Forest	1299 De Forest Avenue	River Right	
04	San Francisco	1799 San Francisco Avenue	River Right	Adjacent to Cressa Park
05	19th Street	998 W 19th Street	River Right	Formal park entrance
06	De Forest/25th	2528 De Forest Avenue	River Right	
07	De Forest/26th	998 26th Way	River Right	
08	Wrigley Greenbelt	992 W 34th	River Right	

Source: Los Angeles County, Department of Recreation 2020.

Frame 2

The Frame 2 study area includes areas within unincorporated County areas, the City of Carson, and the City of Long Beach. The regional settings for the City of Long Beach and the County of Los Angeles are described above under *Frame 1.* The City of Carson has 354 acres of recreational open

space (315 acres of public parkland), consisting of 16 public parks, 1 County park, and 2 public golf courses. There are three types of parks in the City of Carson totaling 315 acres: Regional Parks, Neighborhood Parks, and Mini Parks. Of the 16 public parks in Carson, 1 is a 36-acre regional park, 12 are neighborhood parks ranging in size from 3.4 to 12 acres, and 2 are designated as mini parks.

Table 3.15-6 shows the existing park acreage per 1,000 residents for the Cities of Carson and Long Beach and unincorporated County areas, as well as the Los Angeles County Park and Recreation Needs Assessment Study Areas that exist within Frame 1. Table 3.15-6 also presents the adopted park acreage standard per 1,000 residents according to the *Carson General Plan, City of Long Beach General Plan*, and *Los Angeles County General Plan*, as applicable.

Table 3.15-6. Frame 2: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Carson	3.5	4.0 (*Carson General Plan*)
City of Carson – Park Needs Assessment Study Area	1.5	
City of Long Beach	5.6	8.0 (*City of Long Beach General Plan*)
City of Long Beach Central – Park Needs Assessment Study Area	1.7	
City of Long Beach North – Park Needs Assessment Study Area	0.9	
Unincorporated County Areas	3.3	4.0 (*Los Angeles County General Plan*)
Unincorporated Compton – Park Needs Assessment Study Area	3.2	

Sources: City of Carson 2004b; City of Long Beach 2002; Los Angeles County 2016, 2016.

Existing Local Resources

The parks and recreational facilities within Frame 2 consist of mini parks, pocket parks, neighborhood parks, community parks, greenway parks, and unclassified parks and recreational facilities. The total approximate recreational acreage in Frame 2 is 120.82 acres.

Frame 2 is composed mostly of industrial and single-family residential land uses. The industrial land uses are concentrated mostly on the west side of the LA River. Consequently, most of the parks and recreational facilities within Frame 2 occur on the east side of the LA River. There are two parks within Frame 2 that are west of the LA River: Dominguez Park and Coolidge Park. Both parks are situated within residential neighborhoods that are adjacent to industrial land uses.

The eastern side of the Frame 2 study area is almost entirely residential land uses. DeForest Park and Houghton Park are two of the largest parks within the Frame 2 study area. DeForest Park is immediately to the east of the LA River while Houghton Park is approximately 0.3 mile east of DeForest Park. DeForest Park and Houghton Park both contain sports fields, playgrounds, and a community center, among other amenities (City of Long Beach 2020). Public use at DeForest Park also includes passive recreational activities, such as bird watching, walking, horseback riding, and educational tours and programs. The Dominguez Gap Wetlands, located immediately adjacent to the east of the LA River, is a 1-mile long wetlands area that has an equestrian trail and walkways, as well as an access point to the LA River Trail. The LA River Trail follows the right bank of the river from

West Wardlow Road to beyond the Frame 2 study area (Figure 3.15-2.2). Table 3.15-7 presents all of the parks and recreational facilities within Frame 2, along with the location, total acreage, amenities, and the distance to the LA River; the map IDs given in the table correspond to the numbers depicting these resources on Figure 3.15-1.2. Access points to the LA River Trail within Frame 2 are shown on Figure 3.15-2.2 and described in Table 3.15-8. The map IDs in Table 3.15-8 correspond to the numbers depicting these points on Figure 3.15-2.2.

Table 3.15-7. Parks and Recreational Resources within Frame 2

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Mini Parks (<2 acres)					
48	Arbor Street Park	City of Long Beach	0.43	Green space	0.73
51	Burton W Chace Park	City of Long Beach	0.29	Playground, splash pad	0.36
Pocket Parks (<3 acres)					
50	Baker Street Park	City of Long Beach	1.34	Playground, picnic areas, path	0.17
55	Grace Park	City of Long Beach	1.11	Playground	0.68
58	North Community Garden	City of Long Beach	0.68	Community garden	0.37
Neighborhood Parks (~8 acres)					
49	Atlantic Plaza Park	City of Long Beach	6.57	Tennis, recreation center, green space, benches	1.02
52	Coolidge Park	City of Long Beach	7.18	Basketball court, softball field, playground, dog park, picnic area, community center, youth recreation, restroom	0.13
53	DeForest Park	City of Long Beach	27.57	Tennis, basketball, multipurpose field, playground, community center, restrooms	0.05
54	Dominguez Park	City of Carson	7.63	Tennis, basketball, baseball, soccer, multipurpose field, fitness zone, picnic areas, playground, pool, community centers, senior center, restroom	0.48

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
57	Los Cerritos Park	City of Long Beach	7.73	Tennis, picnic area, playground, restroom	0.29
Community Parks (~35 acres)					
56	Houghton Park	City of Long Beach	26.15	Tennis, basketball, soccer, multipurpose fields, skate park, picnic area, playgrounds, community center, restrooms	0.34
59	Scherer Park	City of Long Beach	25.18	Tennis, basketball, playgrounds, dog park, community center, restroom	0.42
Greenway Parks (No acreage designation)					
60	Sleepy Hollow Greenbelt	City of Long Beach	1.56	Green space	0.31
61	South Street Parkway	City of Long Beach	1.44	Grassy area	0.13
Not Classified (No acreage designation)					
46	51st Street Greenbelt	City of Long Beach	1.02	Green space	0.11
47	72nd Street Staging Area	City of Long Beach	2.96	Equestrian center, trails, restrooms	0.07
62	Wrigley Heights Dog Park	City of Long Beach	1.71	Dog park	0.18
63	C David Molina Park	City of Long Beach	3.3	Sports field, playground, restroom facility, walking path	0.11
Total approximate recreational acreage:			**120.82**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-8. Access Points to the LA River Trail within Frame 2

Map ID	Access Point Name	Address	Side of River
9	Virginia Vista	4065 Del Mar Avenue	River Right
10	Del Amo	287 W Del Almo Boulevard	River Right
11	De Forest Avenue/E Osgood	101 E Osgood Street	River Right
12	Long Beach Boulevard	Long Beach Boulevard	River Right
13	DeForest Park	5941 De Forest Avenue	River Right

Source: Los Angeles County, Department of Recreation 2020.

Frame 3

The Frame 3 study area includes areas within the City of Compton, City of Paramount, City of Lynwood, City of South Gate, City of Downey, City of Cudahy, and unincorporated County areas. The City of Compton operates and maintains a total of 16 parks totaling 118 acres. The City of Paramount has a total of 10 parks and two pools for public use. The City of Lynwood manages nine park facilities over a total of 45 acres, as well as recreational programs. The City of South Gate contains a total of 14 parks and recreational facilities. The City of Downey has a total of 21 parks and recreational facilities and has its own park classification system. The City of Cudahy has four parks. The regional setting for the County was described under *Frame 1*.

Table 3.15-9 shows the existing park acreage per 1,000 residents for the Cities of Compton, Paramount, Lynwood, South Gate, Downey, and Cudahy, and unincorporated County areas, as well as the Los Angeles County Parks and Recreation Needs Assessment Study Areas that exist within Frame 3. Table 3.15-9 also presents the adopted park acreage standard per 1,000 residents according to the *City of Compton Draft General Plan 2030, Paramount General Plan, City of Lynwood General Plan, South Gate General Plan 2035, Downey Vision 2025 General Plan, Cudahy 2040 General Plan,* and *Los Angeles County General Plan*, as applicable.

Table 3.15-9. Frame 3: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Compton	0.6	N/A
City of Compton – Park Needs Assessment Study Area	0.6	
City of Paramount	1.0	N/A
City of Paramount – Park Needs Assessment Study Area	1.8	
City of Lynwood	1.4	3.0 (*City of Lynwood General Plan*)
Unincorporated Lynwood – Park Needs Assessment Study Area	1.6	
City of South Gate	1.6	3.0 (*South Gate General Plan 2035*)
City of South Gate – Park Needs Assessment Study Area	1.6	
City of Downey	1.0	1.5 (*Downey Vision 2025 General Plan*)
City of Downey – Park Needs Assessment Study Area	1.1	
City of Cudahy	0.8	N/A
City of Cudahy – Park Needs Assessment Study Area	0.38	
Unincorporated County Areas	3.3	4.0 (*Los Angeles County General Plan*)
Unincorporated Compton – Park Needs Assessment Study Area	3.2	

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
Unincorporated East Rancho Dominguez – Park Needs Assessment Study Area	0.6	

Sources: City of Compton 2011; City of Paramount 2007; City of Lynwood 2003; City of South Gate 2009; City of Downey 2005; City of Cudahy 2018; Los Angeles County 2015, 2016.

Existing Local Resources

The parks and recreational facilities within Frame 3 consist of park nodes, pocket parks, neighborhood parks, community parks, community regional parks, special use facilities, and unclassified sites. The total approximate recreational acreage in Frame 3 is 370.51 acres. Frame 3 is an urban community that consists mostly of residential, commercial, and industrial development. In Frame 3, residential uses are more prevalent to the west of the LA River, while commercial and industrial uses are more prevalent to the east. Residential uses to the east of the LA River in Frame 3 are more often adjacent to commercial and industrial development.

Spane Park and Ralph C. Dills Park are community parks located in and operated by the City of Paramount. Ralph C. Dills Park is bound to the west by the LA River and to the east by residences. Ralph C. Dills Park has a nature trail, picnic area, and a playground as some of its amenities. Spane Park, which is approximately 0.25 mile east of Ralph C. Dills Park, contains a learning center, baseball diamonds, a basketball court, an outdoor amphitheater, and a playground. Salud Park is also within the City of Paramount, located approximately 0.6 mile east of Ralph C. Dills Park. The amenities of Salud Park focus solely on fitness and include outdoor exercise stations, a rubberized walking/running track, a sand volleyball court, and a field walking path. The only park in the City of Compton within the Frame 3 study area is Kelly Park, which is 3.8 acres and contains a picnic area, basketball courts, and a playground. Kelly Park is approximately 0.5 mile to the west of the LA River. South Gate Park covers a total of 96.8 acres and is the largest park in the City of South Gate. South Gate Park is designated as a community park and offers amenities such as a swim stadium, tennis court, skate park, senior center, golf course, and hockey rink. Hollydale Regional Park is located immediately to the east of the LA River and has sports fields, an equestrian center, a playground, and picnic areas. The largest recreational facility within Frame 3 is the Los Amigos Golf Course, at 146 acres.

Table 3.15-10 presents all of the parks and recreation facilities within Frame 3, along with the location, total acreage, amenities, and distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.3. The LA River Trail follows the right bank of the River from approximately East Greenleaf Boulevard to the Rio Hondo Confluence (Figure 3.15-2.3) and, at Imperial Highway, switches to the left bank and continues beyond the Frame 3 study area. Access points to the LA River Trail within Frame 3 are shown on Figure 3.15-2.3 and described in Table 3.15-11. The map IDs in Table 3.15-11 correspond to the numbers depicting these points on Figure 3.15-2.3.

Table 3.15-10. Parks and Recreational Resources within Frame 3

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Park Nodes (<1/4 acre)					
81	River Pocket Park	City of Cudahy	0.24	Path, benches, informational boards	0.04
Mini Parks (No acreage designation)					
69	Garfield Park	City of Paramount	0.79	Multipurpose field, picnic area, playground	0.79
Pocket Parks (<3 acres)					
70	Hollydale Community Park	City of South Gate	1.01	Basketball, baseball, multipurpose field, picnic area, playground, community center, restroom	0.75
85	Temple Park	City of Downey	0.36	Playground	0.81
86	Triangle Park	City of South Gate	0.57	Benches, grassy areas	0.36
Neighborhood Parks (3 to 10 acres)					
64	Circle Park	City of South Gate	4.40	Basketball, baseball, soccer, playgrounds, restrooms	0.41
65	Clara Park Expansion	City of Cudahy	7.02	Basketball, soccer, fitness center, picnic areas, playground, gym, community center, senior center, restroom	0.56
66	Crawford Park	City of Downey	2.27	Basketball, playground	0.86
67	Cudahy Park	City of Cudahy	8.33	Tennis, basketball, baseball, multipurpose field, skate park, playground, splash pad, community center, restroom	0.04
68	East Rancho Dominguez Park	City of Compton	5.49	Tennis, basketball, soccer, picnic area, playground, gym, community center, senior center, restroom	0.29

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
72	John D Ham Park	City of Lynwood	8.91	Trails, basketball, baseball, multipurpose field, fitness zones, playground, community center, restroom	0.63
73	Kelly Park	City of Compton	4.32	Basketball, baseball, multipurpose field, playground, community center	0.46
75	Meadows Park	City of Paramount	0.65	Picnic areas, playground	0.70
77	Parque Dos Rios	City of South Gate	7.01	Green space	0.03
82	Salud Park	City of Paramount	9.17	Multipurpose field, fitness zones	0.54
Community Parks (10 to 20 acres)					
78	Ralph C. Dills Park	City of Paramount	12.6	Trails, multipurpose fields, fitness zones, playgrounds, restroom	0.05
79	Ricardo Lara Linear Park	City of Lynwood	12.89	Trails, fitness zones, picnic areas, playgrounds, dog park	0.68
84	Spane Park	City of Paramount	4.21	Basketball, multipurpose field, playgrounds, community center, restroom	0.28
Community Regional Parks (20 to 100 acres)					
71	Hollydale Regional Park	City of South Gate	48.04	Trails, tennis, basketball, baseball, soccer, fitness zone, picnic area, playgrounds, dog park, restrooms	0.05
83	South Gate Park	City of South Gate	96.8	Trails, tennis, basketball, baseball, skate park, picnic areas, playgrounds, pool, gym, community centers, senior center, restrooms	0.48

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Special Use Parks (No acreage designation)					
76	Orange Avenue Splash Zone	City of Paramount	0.27	Splash pad, restroom	0.36
Not Classified (No acreage designation)					
64	Circle Park	City of South Gate	0.20	Basketball, baseball, soccer, playgrounds, restrooms	0.32
74	Los Amigos Golf Course	City of Downey	146.26	Golf course	0.52
80	Rio Hondo Golf Club	City of Downey	101	Golf course	1.03
87	Unnamed site	City of Paramount	10.26	No amenities	0.41
88	Washington Ave Park	City of Compton	0.36	Tennis, basketball, fitness zones, playgrounds, splash pads, restrooms	0.33
Total approximate recreational acreage:			**370.52**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-11. Access Points to the LA River Trail within Frame 3

Map ID	Access Point Name	Address	Side of River	Additional Notes
14	Rancho Portillo	500 E 72nd Street	River Right	Water treatment building Rancho Portillo and stairs
15	Alondra	6255 Alondra Boulevard	River Right	N/A
16	Somerset	Somerset Boulevard	River Right	Dills Park and Compton Golf Course
17	Ralph C. Dills Park	6400 San Mateo Street	River Right	Connection through unpaved paths in park
18	Rosecrans	6597 Rosecrans Avenue	River Right	N/A
19	Hollydale Park	11599 Rio Hondo Drive	River Right	Stairs and ramp
20	Rio Hondo Confluence	5517 Imperial Highway	River Right	N/A
21	Imperial	5515 Imperial Highway	River Left	N/A
22	Tweedy/Burtis	9901 Burtis Street	River Left	Legacy High School
23	Southern	5398 Southern Avenue	River Left	Decorative butterfly fence and gate
24	Firestone	5331 Firestone Boulevard	River Left	N/A

Map ID	Access Point Name	Address	Side of River	Additional Notes
25	River Road at Park Avenue Elementary	River Road	River Left	Mural wall with gate, Park Avenue Elementary School
26	River Road at Cudahy River Park	River Road	River Left	Cudahy River Park
27	Clara	5379 Clara Street	River Left	N/A
28	Live Oak	5294 Live Oak Street	River Left	N/A

Source: Los Angeles County, Department of Recreation 2020.

Frame 4

The Frame 4 study area includes areas within the Cities of Bell Gardens, Bell, Maywood, Huntington Park, Vernon, and Commerce, and unincorporated County areas. Frame 4 is a largely industrial area with commercial and high-density residential development occurring in the central and southern portion of the study area. The City of Bell Gardens has 10 parks and recreational facilities totaling 56 acres. The City of Bell has nine parks and recreational facilities. The City of Maywood has five parks, a baseball field, and a community center. The City of Huntington Park has seven parks totaling 31 acres. The City of Vernon does not contain any parks as it is a mostly industrial city. The City of Commerce has four parks and recreational facilities totaling 30 acres. The regional setting for the County was described above.

Table 3.15-12 shows the existing park acreage per 1,000 residents for the Cities of Bell Gardens, Bell, Maywood, Huntington Park, Vernon, and Commerce, and unincorporated County areas, as well as the Los Angeles County Parks and Recreation Needs Assessment Study Areas that exist within Frame 4. Table 3.15-12 also presents the adopted park acreage standard per 1,000 residents according to the *City of Maywood General Plan*, *City of Huntington Park 2030 General Plan, City of Vernon General Plan,* and *Los Angeles County General Plan*, as applicable.

Table 3.15-12. Frame 4: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Bell Gardens	1.3	N/A
City of Bell Gardens – Park Needs Assessment Study Area	1.3	
City of Bell	0.5	N/A
City of Bell – Park Needs Assessment Study Area	0.4	
City of Maywood	0.2	3.0 (*City of Maywood General Plan*)
City of Maywood – Park Needs Assessment Study Area	0.3	
City of Huntington Park	1.2	3.0 (*City of Huntington Park 2030 General Plan*)
City of Huntington Park – Park Needs Assessment Study Area	0.7	
City of Vernon	0	1.5 (*City of Vernon General Plan*)
Unincorporated Vernon – Park Needs Assessment Study Area	0	

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Commerce	2.7	N/A
City of Commerce – Park Needs Assessment Study Area	2.3	
Unincorporated County Areas	3.3	4.0 (*Los Angeles County General Plan*)

Sources: City of Bell Gardens 1995; City of Bell 2018; City of Maywood 2008; City of Huntington Park 2017; City of Vernon 2015; City of Commerce 2008; Los Angeles County 2015, 2016.

Existing Local Resources

The parks and recreational facilities within Frame 4 consist of park nodes, pocket parks, neighborhood parks, community parks, and unclassified parks and recreational facilities. Almost half of the parks and recreational facilities within this study area are less than 1 acre in size. The total approximate recreational acreage in Frame 4 is 44.67 acres.

The Bell Gardens Sports Center and the Bell Gardens Golf Course at Ford Park are located in the same area and are the largest recreational resources by physical size in the Frame 4 study area. However, only a portion of these recreational facilities occur within the study area, with the majority occurring outside of the Frame 4 study area boundary. The Maywood Riverfront Park is located along the west bank of the LA River in Frame 4.

Table 3.15-13 presents all of the parks and recreational facilities within Frame 4, along with the location, total acreage, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.4. In Frame 4, the LA River Trail follows the left bank of the River from Live Oak Street and terminates at South Atlantic Boulevard (Figure 3.15-2.4). Access points to the LA River Trail within Frame 4 are shown on Figure 3.15-2.4 and described in Table 3.15-14. The map IDs in Table 3.15-14 correspond to the numbers depicting these points on Figure 3.15-2.4.

Table 3.15-13. Parks and Recreational Resources within Frame 4

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Park Nodes (<1/4 acre)					
92	Benito Juarez Park	City of Maywood	0.08	Soccer, skate park, playground	0.95
103	Pine Avenue Park	City of Maywood	0.15	Playground	0.28
Pocket Parks (<3 acres)					
94	Darwell Park	City of Bell Gardens	0.26	Picnic area, playground	0.88
95	Freedom Park	City of Huntington Park	0.79	Multipurpose fields	0.99

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
95	Freedom Park Athletic Field	City of Huntington Park	1.57	Basketball, multipurpose field, playground, splash pad, community center, restroom	0.99
96	Gallant Park	City of Bell Gardens	0.26	Playground	0.63
97	Julia Russ Asmus Park	City of Bell Gardens	0.76	Basketball, picnic area, playground, restroom	0.12
98	Marlow Park	City of Bell Gardens	0.98	Basketball, playground, restroom	0.18
99	Maywood Activity Park	City of Maywood	2.40	No amenities	0.19
101	Neighborhood Youth Center	City of Bell Gardens	0.87	Basketball, multipurpose field, picnic area, playground, gym, community center, restroom	0.53
103	Pixley Park	City of Maywood	0.42	Basketball, playground	0.75
105	Treder Park	City of Bell	1.43	Picnic area, senior center, restroom	0.99
Neighborhood Parks (3 to 10 acres)					
99	Maywood Park	City of Maywood	3.05	Baseball, playground, pool, splash pad, gym, community center, restroom	0.17
101	Maywood Riverfront Park	City of Maywood	5.15	Trails, basketball, picnic areas, playground, restroom	0.05
107	Veterans Park	City of Bell	3.26	Basketball, baseball, picnic areas, playground, splash pad, community center, restroom	0.36
Community Parks (10 to 20 acres)					
91	Bell Gardens Sports Center	City of Bell Gardens	18.98	Baseball, soccer, fitness zone, playground, restroom	0.94

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Not Classified (No acreage designation)					
89	Bandini Park	City of Commerce	3.32	Basketball, baseball, multipurpose field, fitness zone, picnic areas, playground, pool, community center	1.04
90	Bell Gardens Golf Course at Ford Park	City of Bell Gardens	12.79	No amenities	0.93
93	Biancini Park	City of Bell	12.45	Benches, grassy areas	0.98
105	Pritchard Field	City of Bell	1.76	No amenities	0.12
Total approximate acreage:			**44.67**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-14. Access Points to the LA River Trail within Frame 4

Map ID	Access Point Name	Address	Side of River	Additional Notes
29	Florence	5379 Florence Avenue	River Left	N/A
30	Gage	5338 E Gage Avenue	River Left	N/A
31	Maywood Riverfront Park	5050 Slauson Avenue	River Left	N/A
32	District	5190 District Boulevard	River Left	N/A
33	Atlantic	4910 S Atlantic Boulevard	River Left	N/A

Source: Los Angeles County, Department of Recreation 2020.

Frame 5

Frame 5 is located in the City of Los Angeles. The City of Los Angeles manages over 16,000 acres of parkland at 444 park sites. Amenities offered at parks and recreational facilities within the city include hundreds of athletic fields, 422 playgrounds, 321 tennis courts, 184 recreation centers, 72 fitness areas, 62 swimming pools and aquatic centers, 30 senior centers, 26 skate parks, 13 golf courses, 12 museums, 9 dog parks, and 187 summer youth camps.

Frame 5 encompasses portions of Downtown Los Angeles, which is highly urbanized and contains high development densities. Recreational resources within this area serve as public places where the community and visitors can enjoy leisure among the bustling center of Downtown. To the west of the LA River, the designated land uses are mostly industrial and contain a small amount of multi-family residential. To the east of the LA River, there are considerably more multi-family land uses present.

Table 3.15-15 shows the existing park acreage per 1,000 residents for the City of Los Angeles, as well as the Los Angeles County Parks and Recreation Needs Assessment Study Areas that exist within Frame 5. Table 3.15-15 also presents the adopted park acreage standard per 1,000 residents according to the *City of Los Angeles General Plan*.

Table 3.15-15. Frame 5: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Los Angeles	9.5	10.0 (*City of Los Angeles General Plan*)
Central North – Park Needs Assessment Study Area	1.6	
Boyle Heights – Park Needs Assessment Study Area	0.6	

Sources: City of Los Angeles 1973; Los Angeles County 2016.

Existing Local Resources

The parks and recreational facilities within Frame 5 consist of pocket parks, community parks, indoor and outdoor sports and fitness centers, pools, and others. The total approximate recreational acreage in Frame 5 is 151.27 acres. The Glendale Narrows portion of the LA River Trail begins at Egret Park in the northernmost portion of Frame 5. As shown on Figure 3.15-2.5, there are access points at the southern and northern ends of Egret Park.

The Los Angeles State Historic Park (LASHP), located approximately 350 feet west of the LA River, provides 32 acres of open space and offers free guided interpretive programs and public events. There are industrial and commercial land uses to the west and south of the LASHP. Elysian Park, which will be discussed in Frame 6, is immediately adjacent to the north. The LASHP is a community regional park, which means that its intended service area is up to 20 miles. The Downey Playground and Recreation Center is about 700 feet to the east of the LA River and has amenities such as a baseball diamond, club room, and a sports field. The City of Los Angeles also operates sports and youth programs for residents at the Recreation Center. Table 3.15-16 presents all of the parks and recreation facilities within Frame 5, along with the location, total acreage, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.5. Access points to the LA River within Frame 5 are shown on Figure 3.15-2.5 and described in Table 3.15-17. The map IDs in Table 3.15-17 correspond to the numbers depicting these points on Figure 3.15-2.5.

Table 3.15-16. Parks and Recreational Resources within Frame 5

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Park Nodes (<1/4 acre)					
110	Aliso-Pico Recreation Center	City of Los Angeles	0.23	Tennis, basketball, baseball, volleyball, auditorium, playground, community centers	0.31
122	Egret Park	City of Los Angeles	0.06	Viewpoint, interpretive displays	0.02
137	Ord and Yale Street Park	City of Los Angeles	0.24	No amenities	0.82

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
142	Ross Valencia Community Park	City of Los Angeles	0.09	No amenities	0.97
Pocket Parks (<3 acres)					
108	1st and Broadway Civic Center Park	City of Los Angeles	1.96	Bicycle parking, outdoor seating, walking paths	0.86
113	Alpine Recreation Center	City of Los Angeles	4.32	Basketball, picnic areas, playgrounds, gyms, community centers, restrooms	0.79
115	Arts District Park	City of Los Angeles	0.52	Playground, picnic area	0.36
117	Budokan Little Tokyo Recreation Center	City of Los Angeles	0.79	Community center	0.80
123	El Pueblo de Los Angeles Historical Monument	City of Los Angeles	2.03	Nature center, interpretive center	0.54
130	Lincoln Heights Recreation Center	City of Los Angeles	1.59	Basketball, playgrounds, community center, senior center, restroom	0.54
131	Lincoln Heights Youth Center	City of Los Angeles	0.74	Community center, gym, roller hockey rink	0.80
135	Lou Costello Recreation Center	City of Los Angeles	1.72	Basketball, baseball, multipurpose field, playground, pool, gym, senior center, restroom	0.68
139	Prospect Park	City of Los Angeles	2.70	Playground	0.50
143	San Julian Park	City of Los Angeles	0.29	Picnic areas	0.88
144	Sixth and Gladys Street Park	City of Los Angeles	0.34	Basketball, fitness zone, picnic area, playground	0.77
145	State Street Recreation Center	City of Los Angeles	2.62	Basketball, baseball, multipurpose field, fitness zone, playground, gym, community center	0.79

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Neighborhood Parks (3 to 10 acres)					
116	Boyle Heights Sports Center Park	City of Los Angeles	7.22	Basketball, baseball, soccer, playground, track field, picnic area, community center	0.63
120	Downey Playground and Recreation Center	City of Los Angeles	9.03	Basketball, baseball, playgrounds, pools, gyms	0.13
136	Mount Olympus Park	City of Los Angeles	8.91	No amenities	0.90
138	Pecan Playground	City of Los Angeles	4.28	Basketball, baseball, multipurpose field, playground, pool, gym, restroom	0.39
Community Regional Parks (20 to 100 acres)					
127	Hollenbeck Park	City of Los Angeles	20.47	Multipurpose field, fitness zone, skatepark, picnic area, playground, community center, barbecue pits, restrooms	0.48
134	Los Angeles State Historic Park	City of Los Angeles	32.02	Pathways, restrooms, picnic area	0.07
132	Lincoln Park Recreation Center/Senior Citizen Center	City of Los Angeles	43.25	Tennis, basketball, baseball, multipurpose field, fitness zone, skatepark, picnic area, playgrounds, pool, senior center, gym, restrooms	0.98
Regional Parks (>100 acres)					
124	Elysian Park	City of Los Angeles	575.96	Tennis, basketball, baseball, multipurpose field, picnic areas, playgrounds, hiking trail, community center, restrooms	0.03

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Special Use Parks (No acreage designation)					
141	Roosevelt High School Pool	City of Los Angeles	1.50	Pool	0.97
Not Classified (No acreage designation)					
109	Albion Riverside Park	City of Los Angeles	12.39	Multi-purpose athletic fields, walking paths, adult fitness zones, children's play area, picnic area	0.12
111	Aliso Triangle	City of Los Angeles	0.04	No amenities	0.31
114	Arroyo Seco	City of Los Angeles	16.46	No amenities	0.05
118	City Hall Park	City of Los Angeles	1.92	No amenities	0.79
119	Confluence Park	City of Los Angeles	0.40	No amenities	0.10
121	East Los Angeles Park	City of Los Angeles	0.32	Picnic area	1.03
125	Grand Park	Los Angeles County	9.32	Picnic area, splash pad, restrooms	0.89
126	Heritage Square	City of Los Angeles	8.43	No amenities	0.88
128	Los Angeles Youth Athletic Club	City of Los Angeles	4.60	No amenities	0.04
129	Lacy Street Neighborhood Park	City of Los Angeles	0.40	Picnic area	0.40
133	Los Angeles River	City of Los Angeles	0.70	No amenities	0.00
140	Ramon Garcia Recreation Center	City of Los Angeles	5.69	Basketball, baseball, multipurpose field, picnic area, playground, gym, community center	1.02
146	Wellness Center Park and Fitness Center	City of Los Angeles	30.65	Picnic areas, playground, gardening area, wellness center, outdoor exercise equipment	0.90
Total approximate recreational acreage:			**151.27**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-17. Access Points to the LA River within Frame 5

Map ID	Access Point Name	Address	Side of River
34	Egret Park	Riverside Drive	River Left
35	Egret Park	Riverside Drive	River Left

Source: Los Angeles County, Department of Recreation 2020.

Frame 6

The Frame 6 project study area includes areas within the Cities of Los Angeles and Glendale. The regional setting for the City of Los Angeles was described above in Frame 5. The City of Glendale manages 286 acres of developed park land and over 5,000 acres of open space. The City of Glendale Community Service and Parks Department consists of 46 parks and park facilities, including 36 parks, the Civic Auditorium, 4 community centers, and 6 sports facilities. The City of Glendale has an adopted standard of 6 acres of parkland per 1,000 residents but currently has 1.5 acres of parkland per 1,000 residents.

Frame 6 contains the highest percentage of open space and recreation land uses of the entire study area. There is also a substantial amount of both single-family and multi-family residential land uses scattered throughout the study area. Industrial land uses are present throughout to the east of the LA River. Table 3.15-18 shows the existing park acreage per 1,000 residents for the Cities of Los Angeles and Glendale, as well as the Los Angeles County Parks and Recreation Needs Assessment Study Areas that exist within Frame 6. Table 3.15-18 also presents the adopted park acreage standard per 1,000 residents according to the *City of Los Angeles General Plan* and the *City of Glendale General Plan*, as applicable.

Table 3.15-18. Frame 6: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Los Angeles	9.5	10.0 (*City of Los Angeles General Plan*)
North Hollywood – Park Needs Assessment Study Area	2.6	
Silver Lake–Echo Park–Elysian Valley – Park Needs Assessment Study Area	0.8	
Northeast Los Angeles–North – Park Needs Assessment Study Area	1.5	
City of Glendale	1.5	6.0 (*City of Glendale General Plan*)
City of Glendale – Park Needs Assessment Study Area	0.4	

Sources: City of Los Angeles 1973; City of Glendale 1996; Los Angeles County 2016.

Existing Local Resources

The parks and recreational facilities within Frame 6 consist of park nodes, pocket parks, neighborhood parks, community parks, community regional parks, regional parks, special use parks, and others. The total approximate recreational acreage in Frame 6 is 2,820.90 acres. The two largest parks in the entire study area, Griffith Park and Elysian Park, occur in Frame 6. Griffith Park, which

is immediately adjacent to the west of the LA River, is one of the largest municipal parks with urban wilderness areas in the U.S., totaling over 4,000 acres (City of Los Angeles 2017a). Amenities within Griffith Park include bike rentals, camping, golf, hiking, horseback riding, jogging, picnicking, play, soccer, swimming, tennis, and more. Griffith Park also provides several access points to the LA River at the Bette Davis Picnic Area, Ferraro Fields, Autry Museum, and Los Angeles Zoo. Elysian Park, which was the City of Los Angeles' first park, totals 576 acres. Elysian Park offers extensive hiking and biking trails. An estimated 9,712 city residents live within a one-half mile walking distance of Elysian Park (City of Los Angeles 2019a). The Elysian Valley River Recreation Zone is a 1.7-mile stretch of the river that allows the public, at certain times during the year, to walk, fish, and use non-motorized and steerable boats, such as kayaks in the LA River. The Silver Lake Reservoir Complex is situated between Elysian Park and Griffith Park to the west of the LA River. Residential land uses surround the complex and it is designated as a neighborhood park, which indicates that this recreation facility is intended to mainly serve the surrounding residents. A jogging path loops around the complex that is used daily by hundreds of people (City of Los Angeles 2019b). Immediately adjacent to the complex is the Silver Lake Meadows Park. On the east side of the LA River, the Rio de Los Angeles State Park provides soccer fields, a playground, and hiking trails. The Rio de Los Angeles State Park sits within an intensely urbanized setting that is characterized by a mix of land uses, from high-density residential districts to industrial factories and manufacturing. Table 3.15-19 presents all of the parks and recreational facilities within Frame 6, along with the location, total acreage, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.6.

In Frame 6, the LA River Trail starts on the left bank north of Egret Park and ends at Riverside Drive after a continuous 7.25-mile stretch. For a half-mile, from just north of Confluence Park to Garden Street, the LA River Trail occurs on both sides of the bank. Access points to the LA River Trail within Frame 6 are shown on Figure 3.15-2.6 and described in Table 3.15-20. The map IDs in Table 3.15-20 correspond to the numbers depicting these points on Figure 3.15-2.6.

Table 3.15-19. Parks and Recreational Resources within Frame 6

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Park Nodes (<1/4 acre)					
150	Cypress Park Library	City of Los Angeles	0.18	Community center	0.37
175	Oso Park	City of Los Angeles	0.21	No amenities	0.05
182	Steelhead Park	City of Los Angeles	0.22	Amphitheater	0.02
Pocket Parks (<3 acres)					
148	Cerritos Park	City of Glendale	1.36	Picnic area, playground, splash pad, restroom	0.89
149	Chevy Chase Park	City of Los Angeles	1.18	Basketball, playground, gym, restroom	0.41
155	Elysian Valley Gateway Park	City of Los Angeles	0.32	Picnic area	0.02

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
156	Elysian Valley Recreation Center	City of Los Angeles	2.01	Basketball, baseball, soccer, playground, gym	0.10
157	Glenhurst Park	City of Los Angeles	0.29	Playground	0.12
161	Griffith Manor Park	City of Glendale	2.80	Basketball, playground	0.54
164	Harvard Mini-Park	City of Glendale	0.29	Picnic area, playground	0.85
166	Juntos Park	City of Los Angeles	1.64	Playground, splash pad, restroom	0.69
171	Milford Mini-Park	City of Glendale	0.26	Playground	0.68
177	Pacific Park and Community Center	City of Glendale	5.30	Basketball, baseball, soccer, picnic areas, playgrounds, splash pads, gyms, community centers, restrooms	0.52
Neighborhood Parks (3 to 10 acres)					
151	Cypress Recreation Center	City of Los Angeles	3.49	Basketball, baseball, soccer, multipurpose field, picnic area, playground, gym, community center, restroom	0.14
157	Fremont Park	City of Glendale	7.90	Tennis, basketball, playgrounds, pool, restroom	0.60
170	Marsh Park/Lewis MacAdams Riverfront Park	City of Los Angeles	4.76	Restrooms, picnic grounds, grassy areas, playgrounds, trail, fitness zones, outdoor classrooms, pavilion	0.03
174	North Atwater Park	City of Los Angeles	5.37	Basketball, baseball, multipurpose fields, picnic areas, playgrounds, restrooms	0.04
178	Pelanconi Park	City of Glendale	3.09	Basketball, baseball, playground, restroom	0.43
180	Silver Lake Meadows Park	City of Los Angeles	8.80	Benches, path, grassy area	0.63
183	Sunnynook Park	City of Los Angeles	3.52	Informational signage, path	0.03

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Community Parks (10 to 20 acres)					
158	Glassell Park and Recreation Center	City of Los Angeles	12.66	Tennis, basketball, baseball, multipurpose field, fitness zone, picnic, playground, pool, gym, community center, restroom	0.83
Community Regional Parks (20 to 100 acres)					
179	Rio de Los Angeles State Park	City of Los Angeles	54.77	Tennis, basketball, baseball, soccer, multipurpose field, picnic area, playground, splash pad, restroom	0.03
Regional Parks (>100 acres)					
154	Elysian Park	City of Los Angeles	575.96	Tennis, basketball, baseball, multipurpose field, picnic areas, playgrounds, community center, restrooms, horseshoe pits, jogging path, hiking trail	0.03
162	Griffith Park	City of Los Angeles	4,066.03	Tennis, baseball, soccer, fitness zone, picnic area, playgrounds, pools, dog park, gym, senior center, restrooms	0
Special Use Parks (No acreage designation)					
176	Pacific Community Pool	City of Glendale	0.46	Pools	0.57
Not Classified (No acreage designation)					
147	Arroyo Seco	City of Los Angeles	16.46		0.42
152	Glassell Park Community Garden	City of Los Angeles	0.12	No amenities	0.85
153	Elyria Canyon Park	City of Los Angeles	35.90	Trails and picnic tables	0.64
160	Greayer's Oak Park	City of Los Angeles	0.60	Grassy area	0.92
163	Griffith Park Central Service Yard	City of Los Angeles	28.30	No amenities – area used as equipment storage for park maintenance.	0.03
165	Heritage Square	City of Los Angeles	8.43	Historic structures and exhibits at open-air architecture museum	1.05

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
167	Los Angeles River and Trail	City of Los Angeles	8.23	Trail	0.00
168	Los Angeles River Center and Gardens	City of Los Angeles	6.69	Park benches, picnic tables, lawn area, self-serve bicycle staging area, restrooms, community center	0.13
169	Los Feliz Golf Course	City of Los Angeles	11.80	Golf course	0.03
170	Marsh Street Skate Park	City of Los Angeles	0.29	Skate park	0.06
172	Glendale Narrows Riverwalk	City of Glendale	3.55	Equestrian facility, interpretive displays, picnic tables, public art project, trail for bicyclists and pedestrians	0.03
173	Natural Park	City of Los Angeles	0.41	No amenities	0.03
181	Silver Lake Reservoir	City of Los Angeles	117.77	Trail	0.43
184	Travel Town Museum	City of Los Angeles	10.38	Train museum	0.07
185	Unnamed site – Mountains Recreation and Conservation Authority	City of Los Angeles	0.40	No amenities	0.01
186	Unnamed site – Mountains Recreation and Conservation Authority	City of Glendale	1.99	No amenities	0.03
Total approximate recreation acreage:			**2,820.90**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-20. Access Points to the LA River Trail within Frame 6

Map ID	Access Point Name	Address	Side of River
36	Barclay Street	2100 Barclay Street	River Left
37	Oros Street	2228 Oros Street	River Left
38	Steelhead Park	2220 Oros Street	River Left
39	Duvall Street	2255 Duvall Street	River Left
40	Gatewood	2441 Gatewood Street	River Left
41	Harwood Street	2500 Harwood Street	River Left
42	Shoredale Avenue	2500 Shoredale Avenue	River Left
43	Meadowvale	2498 Meadowvale Avenue	River Left

Map ID	Access Point Name	Address	Side of River
44	Riverdale	2240 Riverdale Avenue	River Left
45	Dallas	2498 Dallas Avenue	River Left
46	Newell	2831 Newell Street	River Left
47	Elysian Valley Gateway Park	2907 Knox Avenue	River Left
48	Denby	2998 Denby Avenue	River Left
49	Coolidge	3047 N. Coolidge Avenue	River Left
50	Marsh Street Nature Park	2948 Marsh Street	River Left
51	Lewis MacAdams Riverfront Park	3000 Gleneden Street	River Left
52	Ripple	2970 Ripple Place	River Left
53	Gilroy	3099 Gilroy Street	River Left
54	Clearwater	2817 Clearwater Street	River Left
55	Fletcher/Rattlesnake Park	2508 Fletcher Drive	River Left
56	LA River Bicycle Park at Crystal Street	2499 Crystal Street	River Left
57	Glendale Boulevard South	Glendale Boulevard and I-5	River Left
58	Glendale	Glendale Boulevard	River Left
59	Sunnynook River Park	N/A	River Left
60	Sunnynook Pedestrian Bridge	2901 Glendale Boulevard	River Left
61	Los Feliz South	3357 Los Feliz Boulevard	River Left
62	Los Feliz North	3357 Los Feliz Boulevard	River Left
64	Zoo Drive	N Zoo Drive	River Left
65	Flower/Fairmont	905 Flower Street	River Right
66	Garden/Paula	1300 Garden Street	River Right
67	Riverside	48 Riverside Drive	River Left

Source: Los Angeles County, Department of Recreation 2020.

Frame 7

Frame 7 occurs in the Cities of Los Angeles and Burbank, as well as unincorporated County areas. The regional setting for the County and the City of Los Angeles was described above under *Regional Setting* and *Frame 5*, respectively. There are 26 parks within the City of Burbank, ranging in size from pocket parks less than 0.25 acre up to a 500-acre regional park. In Burbank, based on the existing population of 103,340 in 2010, there are approximately 7.1 acres of parkland for every 1,000 Burbank residents (City of Burbank 2013). When broken down by park type, that translates to 5.84 acres of regional parks, 0.69 acre of community parks, 0.54 acre of neighborhood parks, and 0.02 acre of pocket parks per 1,000 residents.

In the Frame 7 study area, over half of the designated land uses are residential. To the south of the LA River, the largest land use designation is single-family residential. There are also open space and recreation and mixed commercial and industrial land uses in this area. To the north of the LA River, there are mostly single- and multi-family residential land uses with commercial uses interspersed.

Table 3.15-21 shows the existing park acreage per 1,000 residents for the Cities of Los Angeles and Burbank, as well as the Los Angeles County Parks and Recreation Needs Assessment Study Areas that exist within Frame 7. Table 3.15-21 also presents the adopted park acreage standard per 1,000

residents according to the *City of Los Angeles General Plan* and the *Burbank 2035 General Plan* as applicable.

Table 3.15-21. Frame 7: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Los Angeles	9.5	10.0 (*City of Los Angeles General Plan*)
North Hollywood – Park Needs Assessment Study Area	2.6	
Sherman Oaks–Studio City–Toluca Lake–Cahuenga Pass/Unincorporated Universal City – Park Needs Assessment Study Area	0.8	
North Hollywood–Valley Village – Park Needs Assessment Study Area	1.1	
City of Burbank	1.5	6.0 (*Burbank 2035 General Plan*)
City of Burbank – Park Needs Assessment Study Area	7.0	

Sources: City of Los Angeles 1973; City of Burbank 2013; Los Angeles County 2016.

Existing Local Resources

The parks and recreational facilities within Frame 7 consist of pocket parks, neighborhood parks, community parks, community regional parks, and others. The total approximate recreational acreage in Frame 7 is 636.12 acres. The majority of Griffith Park occurs in Frame 6; however, Griffith Park is also partially within Frame 7. North Weddington Park is about 200 feet to the south of the LA River and is located toward the western portion of Frame 7. The park is surrounded by residential and commercial land uses. Mountain View Park, which is approximately 1,000 feet north of the LA River, is situated among residential land uses and provides amenities such as a basketball court, horseshoe pit, picnic tables, playground, and tennis courts. Table 3.15-22 presents all of the parks and recreation facilities within Frame 7, along with the location, total acreage, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.7.

There are no access points to the LA River Trail within Frame 7, as shown on Figure 3.15-2.7. However, the Burbank Equestrian Trails exist on the right bank from Sonora Avenue and Riverside Drive in the east to South Beachwood Drive in the west, running alongside the Los Angeles Equestrian Center.

Table 3.15-22. Parks and Recreational Resources within Frame 7

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Pocket Park (<3 acres)					
187	Abraham Lincoln Park	City of Burbank	1.71	Playground	0.84
191	El Paseo Cahuenga Park	City of Los Angeles	1.55	Path	0.76
194	Johnny Carson Park	City of Burbank	2.41	Trails, fitness zone, playgrounds, restroom	0.16
198	Mountain View Park	City of Burbank	2.49	Tennis, basketball, playgrounds, restroom	0.18
Neighborhood Parks (3 to 10 acres)					
205	Verdugo Park	City of Burbank	6.93	Tennis, basketball, playgrounds, pools, gym, community center, restroom	0.98
206	Woodbridge Park	City of Los Angeles	4.30	Fitness zone, picnic areas, playground	0.35
Community Parks (10 to 20 acres)					
199	North Weddington Park	City of Los Angeles	10.16	Basketball, baseball, playground, community center	0.03
200	South Weddington Park	City of Los Angeles	14.04	Baseball, restrooms	0.03
Community Regional Parks (20 to 100 acres)					
192	Fryman Canyon Park	City of Los Angeles	64.84	Fitness course, trail	0.95
Regional Parks (>100 acres)					
193	Griffith Park	City of Los Angeles	4,066.03	Tennis, baseball, soccer, fitness zones, picnic areas, playgrounds, pools, dog parks, gyms, senior centers, restrooms	0
Not Classified (No acreage designation)					
188	Cahuenga Pass-Oakshire Open Space	City of Los Angeles	16.95	No amenities	1.00
189	Cahuenga Peak Phase 1	City of Los Angeles	130.51	No amenities	0.45
190	Campo De Cahuenga	City of Los Angeles	0.73	No amenities	0.23
194	Johnny Carson Park	City of Burbank	12.78	Trails, fitness zone, playgrounds, restroom	0.08

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
195	Los Angeles City Water Resource Parkland	City of Los Angeles	1.45	No amenities	0.72
196	Los Angeles City Water Resource Parkland	City of Los Angeles	1.79		0.91
197	Los Angeles Department of Water and Power	City of Los Angeles	166.50		0.69
202	Unnamed site - Mountains Recreation and Conservation Authority	City of Los Angeles	9.06	No amenities	0.66
203	Unnamed site – Mountains Recreation and Conservation Authority	City of Los Angeles	0.68	No amenities	0.76
204	Unnamed site – Mountains Recreation and Conservation Authority	City of Los Angeles	1.09	No amenities	0.89
Total approximate recreational acreage:			**636.12**		

Source: Los Angeles County, Department of Recreation 2020.

Frame 8

Frame 8 occurs in the City of Los Angeles. Residential land uses compose over 85 percent of this frame. The regional setting for the City of Los Angeles was described above in *Frame 5*. Open space and recreation land uses are the second largest land use, totaling about 6 percent. The parks and recreational facilities occur mostly on the southern boundary of Frame 8.

Table 3.15-23 shows the existing park acreage per 1,000 residents for the City of Los Angeles, as well as the Los Angeles County Park and Recreation Needs Assessment Study Areas that exist within Frame 8. Table 3.15-23 also presents the adopted park acreage standard per 1,000 residents according to the *City of Los Angeles General Plan*.

Table 3.15-23. Frame 8: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Los Angeles	9.5	10.0 (*City of Los Angeles General Plan*)
Van Nuys–North Sherman Oaks – Park Needs Assessment Study Area	0.2	
Valley Glen–North Sherman Oaks – Park Needs Assessment Study Area	0.9	
Sherman Oaks–Studio City–Toluca Lake–Cahuenga Pass/Unincorporated Universal City – Park Needs Assessment Study Area	0.8	
North Hollywood–Valley Village – Park Needs Assessment Study Area	1.1	

Sources: City of Los Angeles 1973; Los Angeles County 2016.

Existing Local Resources

The parks and recreational facilities within Frame 8 consist of pocket parks, neighborhood parks, community parks, community regional parks, and others. The total approximate recreational acreage in Frame 8 is 399.71 acres. The Van Nuys Sherman Oaks Recreation Center is approximately a quarter mile north of the LA River. This Recreation Center offers a wide variety of sports and other recreational programs for the community, especially the youth. The largest park within the Frame 8 study area at 128 acres is Wilacre Park. Wilacre Park contains trails for biking, equestrian use, and hiking and provides access to a larger system of trails. Table 3.15-24 presents all of the parks and recreation facilities within Frame 8, along with the location, total acreage, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.8.

Traveling west through Frame 8, the LA River Trail starts on the right bank and continues for approximately 1 mile. At Coldwater Canyon Avenue, the River Trail begins on the right bank and travels through the North Valleyheart Riverwalk until it reaches the intersection of Fulton Avenue and Valleyheart Drive. For approximately 1,000 feet between Coldwater Canyon Avenue and Fulton Avenue, the River Trail occurs on both the right and left banks. The left bank portion of the River Trail is adjacent to the Richard Lillard Outdoor Classroom, providing interpretive displays, an outdoor amphitheater, and native riparian landscaping. The River Trail begins again approximately 2 miles west of Fulton Avenue, at Cedros Avenue, then travels through Ernie's Walk and ends at Sepulveda Boulevard. Ernie's Walk is a quarter-mile section of the LA River right bank where Ernie La Mere, a local resident, planted and maintained landscaping for the benefit of the community. The site is heavily used by local residents and neighbors. Access points to the LA River Trail within Frame 8 are shown on Figure 3.15-2.8 and described in Table 3.15-25. The map IDs in Table 3.15-25 correspond to the numbers depicting these points on Figure 3.15-2.8.

Table 3.15-24. Parks and Recreational Resources within Frame 8

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Pocket Parks (<3 acres)					
206	Coldwater Canyon Open Space Park	City of Los Angeles	2.034	Trails	0.91
214	Moorpark Park	City of Los Angeles	2.413	Playground	0.23
Neighborhood Parks (3 to 10 acres)					
216	Oak Forest West	City of Los Angeles	9.686	No amenities	0.88
217	Sherman Oaks Castle Park	City of Los Angeles	4.978	Miniature golf, arcade, batting cages	0.01
218	Studio City Park	City of Los Angeles	9.308	Tennis, basketball, baseball, fitness zone, playground, community center	0.35
219	Teichman Family Magnolia Park	City of Los Angeles	3.866	Basketball	0.06
Community Parks (10 to 20 acres)					
210	Dixie Canyon Park	City of Los Angeles	18.29	Trails	0.81
208	Coldwater Canyon Park	City of Los Angeles	41.743	Picnic areas, play areas, water feature, shaded arbor, jogging track, grassy area	0.85
209	Deervale-Stone Canyon Park	City of Los Angeles	79.402	Trails	0.81
211	Fossil Ridge Park	City of Los Angeles	57.362	Trails	0.91
212	Libbit Park/Encino Little League	City of Los Angeles	24.543	Baseball	0.61
213	Longridge Park	City of Los Angeles	54.372	Trails	0.72
223	Van Nuys Sherman Oaks Recreation Center	City of Los Angeles	65.549	Tennis, basketball, baseball, soccer, fitness zone, picnic area, playgrounds, pools, community center, senior center, restroom	0.22
Regional Parks (>100 acres)					
224	Wilacre Park	City of Los Angeles	128	Restrooms, drinking fountains, picnic area	0.35
225	Woodley Avenue Park	City of Los Angeles	119.836	Fitness zones, picnic area, playground, restrooms	1.00

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Not Classified (No acreage designation)					
214	Los Angeles Riverfront Park	City of Los Angeles	6.2	No amenities	0.00
220	Unnamed site – Mountains Recreation and Conservation Authority	City of Los Angeles	57.796	No amenities	0.95
221	Unnamed site – Mountains Recreation and Conservation Authority	City of Los Angeles	2.856	No amenities	0.58
222	Unnamed site – Mountains Recreation and Conservation Authority	City of Los Angeles	2.569	No amenities	0.83
Total approximate recreational acreage:			**399.71**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-25. Access Points to the LA River Trail and Trail within Frame 8

Map ID	Access Point Name	Address	Side of River
68	Valleyheart/Radford	12000 Valleyheart Drive	River Left
69	Valleyheart/Guerin	12078 Valleyheart Drive	River Left
70	Valleyheart/Laurel Canyon	12098 Valleyheart Drive	River Left
71	Laurel Canyon	4070 Laurel Canyon Boulevard	River Left
72	Laurelgrove	12300 Ventura Court	River Left
73	Whitsett	12500 Valleyheart Drive	River Left
76	Coldwater Canyon/Valleyheart	4250 Coldwater Canyon Avenue	River Right
77	Valleyheart/Ethel	13099 N Valleyheart Drive	River Right
78	Longridge/Valleyheart	13227 Valleyheart Drive	River Left
79	Valleyheart/Fulton	132000 Bloomfield Street	River Right
80	Fulton/Valleyheart	13298 Valleyheart Drive	River Left
81	Valleyheart/Cedros	4805 Cedros Avenue	River Right
82	Valleyheart/Huston	14852 Valleyheart Drive	River Right
83	Valleyheart/Kester	14900 Valleyheart Drive	River Left
84	Morrison Street Park	15115 Morrison Street	River Left
85	Sepulveda/Valleyheart	4984 Sepulveda Boulevard	River Left

Source: Los Angeles County, Department of Recreation 2020.

Frame 9

Frame 9 occurs in the City of Los Angeles and is dominated by residential land uses. The regional setting for the City of Los Angeles was described above in *Frame 5.* Toward the northwest end of Frame 9, there are some industrial and commercial land uses among multi-family residences. The

presence of parks is heavily concentrated toward the east end of Frame 9, with open space and recreation land uses surrounding both banks of the LA River for most of this study area.

Table 3.15-26 shows the existing park acreage per 1,000 residents for the City of Los Angeles, as well as the Los Angeles County Parks and Recreation Needs Assessment Study Areas that exist within Frame 9. Table 3.15-26 also presents the adopted park acreage standard per 1,000 residents according to the *City of Los Angeles General Plan*.

Table 3.15-26. Frame 9: Existing Park Acreage Based on Countywide Park Needs Assessment Study Areas and Adopted Park Acreage Standards

Jurisdiction	Existing Park Acreage per 1,000 Residents	Adopted Park Acreage Standard per 1,000 Residents
City of Los Angeles	9.5	10.0 (*City of Los Angeles General Plan*)
Canoga Park–Winnetka – Park Needs Assessment Study Area	0.5	
Reseda–West Van Nuys – Park Needs Assessment Study Area	0.5	
Encino–Tarzana – Park Needs Assessment Study Area	1.8	

Source: City of Los Angeles 1973; Los Angeles County 2016.

Existing Local Resources

Frame 9 includes multiple golf courses, including Balboa Golf Course and Encino Golf Course, Van Nuys Golf Course, and Woodley Lakes Golf Course. The total approximate recreational acreage in Frame 9 is 1,575.17 acres. The Sepulveda Basin Wildlife Reserve, which totals over 300 acres, is located near the east end of Frame 9. The Sepulveda Basin Wildlife Reserve contains walking and biking paths, bird watching opportunities, and a number of facilities such as the Japanese Garden, the golf course, picnic areas, and Lake Balboa. Table 3.15-27 presents all the parks and facilities within Frame 9, along with the location total acreage, amenities, and the distance to the LA River; the map IDs correspond to the numbers depicting these resources on Figure 3.15-1.9. Within Frame 9 also lies the Sepulveda Basin Recreation Area. The Mountains Recreation and Conservation Authority (MRCA), in cooperation with the City of Los Angeles, the County, and the U.S. Army Corps of Engineers, manages the Los Angeles River Recreation Program. The 2-mile Sepulveda Basin Recreation Area allows the public, from Memorial Day to Labor Day, to walk, fish, and use non-motorized and steerable boats, such as kayaks, in the LA River. The LA River Trail occurs on both sides of the bank through the Sepulveda Basin Recreation Area, between Burbank Boulevard and Balboa Boulevard.

Traveling west through Frame 9, the LA River Trail starts at Balboa Boulevard in the Sepulveda Basin Recreation Area. This segment of trail features 1.5-mile walking paths along both banks of the river between Balboa Boulevard and Burbank Avenue. The scenic, natural river bottom includes riparian habitat and a large bird population. The walk turnaround point features a small confluence and a view of the Sepulveda Dam. The River Trail begins again at Vanalden Avenue as the West Valley Bikeway, which consists of an uninterrupted 1.8-mile multi-use path along the left bank of the Los Angeles River. Within approximately 5 acres, it incorporates a bikeway, public amenities (benches, drinking fountains, exercise equipment, etc.), habitat landscaping, a vegetated bioswale for the drainage and treatment of storm water, and interpretive signage. At Mason Avenue, the trail

transitions into the Headwaters Greenway, extending along both banks to Owensmouth Avenue. This 1.5-mile trail and 5-acre surrounding greenway is outfitted with native and drought-tolerant plants and includes a rain garden for water conservation. Access points to the LA River Trail within Frame 9 are shown on Figure 3.15-2.9 and described in Table 3.15-28. The map IDs in Table 3.15-28 correspond to the numbers depicting these points on Figure 3.15-2.9.

Table 3.15-27. Parks and Recreational Resources within Frame 9

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Pocket Parks (<3 acres)					
226	Aliso Creek Park	City of Los Angeles	1.707	No amenities	0.02
230	Caballero Creek Park	City of Los Angeles	1.529	No amenities	0.01
233	Jesse Owens Mini Park	City of Los Angeles	1.745	Restroom	0.99
Neighborhood Parks (3 to 10 acres)					
234	John Quimby Park	City of Los Angeles	4.26	Tennis, basketball, playground	0.15
237	Runnymede Recreation Center	City of Los Angeles	5.93	Tennis, playground, restroom	0.71
242	Tarzana Recreation Center	City of Los Angeles	5.572	Baseball, fitness zone, playground, community center	0.82
244	West Valley Park	City of Los Angeles	8.805	Playground	0.22
Community Parks (10 to 20 acres)					
232	Hjelte Sports Center	City of Los Angeles	14.717	Baseball, restrooms	0.32
241	Shadow Ranch Park	City of Los Angeles	12.332	Basketball, baseball, soccer, fitness zone, playground, community center	0.96
Community Regional Parks (20 to 100 acres)					
228	Balboa Sports Center	City of Los Angeles	48.76	Tennis, basketball, baseball, soccer, playground, gym, restrooms	0.02
236	Reseda Park and Recreation Center	City of Los Angeles	29.80	Tennis, basketball, baseball, picnic area, playground, pool, community center, senior center, restroom	0.01
240	Sepulveda Garden Center	City of Los Angeles	24.09	Picnic area, community center, restroom	0.62

Map ID	Park/Facility Name	Location	Size (acres)	Amenities	Distance to LA River (miles)
Regional Parks (>100 acres)					
235	Lake Balboa Park	City of Los Angeles	110.97	Baseball, picnic areas, playground, restrooms	0.03
238	Sepulveda Basin Recreation Area	City of Los Angeles	268.40	Baseball, soccer, multipurpose fields, fitness zones, dog parks, senior centers, restrooms	0.01
245	Woodley Avenue Park	City of Los Angeles	119.84	Fitness zone, picnic area, playground, restrooms	0.40
Not Classified (No acreage designation)					
227	Balboa Golf Course and Encino Golf Course	City of Los Angeles	320.94	Golf course	0.03
229	Bell Creek Park	City of Los Angeles	0.37	No amenities	0.96
231	Canoga Park Senior Citizen Center	City of Los Angeles	0.77	Senior center	0.56
239	Sepulveda Basin Wildlife Reserve	City of Los Angeles	327.34	Trails, amphitheater	0.02
243	Van Nuys Golf Course	City of Los Angeles	56.30	Golf course	0.71
246	Woodley Lakes Golf Course	City of Los Angeles	209.19	Golf course	0.04
Total approximate recreational acreage:			**1,575.17**		

Source: Los Angeles County, Department of Recreation 2020.

Table 3.15-28. Access Points to the LA River Trail within Frame 9

Map ID	Access Point Name	Address	Side of River
86	Burbank	Burbank Boulevard	River Left
87	Burbank	Burbank Boulevard	River Left
88	Balboa	Balboa Boulevard	River Left
89	Balboa	Balboa Boulevard	River Left
90	Vanalden	6414 Vanalden Avenue	River Left
91	Tampa	Tampa Avenue	River Left
92	Corbin	6562 Corbin Avenue	River Left
93	Winnetka	6606 Winnetka Avenue	River Left
95	Mason	6810 Mason Avenue	River Left
96	Mason/Bassett	6828 Mason Avenue	River Right
97	Lurline/Bassett	6900 Lurline Avenue	River Right
98	De Soto/Bassett	6900 De Soto Avenue	River Right
100	Variel/Bassett	6900 Variel Avenue	River Right
102	Canoga/Bassett	6800 Canoga Avenue	River Right

Map ID	Access Point Name	Address	Side of River
104	Owensmouth/Bassett	6900 Owensmouth Avenue	River Right

Source: Los Angeles County, Department of Recreation 2020.

3.15.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of parks, recreation, and open space in this PEIR.

Federal

No federal regulations are applicable to the proposed Project and the recreation impact analysis.

State

Public Park Preservation Act of 1971

The California Public Park Preservation Act of 1971 provides that no city, county, public district, agency of the State government, or public utility may acquire any real property, which is in use as a public park at the time of acquisition, for the purpose of utilizing the property for any non-park purpose, unless the acquiring entity pays or transfers to the legislative body of the entity operating the park sufficient compensation or land, or both, to enable the operating entity to replace the parkland and its facilities. This act enables changes in the general character and location of the park if sufficient compensation or land are provided as a replacement.

Quimby Act of 1975

Cities and counties have been authorized since the passage of the 1975 Quimby Act (California Government Code Section 66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act was to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide parks and recreation services community-wide. In 1982, the Quimby Act was substantially amended via Assembly Bill 1600 requiring agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed. Cities can require up to 3 to 5 acres of parkland per 1,000 residents for new development based on the population count of the most recent census.

California Parklands Act of 1980

The California Parklands Act of 1980 (Public Resources Code Section 5096.141-5096.143) identifies "the public interest for the state to acquire, develop, and restore areas for recreation…and to aid local governments of the state in acquiring, developing and restoring such areas…." The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that their parks, recreation areas, and recreational facilities are not lost to other uses.

Regional

Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment

The *Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment* (Los Angeles County 2016) documents existing parks and recreation facilities in cities and unincorporated communities and uses that data to determine the scope, scale, and location of park need in Los Angeles County. The County was divided into 188 approved Study Areas for the purposes of the analysis. The results of the Parks and Recreation Needs Assessment were intended to help inform planning and decision-making regarding future funding of park projects within the County. This information is used to present an estimate of park need within each of the frames in Section 3.15.2.2.

Emerald Necklace Expanded Vision Plan

The *Emerald Necklace Expanded Vision Plan* (Amigos de los Rios 2014) establishes a comprehensive and strategic guide to creating a network of parks and public open spaces in the Los Angeles and San Gabriel watersheds and along their rivers and tributaries. The Emerald Necklace Coalition is a group formed to help implement the Vision Plan. The Emerald Necklace Coalition includes 24 cities, 3 school districts, 3 homeowners' associations, the Los Angeles County Board of Supervisors, the San Gabriel and Lower Los Angeles and Mountain Conservancy, and the Sierra Club. Coalition members have pledged to work collaboratively to preserve the Los Angeles and San Gabriel watersheds and their rivers and tributaries for recreational, open space, environmental education and job training, native habitat restoration and conservation, and non-vehicular transportation. The following regional goals and strategies from the Emerald Necklace Expanded Vision Plan would be applicable to this PEIR:

- Goal 3: Improve Public Health by Expanding Access to Nature and Outdoor Recreation.
    - Ensure that protected natural areas, parks, and trails are distributed equitably throughout the region so that residents of all ages have access to nature and healthy living.
    - Improve access to recreational opportunities in park-poor neighborhoods.
- Goal 6: Enhance Regional Wildlife and Natural Area Anchors.
    - Expand regional open space anchors through ecological design, strategic mitigation, and public land management.
    - Devote greater resources to ensure that the region's natural resources are maintained at a high level for both recreational uses as well as for the sustainability of habitat and natural systems.

Los Angeles County General Plan

The *Los Angeles County General Plan* (Los Angeles County 2015) includes policies within the Parks and Recreation Element that provide direction for the maintenance and expansion of the County's parks and recreation system. The *Los Angeles County General Plan* also contains the Conservation and Natural Resources Element, which guides the long-term conservation of natural resources and preservation of available open space areas. Table 3.15-29 describes goals and policies from the Parks and Recreation Element and the Conservation and Natural Resources Element that would be applicable to the proposed Project.

Table 3.15-29. *Los Angeles County General Plan* Goals and Policies

Plan/Element	Goals and Policies
Parks and Recreation Element	• **Goal P/R 1:** Enhanced active and passive park and recreation opportunities for all users. ○ **Policy P/R 1.1:** Provide opportunities for public participation in designing and planning parks and recreation programs. ○ **Policy P/R 1.2:** Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences. ○ **Policy P/R 1.3:** Consider emerging trends in parks and recreation when planning for new parks and recreation programs. ○ **Policy P/R 1.4:** Promote efficiency by building on existing recreation programs. ○ **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible. ○ **Policy P/R 1.6:** Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories. ○ **Policy P/R 1.7:** Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities. ○ **Policy P/R 1.8:** Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities. ○ **Policy P/R 1.10:** Ensure a balance of passive and recreational activities in the development of new park facilities. ○ **Policy P/R 1.11:** Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances • **Goal P/R 2:** Enhanced multi-agency collaboration to leverage resources. ○ **Policy P/R 2.5:** Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, the County, state, and federal agencies, private groups, schools, private landowners, and other organizations. • **Goal P/R 3:** Acquisition and development of additional parkland. ○ **Policy P/R 3.1:** Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County. ○ **Policy P/R 3.3:** Provide additional parks in communities with insufficient local parkland as identified through the gap analysis. • **Goal P/R 4:** Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages. ○ **Policy P/R 4.1:** Create multi-use trails to accommodate all users.
Conservation and Natural Resources Element	• **Goal C/NR 1:** Open space areas that meet the diverse needs of Los Angeles County. ○ **Policy C/NR 1.2:** Protect and conserve natural resources, natural areas, and available open spaces. • **Goal C/NR 2:** Effective collaboration in open space resource preservation. ○ **Policy C/NR 2.2:** Encourage the development of multi-benefit dedicated open spaces.

Plan/Element	Goals and Policies
	○ **Policy C/NR 2.3:** Improve understanding and appreciation for natural areas through preservation programs, stewardship, and educational facilities.

Source: Los Angeles County 2015.

Local

City of Long Beach (Frame 1 and Frame 2)

City of Long Beach General Plan

The *City of Long Beach General Plan* includes goals and policies within the Open Space and Recreation Element (City of Long Beach 2002) to protect and preserve open space and recreational resources. The city's recreational resources include parks, community centers, golf courses, bike and equestrian trails, numerous special use recreation resources, and coastal amenities such as beaches, a boardwalk, an esplanade, piers, fishing platforms, boat launches, a rowing center, a sailing center, harbors, and marinas. The Open Space and Recreation Element of the *City of Long Beach General Plan* provides a reference to guide the protection and preservation of open space, recreation, and scenic areas. Table 3.15-30 presents goals and policies from the Open Space and Recreation Element that would be applicable to this PEIR.

City of Long Beach Parks, Recreation, and Marine Strategic Plan

The City of Long Beach Department of Parks, Recreation, and Marine developed a Departmental Strategic Plan in February 2003. The Departmental Strategic Plan assessed recreation needs and objectives citywide. There are several strategies in the plan that apply to the proposed Project, as listed in Table 3.15-30 below.

Table 3.15-30. City of Long Beach Goals, Policies, and Objectives

Plan/Element	Goals, Policies, and Objectives
City of Long Beach General Plan	
Open Space and Recreation Element	• **Goal/Objective 1.2:** Preserve, keep clean, and upgrade beaches, bluffs, water bodies, and natural habitats, including the ecological preserves at El Dorado Nature Center and the DeForest Nature Area. • **Goal/Objective 1.3:** Improve appropriate access to natural environments. • **Goal/Objective 1.4:** Design and manage natural habitats to achieve environmental sustainability. ○ **Policy 1.2:** Protect and improve the community's natural resources, amenities and scenic values including nature centers, beaches, bluffs, wetlands and water bodies. • **Goal/Objective 4.5:** Make all recreation resources environmentally friendly and socially and economically sustainable. • **Goal/Objective 4.6:** Increase recreation resources and supplement publicly owned recreation resources with privately owned recreation resources.

Plan/Element	Goals, Policies, and Objectives

	• **Goal/Objective 4.7:** Fully maintain public recreation resources.
	• **Goal/Objective 4.10:** Provide access to recreation resources for all individuals in the community.
	  ○ **Policy 4.4:** Ensure that the general plan and zoning are consistent for all recreation open space locations and uses.
	  ○ **Policy 4.9:** Encourage the provision of non-City-owned recreation resources to supplement what the City is able to provide.

City of Long Beach Parks, Recreation, and Marine Strategic Plan	
City of Long Beach Parks, Recreation, and Marine Strategic Plan	• **Strategy 1.2:** Focus on improving the level of safety within City Parks and Recreational Facilities. • **Strategy 2.1:** Focus on improving the condition of Department Parks and Recreational Facilities. • **Strategy 2.2:** Establish lifetime use opportunities. Recreation programs and facilities will be designed to develop and serve a lifetime user through active, passive, and educational experiences.

Sources: City of Long Beach 2002, 2003.

City of Los Angeles (Frame 1, Frame 5, Frame 6, Frame 7, Frame 8, and Frame 9)

City of Los Angeles General Plan

The *City of Los Angeles General Plan* includes goals, objectives, policies, and programs within the Public Facilities and Services Element (City of Los Angeles 1968) and the Open Space Element (City of Los Angeles 1973) to identify, preserve, conserve, and acquire open space. The Open Space Element provides a reference to guide the protection and preservation of open space areas.

Table 3.15-31 presents goals, policies, and objectives from the *City of Los Angeles General Plan* Open Space Element that would be applicable to the *2020 LA River Master Plan*.

The City of Los Angeles also maintains 35 community plans, one for each of its Community Plan Areas. The community plans establish neighborhood-specific goals and implementation strategies to achieve the broad objectives laid out in the *City of Los Angeles General Plan.* Together, the 35 community plans compose the general plan's Land Use Element, which plays an important role in conserving open space and natural resources and balancing different neighborhoods' needs.

Table 3.15-31 presents the community plan policies that are applicable to parks and recreation as it pertains to the proposed *2020 LA River Master Plan*.

Table 3.15-31. *City of Los Angeles General Plan* Goals, Policies, and Objectives

Plan	Goals, Policies, and Objectives
City of Los Angeles General Plan	
Public Facilities and Services Element	**Equestrian Trails Objectives** • To provide a means for the promotion of horseback riding as a healthful and relaxing activity. • To guide public and private decision makers in the development of new trails to form a system connecting City trails with County, State, and Federal systems and connecting urban trails with wilderness trails. **Equestrian Trails Standards and Criteria** • Trails should have a minimum tread width of ten feet and a cleared width of twelve feet. • Routes shown on the Major Trails Plan should be only backbone trails which connect the various equestrian areas together to form a major trails system. Connections with other city trials and the major County, State, and Federal trails surrounding the City should be included. • Trails should be along interesting routes with varied features and scenery. • Trails should be used by equestrians and hikers only. Bicycles, motorcycles, and all other vehicles except maintenance vehicles should be prohibited. • A maximum grade of 10 percent is desirable. Steeper grades may be allowed in exceptional terrain, but the distance should be limited to a maximum of 500 feet. • Trails should be aligned to eliminate the need for sharp switchbacks. However, if these are unavoidable, the trail should be reinforced and drainage provisions made to prevent erosion of the trail and properties adjoining it. **Hiking Trails Objectives** • To provide policies and a plan which can be used in the promotion of hiking as a healthful and relaxing activity. • To describe standards for the improvement of existing and proposed trails. **Hiking Trails Standards and Criteria** • Trails should have a minimum tread width of five feet and a cleared width of seven feet except in unusual circumstances. • The grade of the trail should be related to the purpose for using the particular trail. The rock climber, as well as the beginning hiker, should be served by the various trails proposed. **Public Recreation Objectives** • To provide a guide for the orderly development of the City's public recreational facilities • To develop and locate public facilities to provide the greatest benefit to the greatest number of people at the least cost and with the least environmental impact. • To provide a guide for the acquisition and development of public recreational facilities.

Plan	Goals, Policies, and Objectives
	<u>Public Recreation Policies</u> • Recreational facilities and services should be provided for all segments of the population on the basis of present and future projected needs, the local recreational standards, and the City's ability to finance. • Park and recreation sites shall be acquired and developed first in those areas of the City found to be most deficient in terms of the recreation standards. • Recreational use should be considered for available open space and unused or underused land, particularly publicly owned lands having potential for multiple uses. • High priority will be given to areas of the City which have the fewest recreational services and the greatest numbers of potential users.

Open Space Element	• **Goal:** To ensure the preservation and conservation of sufficient open space to serve the recreational, environmental, health and safety needs of the City.
	• **Goal:** To conserve unique natural features, scenic areas, cultural and appropriate historical monuments for the benefit and enjoyment of the public.
	• **Goal:** To conserve and/or preserve those open space areas containing the City's environmental resources including air and water.
	• **Goal:** To provide access, where appropriate, to open space lands.
	  ○ **Objective:** To encourage private persons and all levels of government to assume a logical role in the regulation, funding, planning, development, and operation of a coordinated open space system for the State, County, region, and City.
	  ○ **Objective:** To emphasize the importance of, and to preserve open space and natural features in private and public development.
	  ○ **Policy:** Small parks, public and private, should be located throughout the City. Not only should recreation activities be provided, but an emphasis shall be placed on greenery and openness.
	  ○ **Policy:** Open space lands held by the public for recreational use should be accessible and should be provided with essential utilities, public facilities, and services.

City of Los Angeles Community Plans (*City of Los Angeles General Plan* Land Use Element)	
Canoga Park-Winnetka-Woodland Hills-West Hills	• **Policy 4-1.1:** Preserve the existing recreational facilities and park space. • **Policy 5-1.2:** Accommodate active park lands and other open space uses
Reseda-West Van Nuys	• **Policy 4-2.3:** Encourage cooperation to provide recreation facilities for the community. • **Policy 5-1.1:** Preserve and improve the existing recreational facilities and park space.

Plan	Goals, Policies, and Objectives
	• **Policy 5-1.2:** Better utilization and development of recreational facilities at existing parks. • **Policy 5-4.1:** Develop new neighborhood parks and new community parks to help offset Reseda-West Van Nuys parkland deficit for its current population and its projected year 2010 population. • **Policy 5-4.3:** All park and recreation facilities should be designed, landscaped, and maintained to promote a high quality recreational experience.
Encino-Tarzana	• **Policy 4-1.1:** Preserve the existing recreational facilities and park space. • **Policy 4-2.1:** Promote the development of new recreation and park facilities through the acquisition of new recreation and park land. • **Policy 5-1.2:** Accommodate active parklands, and other open space uses.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass	• **Policy 4-1.1:** Preserve the existing recreational facilities and park space. • **Policy 4-1.2:** Increase accessibility to The Los Angeles River. • **Policy 5-1.2:** Accommodate active parklands, and other open space uses.
Van Nuys-North Sherman Oaks	• **4-1.1:** Preserve and improve the existing recreation and park facilities and park space. • **4-1.2:** Encourage cooperation between the Los Angeles Unified School District, the Los Angeles County Parks and Recreation Department to provide recreation facilities for the community. • **4-2.1:** Flood control channel rights-of-way and other appropriate public lands should be considered for open space purposes. Hiking and bicycle trails in the area should connect facilities with the local and regional system. • **4-4.1:** Develop new neighborhood and community parks to help offset the Van Nuys-North Sherman Oaks parkland deficit for its current 1990 population and its projected year 2010 population. • **4-4.3:** All park and recreation facilities should be designed, landscaped, and maintained to promote a high-quality recreational experience. • **5-1.3:** Accommodate active park lands and other open space uses in areas designed and zoned as Open Space.
North Hollywood-Valley Village	The Recreation and Parks Department should work with the Los Angeles Unified School District to develop shared programs to fully utilize each of their respective sites.
Hollywood	1. That the desires of the local residents be considered in the planning of recreational facilities. 2. That recreational facilities, programs and procedures be tailored to the social, economic and cultural characteristics of individual neighborhoods and that these programs and procedures be continually monitored. 3. That existing recreational sites and facilities be upgraded through site improvements, rehabilitation and reuse of sound

Plan	Goals, Policies, and Objectives
	structures, and replacement of obsolete structures, as funds become available. 4. That, in the absence of public land, and where feasible, intensified use of existing facilities and joint use of other public facilities for recreational purposes be encouraged. 5. That the expansion of existing recreational sites and the acquisition of new sites be planned so as to minimize the displacement of housing and the relocation of residents.
Silver Lake-Echo Park-Elysian Valley	• **4-1.1:** Preserve the existing recreational facilities and park space • **4-1.2:** Preserve and encourage acquisition, development and funding of new recreational facilities and park space with the goal of creating greenways and trail systems. • **4-1.3:** Preserve and maintain public staircases in the Plan area and other public rights-of-way that could provide or enhance linkages for greenways and trail systems. • **5-1.2:** Accommodate active parklands and other open space. • **5-2.1:** Ensure? that there is public access to any new open space and recreational facilities in the Plan Area, especially the Los Angeles River.
Northeast Los Angeles	• **4-2.1:** Accommodate and promote active use of parklands and open space and promote and preserve greenways. • **5-1.1:** Preserve the existing recreational facilities and park space. • **5-1.2:** Increase accessibility to park land along the Arroyo Seco and potential parkland along the Los Angeles River.
Central City	• **4-1.1:** Review existing open space standards in order to expand the range of potential open space resources at the neighborhood and community levels. • **4-3.1:** Review existing park and recreational space usage in order to determine factors impacting low use of certain facilities. • **4-4.1:** Improve Downtown's pedestrian environment in recognition of its important role in the efficiency of Downtown's transportation and circulation systems and in the quality of life for its residents, workers, and visitors.
Central City North	• **4-1.1:** Preserve the existing recreational facilities and park space.
Boyle Heights	Preserve and improve the existing recreation and park facilities and park space.
Southeast Los Angeles	• **CF7.1:** Maintain and Improve Existing Facilities. Preserve, maintain and enhance existing recreational facilities and park space. • **CF8.1:** Parks in Low-Income Communities First. Prioritize new parks in underserved or low-income communities with the greatest need and opportunities. • **CF9.2:** Acquire Vacant Land for Parks and Open Space. Encourage continuing efforts by City and County agencies to acquire vacant land and surplus city-owned land for parks and open space.

Plan	Goals, Policies, and Objectives
	• **CF10.1:** Retain Passive Open Space. Encourage the retention of passive and visual open space resources which provide a balance to the urban development of the Plan Area. • **CF10.2:** Co-Location of Public Facilities and Open Space. Integrate the use of open space with public facilities, such as flood control channels, utility easements and Department of Water and Power properties.
Wilmington-Harbor City	• **4-1.1:** Preserve and improve the existing recreational facilities and park space. • **4-2.1:** Flood control channels and other appropriate public lands should be considered for open space purposes. Bicycle trails in Wilmington Harbor City should connect these facilities with the local and regional system. • **4-4.1:** Develop new neighborhood parks and new community parks to help offset Wilmington-Harbor City's parkland deficit for its current 1990 population and its projected year 2010 population. • **4-4.4:** All park and recreation facilities should be designed, landscaped, and maintained to promote a high-quality recreational experience.

Sources: City of Los Angeles 1968, 1973, 1996, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 1999d, 2000, 2003, 2004, 2014, 2017b,

City of Carson (Frame 2)

Carson General Plan

The *Carson General Plan* contains two elements that are relevant to this section: the Open Space and Conservation Element (City of Carson 2004a) and the Parks, Recreation, and Human Services Element (City of Carson 2004b). Table 3.15-32 presents the policies from these elements that are relevant to the proposed Project.

Table 3.15-32. *Carson General Plan* Goals, Policies, and Implementation Measures

Plan	Goals, Policies, and Implementation Measures
Open Space and Conservation Element	• **Goal OSC-1:** Enhancement of Carson's open space resources. ○ **Policy OSC-1.1:** Preserve and enhance the existing open space resources in Carson.

Parks, Recreation, and Human Services Element	• **Goal P-1:** Increase of and improvements to park, recreational and cultural facilities to meet the needs of existing and future residents and workers in the City.
	  ○ **Policy P-1.5:** Provide access to existing and future recreational facilities in accordance with the Americans with Disabilities Act.
	  ○ **Implementation Measure P-IM-1.8:** Coordinate with County Departments to maintain and, wherever feasible, expand the joint use of facilities within the City.
	  ○ **Implementation Measure P-IM-1.14:** Ensure that all new recreation facilities and alterations to existing facilities conform to the accessibility requirements of the Americans with Disabilities Act.

Plan	Goals, Policies, and Implementation Measures
	• **Goal P-4:** Enhanced maintenance and rehabilitation of existing park and recreational facilities. ○ **Policy P-4.3:** Require park improvements and facilities that are durable and economical to maintain.

Sources: City of Carson 2004a, 2004b.

City of Compton (Frame 2 and Frame 3)

City of Compton General Plans

General Plan Vision 2010 (City of Compton 1991) contains the Conservation/Open Space/Parks and Recreation Element. In 2011, the City of Compton began an update of the general plan to serve as a guide for development to 2030. The *Draft Compton General Plan 2030* (City of Compton 2011) contains the Conservation, Open Space, and Recreation Element. Applicable goals and policies from both plans are presented in Table 3.15-33.

Table 3.15-33. City of Compton General Plan Goals and Policies

Plan	Goals and Policies
General Plan Vision 2010	
Conservation/Open Space/Parks and Recreation Element	• **Goal 4.0(L):** Develop and maintain a balanced system of open space, public parks, and recreational facilities. ○ **Policy 4.1(L):** Provide active and passive park and recreational facilities, based on the distribution of population within the City, to serve the needs of residents of all ages, economic levels, and physical conditions. ○ **Policy 4.3(L)(M):** Upgrade existing park facilities to improve park use and appearance. ○ **Policy 4.5(M):** Pursue opportunities for the creation of additional open space and parkland whenever available. ○ **Policy 4.10(S):** Coordinate local open space development with regional open space opportunities to satisfy a wide range of recreational demands.
Draft Compton General Plan 2030	
Conservation, Open Space, and Recreation Element	• **Goal 3.** Provide well-maintained open space, park, and recreational facilities that meet the needs of residents. ○ **Policy 3.1:** The City of Compton will provide active and passive parks and recreational facilities to serve the needs of residents of all ages, economic levels, and physical conditions.

Sources: City of Compton 1991, 2011.

City of Cudahy (Frame 3)

Cudahy 2040 General Plan

The *Cudahy 2040 General Plan* (City of Cudahy 2018) includes goals and policies within the Open Space and Conservation Element to address long-term community needs and plan for open space, parks, recreation services, and natural resource preservation. Table 3.15-34 presents the goals and policies from the Open Space and Conservation Element that would be applicable to the proposed Project.

Table 3.15-34 *Cudahy 2040 General Plan* Goals and Policies

Plan	Goals and Policies
Open Space and Conservation Element	• **Goal OSCE-1:** A sustainable urban environment protects valuable natural resources (water, air, and soil) and limits waste production ○ **Policy OSCE 1.16:** Promote and participate in efforts to restore the riparian environment of the Los Angeles River and facilitate its use for educational and recreational uses. • **Goal OSCE-2:** An increase of trails, parks, recreation, and other open space ○ **Policy OSCE 2.1:** Create and maintain a system of trails, sidewalks, linear parks, and other connections that provide residents of all abilities with opportunities to exercise, enjoy nature, and access recreation facilities within a five-minute walk from home. Activate and encourage discovery along urban trails. ○ **Policy OSCE 2.12:** Consider ways to improve access to the Los Angeles River Trail by addressing the difference in grade and increasing the number of access points. • **Goal OSCE-3:** Recreation facilities design and programming that provide a range of opportunities and evolve to meet the needs of changing demographics and public interests. ○ **Policy OSCE 3.1:** Ensure available recreational facilities are of high quality and are properly maintained. Encourage stewardship and volunteerism within parks to foster a sense of ownership, establish social connections, and reduce maintenance costs. ○ **Policy OSCE 3.2:** Incorporate flexible, multi-purpose design characteristics into the renovation of existing and development of new parks and community facilities.

Source: City of Cudahy 2018.

City of Downey (Frame 3)

Downey Vision 2025 General Plan

The *Downey Vision 2025 General Plan* (City of Downey 2005) includes goals, policies, and programs within the Open Space Element. Table 3.15-35 presents the goals and policies from the Open Space Element that would be applicable to the proposed Project.

Table 3.15-35. *Downey Vision 2025 General Plan* Goals, Policies, and Programs

Plan	Goals, Policies, and Programs
Open Space Element	**Goal 7.1.** Augment the availability of open space areas with other open spaces besides public parks. • **Policy 7.1.1.** Preserve undeveloped areas that function as open space. ○ **Program 7.1.1.3.** Discourage the development of properties designated as open space areas, such as parks, golf courses, cemeteries, public schools, utility easements, railroad rights-of-way, and riverbeds, that would limit the property's functionality as open space. ○ **Program 7.1.1.4.** Promote the use of properties designated as open space areas for recreation purposes.

Plan	Goals, Policies, and Programs
	○ **Program 7.1.1.5.** Promote the creation of and expansion of areas designated for open space. **Goal 7.2.** Optimize the use of established public parks to meet the needs of residents. • **Policy 7.2.2.** Upgrade existing park facilities. ○ **Program 7.2.2.1.** Maintain an adequate level of recreational staffing at park facilities. **Goal 7.3.** Increase the amount of park acreage. • **Policy 7.3.1.** Promote the expansion of the existing park system. ○ **Program 7.3.1.1.** Promote the creation of new parks, especially in areas of the city in the greatest need of additional parks. ○ **Program 7.3.1.5.** Promote the development of pocket parks.

Source: City of Downey 2005.

City of Downey Parks and Open Space Master Plan

The *City of Downey Parks and Open Space Master Plan* (City of Downey 2016) is a guide and implementation tool for the management and development of parks and recreational facilities and programs within the City of Downey. This Master Plan inventories existing recreational resources, provides a recreation facility needs assessment, and discusses implementation programs.

City of Lynwood (Frame 3)

City of Lynwood General Plan

The *City of Lynwood General Plan* (City of Lynwood 2003) includes goals, policies, and implementation measures within the Community Services Plan and the Open Space and Conservation Plan. Table 3.15-36 presents the goals and policies that would be applicable to the proposed Project.

Table 3.15-36. *City of Lynwood General Plan* Goals, Policies, and Implementation Measures

Plan	Goals, Policies, and Implementation Measures
Community Services Plan	**Goal PR-1:** Provide a variety of recreational opportunities to serve the needs of all segments of the population. • **Policy PR-1.1:** The City shall work to achieve additional acres of parkland. ○ **Implementation Measure 9.0:** The City shall encourage the development of pocket parks. (also implements Policies PR-1.2 and PR-1.4) • **Policy PR-1.2:** The City shall ensure that parks are developed on the appropriate sized parcels in locations that best serve the community. ○ **Implementation Measure 5.0:** The Sheriff Department shall be given the opportunity to comment on the location and design of all parks with regard to security and safety.

Plan	Goals, Policies, and Implementation Measures
	• **Policy PR-1.4:** The City shall promote the development of park facilities that allow for both active and passive, as well as commercial recreation. ○ **Implementation Measure 4.0:** The City shall promote recreational activities for children, teens, seniors, and families.
Open Space and Conservation Plan	**Goal OS-1:** Ensure the public enjoyment of open space by providing open space recreational opportunities, preserving sensitive natural resources, and promoting the use of open space within public and private developments. • **Policy OS-1.3:** The City shall ensure that pedestrian, hiking, equestrian, and biking trails are provided to link open space areas to the greatest extent feasible. • **Policy OS-1.4:** The City shall ensure that areas designated as open space for public use remain accessible to the general public.

Source: City of Lynwood 2003.

City of Paramount (Frame 3)

Paramount General Plan

The *Paramount General Plan* (City of Paramount 2007) includes policies within the Resources Management Element. Table 3.15-37 presents the policies that would be applicable to the proposed Project.

Table 3.15-37. *Paramount General Plan* Policies

Plan	Policies
Resource Management Element	• **Policy 1:** The City of Paramount will develop new areas of open space to the extent that opportunities present themselves for such development. • **Policy 2:** The City of Paramount will continue to make effective use of the open space lands that are available. • **Policy 5:** The City of Paramount will pursue a landscape program to improve the open space areas located next to the Los Angeles River. • **Policy 7:** The City of Paramount will maintain a recreation program that is responsive to the interests and needs of the City. • **Policy 8:** The City of Paramount will maintain existing park and recreation facilities in such a manner so as to protect the public's investment and facilitate their use. • **Policy 9:** The City of Paramount will maintain and improve the existing park facilities in the City for the benefit and enjoyment of the community. • **Policy 11:** The City of Paramount will continue to investigate new opportunities for recreational activities and services. • **Policy 22:** The City of Paramount will continue to cooperate with surrounding cities in the formulation and implementation of regional resource management plans and programs.

Source: City of Paramount 2007.

City of South Gate (Frame 3)

South Gate General Plan 2035

The *South Gate General Plan 2035* (City of South Gate 2009) includes policies within the Green City Element to create a "greener" city, and includes directions for parks, civic plazas, open space, rivers, trails, equestrian facilities, the conservation of natural resources, energy and climate change, and green buildings. Table 3.15-38 presents the policies from the Green City Element that would be applicable to the proposed Project.

Table 3.15-38 *South Gate General Plan 2035* Goals, Objectives, and Policies

Plan	Goals, Objectives, and Policies
Green City Element	**Goal GC 1:** An extensive, high-quality system of parks, civic plazas, and open space. • **Objective GC 1.1:** Maintain and improve existing parks and recreational facilities. ○ **Policy P.2:** South Gate will provide a full range of park and recreational opportunities and active and passive public space for residents. ○ **Policy P.4:** All parks will be clean, well-kept, and well-maintained, preserving it as one of the main community gathering points in the City. ○ **Policy P.5:** Parks in South Gate should be safe and well lit environments for recreational activities, both day and night. • **Objective GC 1.2:** Expand public space in the City by establishing new parks, civic plazas, and open space. ○ **Policy P.1:** New parkland, civic plazas, and open space will be created as funding and other opportunities become available. ○ **Policy P.4:** Wherever feasible, development of new park facilities will be located in areas of the City currently underserved by parks. **Goal GC 2:** Improved trails, equestrian facilities and green streets. • **Objective GC 2.1:** Expand and enhance the City's trail network. ○ **Policy P.1:** New trails should contribute to increased connectivity across the City by reducing pedestrian and cycle travel times, integrating with existing sidewalks, bike lanes and other bicycle/ pedestrian infrastructure, and providing an alternate mode of access to goods, services, and other desirable destinations. ○ **Policy P.6:** The City will pursue a Class I trail along the LADWP right-of-way that connects the west side of the City to the Los Angeles River trail. **Goal GC 3:** Enhanced utilization of the Los Angeles River and the Rio Hondo Channel as open space. • **Objective GC 3.1:** Improve access to and use of the Los Angeles River and Rio Hondo Channel. ○ **Policy P.1:** The City will capitalize on the Los Angeles River and Rio Hondo Channel as public amenities that can enhance access to open space, create a unique identity for the City and enhance economic development opportunities in the City.

Plan	Goals, Objectives, and Policies
	○ **Policy P.2:** New development along the Los Angeles River and the Rio Hondo Channel should encourage access to and utilization of the rivers. ○ **Policy P.3:** The City should seek to develop attractive destinations, businesses, and resting points along and in close proximity to the Los Angeles River and Rio Hondo Channel. ○ **Policy P.6:** The City may support regional or multi-jurisdictional efforts to improve the riverfront and to naturalize the river in a manner that restores the ecological functioning of the area.

Source: City of South Gate 2009.

City of Bell (Frame 4)

City of Bell 2030 General Plan

The *City of Bell 2030 General Plan* (City of Bell 2018) includes policies within the Resource Management Element that focus on the maintenance of open space areas and the provision of parks and recreational facilities. Table 3.15-39 presents the policies that would be applicable to the proposed Project.

Table 3.15-39 *City of Bell 2030 General Plan* Issues and Policies

Plan	Issues and Policies
Resource Management Element	**Issue:** To promote the maintenance, enhancement, and preservation of recreational facilities. • **Resource Management Element Policy 1:** The City of Bell shall provide a balanced range of recreational opportunities and activities for all age levels within the community. • **Resource Management Element Policy 2.** The City of Bell shall promote the scheduling of maintenance activities for all public recreational facilities. • **Resource Management Element Policy 3.** The City of Bell shall continue to maintain a recreation program that is responsive to the interests and needs of the residents. The City shall also ensure park and staff management conducts programs deemed consistent to the General Plan. **Issue:** To promote the growth and improvement of recreational facilities in the City. • **Resource Management Element Policy 9.** The City of Bell shall negotiate agreements with the Southern California Edison Company, the Los Angeles Department of Water and Power, the Pacific Electric Railway Company, and the Los Angeles County Flood Control District for the establishment of trails, recreational use, and appropriate landscaping within their respective rights-of-way. The City shall identify potential rights-of-ways, create an inventory, and hold meetings to negotiate agreements. **Issue:** To promote the quality design and development related to the provision of open space.

Plan	Issues and Policies
	• **Resource Management Element Policy 10.** The City of Bell shall recognize the social, economic, and aesthetics benefits that will result from the preservation of open space. • **Resource Management Element Policy 12.** The City of Bell shall pursue a landscape program to improve the open space areas located next to the Los Angeles River. Such landscaping must be drought tolerant.

Source: City of Bell 2018.

City of Bell Gardens (Frame 4)

City of Bell Gardens General Plan 2010

The *City of Bell Gardens General Plan 2010* (1995) includes policies within the Open Space and Recreation Element that outline a strategy to preserve remaining open space areas in the city to meet the recreational needs of the community. Table 3.15-40 presents the policies that would be applicable to the proposed Project.

Table 3.15-40. *City of Bell Gardens General Plan 2010* Policies

Plan	Policies
Open Space and Recreation Element	• **Policy 1:** The City of Bell Gardens shall continue to protect and maintain existing open spaces used for recreation and shall explore opportunities for providing additional park land. • **Policy 2:** The City of Bell Gardens shall expand existing open space through land acquisition and multi-use corridors, particularly in the northwest of the City.

Source: City of Bell Gardens 1995.

City of Commerce (Frame 4)

City of Commerce 2020 General Plan

The *City of Commerce 2020 General Plan* (City of Commerce 2008) includes the Resource Management Element, which contains policies and programs related to conservation, parks, open space, and historic resources, along with supporting programs. Table 3.15-41 presents the policies that would be applicable to the proposed Project.

Table 3.15-41. *City of Commerce 2020 General Plan* Policies

Plan	Policies
Resource Management Element	• **Resource Management Policy 5.1**. The city of Commerce will maintain the existing park and recreational facilities to the extent that they can continue to provide residents with the best possible recreational opportunities. • **Resource Management Policy 5.2.** The city of Commerce will strive to create more "green space" and recreational facilities that will accommodate skateboarding, roller hockey, and field soccer programming.

Plan	Policies
	• **Resource Management Policy 5.3.** The city of Commerce will continue to upgrade existing facilities to improve park appearance and utility. • **Resource Management Policy 5.7.** The city of Commerce will continue to assess the recreational program needs of the city's residents and establish guidelines to respond to those needs. • **Resource Management Policy 5.10.** The city of Commerce will encourage citizen involvement and participation in the planning of park improvements. • **Resource Management Policy 6.1.** The city of Commerce will strive to ensure that park and open space is preserved and maintained for the use of existing and future residents of the city. • **Resource Management Policy 6.2.** The city of Commerce will ensure that future public works projects in the region do not significantly adversely impact the community and its residents. • **Resource Management Policy 6.3.** The city of Commerce will continue to monitor development efforts that could affect the resources that are of importance to the community.

Source: City of Commerce 2008.

City of Huntington Park (Frame 4)

City of Huntington Park 2030 Draft General Plan

The *City of Huntington Park General Plan* (City of Huntington Park 1991) includes the Open Space and Conservation Element, which identifies goals, policies, and specific measures for managing the community's open space and recreational areas. Additionally, the City of Huntington Park is undergoing a General Plan Update to serve as a guide for development to 2030. The *City of Huntington Park 2030 Draft General Plan* (2017) includes the Resource Management Element, which contains policies for the conservation, development, and use of natural resources. Table 3.15-42 presents the goals and policies that would be applicable to the proposed Project.

Table 3.15-42. *City of Huntington Park General Plan* Goals and Policies

Plan	Goals and Policies
***City of Huntington Park General Plan* (1991)**	
Open Space and Conservation Element	**Goal 4.0:** Develop and maintain a balanced system of open space, public parks, and recreational facilities. • **Policy 4.1:** Provide active and passive park and recreational facilities, based on the distribution of population within the City, to serve the needs of residents of all ages, economic levels, and physical conditions. • **Policy 4.2:** Upgrade existing park facilities to improve park use and appearance. • **Policy 4.3:** Utilize opportunities for joint use of public facilities for recreational purposes, such as schools, utility easements, and abandoned railroad right-of-ways. • **Policy 4.4:** Pursue opportunities for the creation of additional open space and parkland whenever available.

Plan	Goals and Policies
	• **Policy 4.5:** Actively pursue all available sources of financing for parkland acquisition and maintenance.
***City of Huntington Park 2030 Draft General Plan* (2017)**	
Resource Management Element	• **Resource Management Element Policy 17.** The City of Huntington Park shall provide an active and passive park system and recreational facilities, based on the distribution of population within the City so as to serve the needs of residents of all ages, economic levels, and physical conditions. • **Resource Management Element Policy 18.** The City of Huntington Park shall upgrade existing park facilities to improve park use and appearance and shall utilize opportunities for joint use of public facilities for recreational purposes, such as schools, utility easements, and abandoned railroad rights-of-way. • **Resource Management Element Policy 19.** The City of Huntington Park shall encourage the development of common and private open space and recreational facilities within multi-family developments to increase recreational opportunities. • **Resource Management Element Policy 20.** The City of Huntington Park shall coordinate local open space development with regional open space opportunities to satisfy a wide range of recreational demands.

Sources: City of Huntington Park 1991, 2017.

Parks and Recreation Master Plan

The Parks and Recreation Master Plan (City of Huntington Park 2008) was approved in 2008 and serves as a roadmap to guide parks and recreation development in the city. The Master Plan is used as a tool to develop parks and recreation-related goals, policies, and objectives that will provide the city with a clear vision for park facilities and recreation programming.

City of Maywood (Frame 4)

City of Maywood General Plan

The *City of Maywood General Plan* (City of Maywood 2008) includes the Land Use Element and Open Space Element, which contain policies and programs related to conservation, parks, open space, and historic resources, along with supporting programs. Table 3.15-43 presents the goals and policies that would be applicable to the proposed Project.

Table 3.15-43. *City of Maywood General Plan* Goals and Policies

Plan	Goals and Policies
Land Use Element (2007)	**Goal 8.0** Increase the acreage of park uses within the City. • **Policy 8.1** Provide similar or equal levels of parks and recreational facilities to all areas of the community. • **Policy 8.2** Develop mini-parks, where appropriate, on land acquired or donated to the City. • **Policy 8.3** Partner with State and County agencies to develop additional park resources.

Plan	Goals and Policies
	• **Policy 8.4** Explore the recreational potential of publicly owned lands and utility rights-of-way. **Goal 9.0** Protect, maintain and better utilize existing parks and recreation facilities. • **Policy 9.1** Protect, maintain, and upgrade existing parks and recreation facilities, eliminating evidence of vandalism, wear, and deterioration. • **Policy 9.2** Better utilize parks and recreation facilities to increase the level of multi-use capabilities and high degree of adaptability to more intensive use or uses as recreation demand changes and/or population density increases.
Open Space Element	**Goal 1** Continue to provide open space to improve the quality of the environment. • **Policy 1.1** Develop mini parks, where appropriate, on land acquired or donated to the city.

Source: City of Maywood 2008.

City of Vernon (Frame 4)

City of Vernon General Plan

The *City of Vernon General Plan* (City of Vernon 2015) includes the Resources Element, which establishes policies intended to best manage the limited available natural resources in Vernon and to encourage continued participation in broader efforts to protect the environment from harmful human activities. Table 3.15-44 presents the policies that would be applicable to the proposed Project.

Table 3.15-44. *City of Vernon General Plan* Goals and Policies

Plan	Goals and Policies
Resources Element	**Goal R-3:** Preserve established open spaces and look for opportunities to create new open space areas that can benefit the health and welfare of workers and residents in Vernon. • **Policy R-3.2:** Cooperate with regional efforts to upgrade the appearance and open space value of the Los Angeles River Channel.

Source: City of Vernon 2015.

City of Glendale (Frame 6)

City of Glendale General Plan

The *City of Glendale General Plan* (City of Glendale 1996) includes the Recreation Element, which establishes policies to guide development and acquisition of parks and other recreation facilities in the city. Table 3.15-45 presents the policies that would be applicable to the proposed Project.

Table 3.15-45. *City of Glendale General Plan* Objectives and Policies

Plan	Objectives and Policies
Recreation Element	**Objective 1:** Incrementally expand the quantity and quality of recreational experiences for residents and visitors to the City of Glendale now and far into the future. • **Policy 1:** The City shall provide a range of recreational opportunities to meet the needs, desires and interest of all population groups in the city. • **Policy 3:** The City shall enhance and expand existing recreational facilities in response to community needs. • **Policy 4:** The City shall both promote and when possible provide recreational opportunities for the day time population both in the downtown, commercial and industrial areas. **Objective 4:** The City shall supplement existing recreational facility resources through enhancement or cooperative use of the existing assets now and far into the future. • **Policy 2:** The City shall develop improvements to parks, trails and bikeways for recreational applications. **Objective 9:** Facilitate development of walkways and urban hikeways that connect major destinations and recreation centers in developed portions of the community beginning immediately. • **Policy 2:** The City shall link urban hikeways, commercial areas, recreational facilities, paths and trails and other activity centers.

Source: City of Glendale 1996.

City of Burbank (Frame 7)

Burbank 2035 General Plan

The *Burbank 2035 General Plan* (City of Burbank 2013) includes the Open Space and Conservation Element, which establishes policies to guide development and acquisition of parks and other recreation facilities in the city. Additionally, the *Burbank 2035 General Plan* includes the Land Use Element, which contains goals and policies related to open space land use. This Open Space and Conservation Element establishes a citywide parkland level of service goal of 5 acres of improved parkland per 1,000 residents. The element also establishes a requirement applicable to new development of 3 acres of new parkland per 1,000 new residents, which is intended to correct existing parkland deficiencies as new development and redevelopment occur. Table 3.15-46 presents the policies that would be applicable to the proposed Project.

Table 3.15-46. *Burbank 2035 General Plan* Policies

Plan	Policies
Open Space and Conservation Element	• **Policy 1.1:** Encourage citizen interest and participation in open space management and development. • **Policy 1.3:** Coordinate the City's open space program with regional parks, open space, and conservation plans. • **Policy 2.1:** Identify areas of the city that are currently underserved and focus park expansion and open space acquisition in these areas.

Plan	Policies
	• **Policy 2.4:** Seek opportunities to develop additional parks and open space in areas where needed, including pocket parks, dog parks, athletic fields, amphitheaters, gardens, and shared facilities. • **Policy 5.2:** Develop a multi-functional path and trail system within the natural constraints presented by open space areas.
Land Use Element	• **Policy 14.1:** Provide parks for the use and benefit of the general public. Allow retail and other ancillary uses only when directly related to the primary park and recreational use. • **Policy 14.3:** Design expansions or enhancements to existing park facilities to minimize effects on the surrounding neighborhood.

Source: City of Burbank 2013.

3.15.3 Impact Analysis

3.15.3.1 Methods

This analysis qualitatively evaluates at a program level the impacts of the proposed Project, which includes the Common Elements Typical Projects, Multi-Use Trails and Access Gateways Typical Projects, kit of parts (KOP) categories, and overall *2020 LA River Master Plan*, on existing recreational resources as a result of both the construction and operations of the proposed Project, which will include a range of recreational features. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

The analysis determines if there is the potential for impacts on existing resources in the 18 jurisdictions (17 cities and unincorporated County areas) in the project study area during construction and operation. Data from the *Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment* (2016) and the 17 jurisdictions' respective general plans were used to evaluate impacts on parks and trails, as shown in the *2020 LA River Master Plan*. The analysis also identifies beneficial impacts on recreational resources, as applicable.

3.15.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.15(a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

3.15(b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

3.15.3.3 Impacts and Mitigation Measures

Impact 3.15(a): Would the proposed Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Typical Projects

Common Elements

Construction

Within Frames 1 through 9 the amount of park land provided per resident is already inadequate based on current standards. Construction of a Common Elements Typical Project could result in a temporary increase in the use of nearby existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River and existing recreational facilities is disrupted. Construction of a Common Elements Typical Project would last approximately 10 months and would generally be completed over six phases to minimize disruption to existing operations and the community. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted hours without permission from the local jurisdiction. Construction would involve up to 20 construction workers per day and may include excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, and small cranes. Although staging areas cannot be determined at this time, it can be reasonably assumed that staging areas for construction equipment would be located primarily in LA River right-of-way (ROW) for County or Los Angeles County Flood Control District projects.

Existing recreational facilities could be temporarily closed or have restricted access during construction of Common Elements Typical Projects. This could result in additional strain on surrounding recreational facilities as users seek alternative areas to recreate, thereby requiring additional maintenance of these facilities. Even though the increased use of the adjacent recreational facilities would be limited to the duration of construction and would be temporary in nature and would include compliance with local noise regulations, a Common Elements Typical Project could result in direct temporary impacts on nearby facilities. During construction, nearby facilities have the potential to experience physical deterioration (e.g., overcrowding, disrepair, increased waste generation, increased noise, worsened air quality, deterioration of aesthetics through lack of maintenance, damaged landscapes and habitats, and vandalism).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

As specific subsequent project and location information is identified during detailed design, the implementing agency will confirm the timing, duration, and areal extent of construction activities that would occur. If temporary closures of existing recreational facilities would be necessary for construction, the specific increase in use of other nearby recreational facilities will be evaluated. Factors to be considered in the evaluation include the duration of the closure, acreage and type of facility that would be unavailable due to the closure, and existing usage levels at the relevant nearby recreational facilities.

If there is an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or is accelerated, the implementing agency will apply measures including, but not limited to, one or more of the following:

- Minimize duration of construction period.
- Modify construction phasing to limit disturbance of existing recreational facilities.
- Avoid construction during peak use periods.
- Post signage informing users of the duration of construction, with additional wayfinding to adjacent facilities with similar amenities.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once operational, Common Elements Typical Projects could attract up to 500 new daily users and 10 daily full-time equivalent (FTE) operations and maintenance staff. This could lead to an increased use of existing neighborhood or regional parks and other recreational facilities. As mentioned above, none of the frames within the project study area meet their jurisdiction's adopted park acreage standards. The Common Elements Typical Project would provide new and enhanced recreational facilities and opportunities for gathering spaces for the communities and neighborhoods along the river's extent. Therefore, the Common Elements Typical Project could relieve some of the existing park demand with the construction of recreational facilities in new locations along the LA River. The Common Elements Typical Project would also provide increased access and connections along the river to the adjacent communities and neighborhoods due to the enhanced access to the LA River and the construction of community-serving amenities. Existing recreational resources that are immediately adjacent to the Common Elements Typical Project could experience an increase in the number of users by as many as 500 users dispersed throughout the day, typically from dawn to dusk. Because these adjacent existing recreational facilities are operated by various jurisdictions in the project study area and have existing operations and maintenance requirements, it is not anticipated that this increased use would result in substantial physical deterioration of these facilities. Additionally, any Common Elements Typical Project would be required to submit a 3-year maintenance plan and monitoring program for the site per the *2020 LA River Master Plan* Design

Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B), which must be agreed to by the agency responsible for maintenance prior to commencing new construction activities. Additionally, the Common Elements Typical Project would not include the creation of new housing and would not result in a substantive amount of new permanent jobs and therefore would not result in an increase in the use of existing nearby facilities due to an increase in population.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Construction impacts of a Multi-Use Trails and Access Gateways Typical Project would be similar to those described for the Common Elements Typical Project above; however, the construction duration could last up to 20 months, would disturb a larger area (up to 5 miles in length), would have fewer daily workers, but would require more extensive construction equipment use (such as hydraulic impact hammers, forklifts, and truck mounted cranes). During construction, closures and/or detours of existing trails and access points may be necessary. These closures and/or detours would be temporary in nature and the implementation of a Multi-Use Trails and Access Gateways Typical Project would ultimately increase the quality and accessibility of the LA River and associated trails. Temporary closures of trails and access gateways during construction could result in a temporary increase in the use of existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River Trail is disrupted. Although construction of the Multi-Use Trails and Gateways Typical Project could require temporary closures of existing access along the river, other access would be made available at different sites and temporary closures would be minimized. Although staging areas cannot be determined at this time, it can be reasonably assumed that staging areas for construction equipment would be located primarily in the river properties. This could put a temporary additional strain on surrounding recreational facilities during construction as users seek alternatives, and there may be a need for increased maintenance at these alternate facilities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once operational, a Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 new daily users and 3 daily FTE operations and maintenance staff. As the Multi-Use Trails and Access Gateways Typical Project aims to connect other trails and paths along the length of the river to create a mobility network, this increase in new daily users could lead to an increased use of existing neighborhood or regional parks and other recreational facilities that are immediately adjacent to a Multi-Use Trails and Access Gateways Typical Project. As mentioned above, none of the frames within the project study area meet their jurisdiction's adopted park acreage standards. A Multi-Use Trails and Access Gateways Typical Project would provide new and enhanced recreational facilities such as trails and opportunities for gathering spaces for the communities and neighborhoods along the river's extent, like the river gateways. Therefore, a Multi-Use Trails and Access Gateways Typical Project could relieve some of the existing park demand with the construction of recreational facilities in new locations along the LA River. Additionally, a Multi-Use Trails and Access Gateways Typical Project would provide increased access and connections along the river to the adjacent communities and neighborhoods and enhanced access to the river.

Existing recreational resources that are immediately adjacent to a Multi-Use Trails and Access Gateways Typical Project could experience as many as 1,000 additional users over the course of a day from along the entire 5-mile length of the multi-use trail, typically from dawn to dusk, perhaps more during weekends and holidays However, because these adjacent existing recreational facilities are operated by various jurisdictions and have existing operations and maintenance requirements, it is not anticipated that this increased use would result in substantial physical deterioration of these facilities.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all KOP categories discussed below. Therefore, for potential impacts of the overall Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Category 1

Certain design components of the Trails and Access Gateways KOP category inform the Multi-Use Trails and Access Gateways Typical Project, which is analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed below include those listed in Chapter 2, Section 2.5.1, under the *KOP Category 1: Trails and Access Gateways* heading.

Construction

The specific location (in-channel or off-channel), configuration, and design for these design components has not been determined yet and would depend on numerous factors, including the project proponent and availability of funding. Potential impacts from construction of the design components under KOP Category 1 would vary depending on the specific design component and its intended function. This KOP includes a variety of construction activities ranging from trail modifications to development of facilities, habitat corridors, and channel access ramps anywhere in the study area, within all frames. During construction, closures and/or detours of existing trails and access points may be necessary. These closures and/or detours would be temporary in nature and the implementation of the proposed project would ultimately increase the quality and accessibility of the LA River and associated trails.

In addition, given the general accessibility of the project study area with its central location in an urban environment, and availability of construction workers throughout, it is unlikely that a substantial number of construction workers and their families would relocate to the immediate vicinity of a project under KOP Category 1 such that use of existing parks or recreational facilities would increase to the point that substantial deterioration would occur. Temporary closures of trails and access gateways could occur during construction, and nearby recreational facilities may experience noise, dust, diminished access, and other nuisance impacts during construction. This could result in an increased use of existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River Trail is disrupted. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. It can be reasonably assumed that staging areas would be located either in the LA River ROW or—dependent on the location and project proponent staging areas—on local jurisdiction properties within the study area. As such, construction of KOP Category 1 could result in temporary loss of access to existing recreational resources, including trails, parks, and recreational fields nearby that may result in increased use of existing nearby recreational facilities.

Within all frames, projects under KOP Category 1 would likely be larger than Typical Projects. Because the construction area (including staging areas) could be substantially larger than Typical Projects, they would have a longer construction duration with more intensive construction activities, thereby disrupting access and use and likely causing longer temporary closures. Thus, construction activities under KOP Category 1 could increase the use of nearby existing neighborhood and regional parks or other recreational facilities for an unknown extended period (due to the lack of site-specific information), such that substantial physical deterioration of the facility may occur or be accelerated, without mitigation. This potential physical deterioration is associated with the additional strain on surrounding recreational facilities as users seek alternatives, as well as with a need for increased maintenance at these facilities. Although impacts would be limited to the duration of construction and would be temporary in nature, there could be deterioration of recreation facilities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Recreational uses under KOP Category 1 would attract additional users. However, KOP Category 1 includes the development of recreational facilities such as equestrian facilities and skate parks, and would thus increase the amount of recreational resources available to users in the project study area. Additionally, as specified in the Design Guidelines, subsequent projects along the LA River under KOP Category 1 would require the submission and approval of a 3-year maintenance and monitoring program for the site. The operation of KOP Category 1 is anticipated to have similar impacts as those discussed above for the Common Elements Typical Project and would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Construction

Construction impacts under KOP Category 2 would be similar to those described above for KOP Category 1 because, like KOP Category 1 design components, design components under KOP Category 2 (e.g., terraced banks, armored channels, or bridge pier modifications) could be larger than the Typical Projects with longer construction duration and more intensive construction activities, and may cause an increased use of existing nearby recreational facilities during the construction period. This impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Category 2 includes a range of functions, such as flood management, recreational, and ecological uses such as amphitheaters, small planting trays, parks, wildlife ramps, and wetland terraces. Operation of flood management and ecological functions would not attract a large number of users. However, the recreational uses under KOP Category 2 would attract additional users and, similar to KOP Category 1, would increase the amount of recreational resources available to users in the study area. Therefore, this impact would be similar to that described for KOP Category 1 operations and would be less than significant. Refer to the KOP Category 1 operations impacts discussion for details. Operation of KOP Category 2 is anticipated to have similar impacts as those discussed above for the Common Elements Typical Project and would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Construction

Construction impacts under KOP Category 3 would be similar to those described above for KOP Category 1 because, like KOP Category 1 design components, design components under KOP Category 3 (e.g., multi-use bridges including pedestrian, bike, platforms, and cantilevers) could be larger with a longer construction duration and more intensive construction activities, and could result in increased use of existing nearby recreational facilities during the construction period. This

impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Category 3 includes a range of functions comprising ecological and recreational uses. Ecological uses include water features and connections for habitat communities, while recreational uses include recreational fields, parks, and channel overlooks. Operation of ecological functions would not attract a large number of users; however, the recreational uses under KOP Category 3 would attract additional users and, similar to KOP Category 1, would increase the amount of recreational resources available to users in the study area. Therefore, this impact is similar to that described for KOP Category 1 operations and would be less than significant. Refer to the KOP Category 1 operations impacts discussion for details. Operation of KOP Category 3 would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Construction

Construction impacts under KOP Category 4 would be similar to those described above for KOP Category 1 because, like KOP Category 1 design components, design components under KOP Category 4 (e.g., diversions such as side channels, diversion tunnels/channels) could be larger with a longer construction duration and more intensive construction activities, and could result in increased use of existing nearby recreational facilities during the construction period. This impact

would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Category 4 includes a range of functions, such as flood management, recreational uses, and ecological uses (e.g., pumps, wetlands, diversion channels, and overflow weirs). Operation of ecological functions would not attract a large number of users; however, the recreational uses under KOP Category 4 would attract additional users and, similar to KOP Category 1, would increase the amount of recreational resources available to users in the study area. Therefore, this impact would be similar to that described for KOP Category 1 operations and would be less than significant. Refer to the KOP Category 1 operations impacts discussion for details. Operation of KOP Category 4 would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

Construction

Construction impacts under KOP Category 5 would be similar to those described above for KOP Category 1 because, like KOP Category 1 design components, design components under KOP Category 5 (e.g., surface storage, recreation fields, naturalized banks) could be larger with a longer construction duration and more intensive construction activities, and could result in increased use of existing nearby recreational facilities during the construction period. This impact would be

potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Category 5 includes a range of functions, such as flood management, ecological uses (e.g., wetlands, naturalized banks, braided channels, fields, storage, and side channels), and recreational uses (e.g., boardwalk platforms and a farmers' market). Ecological functions under KOP Category 5 would not attract a large number of users; however, the recreational uses under KOP Category 5 would attract additional users and, similar to KOP Category 1, would increase the amount of recreational resources available to users in the study area. Therefore, this impact would be similar to that described for KOP Category 1 operations and would be less than significant. Refer to the KOP Category 1 operations impacts discussion for details. Operation of KOP Category 5 would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

Construction impacts under KOP Category 6 would be similar to those described above for KOP Category 1 because, like KOP Category 1 design components, design components under KOP Category 6 (e.g., affordable housing, arts and culture facility) could be larger-scale with a longer construction duration and more intensive construction activities, and could result in increased use of existing nearby recreational facilities during the construction period. This impact would be

potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Category 6 includes a range of functions, such as flood management, recreational uses, and ecological uses (e.g., affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks). Under KOP Category 6, flood management and ecological uses would not attract a large number of users; however, recreational uses such as arts and culture facilities and parks would attract additional users and, similar to KOP Category 1, would increase the amount of recreational resources available to users in the study area. Therefore, this impact would be similar to that described for KOP Category 1 operations and would be less than significant. Refer to the KOP Category 1 operations impacts discussion for details. Operation of KOP Category 6 would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction

The *2020 LA River Master Plan* would involve construction of 107 projects that include recreational facilities that could occur anywhere in the study area over a 25-year period. The specific location

(in-channel or off-channel), configuration, and design of these components have not been determined yet and would depend on numerous factors, including the project proponent and availability of funding. Construction under the *2020 LA River Master Plan* could result in an increased use of nearby existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River and existing recreational facilities is disrupted. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. It can be reasonably assumed that staging areas for construction equipment would be located primarily in the LA River ROW for Typical Projects. For the KOP categories, staging areas would also be primarily in the LA River ROW or—depending on the location and project proponent—possibly on local jurisdiction properties within the study area. Staging areas for the KOP categories could be large, depending on the extent and nature of projects and the equipment involved. Additionally, the future projects could have substantially long construction durations with intensive construction activities, thereby causing disruption of access and use and potentially leading to longer temporary closures of existing recreational facilities. Temporary closures of existing recreational facilities could occur during construction, and recreational facilities near a construction site may experience noise, dust, diminished access, and other nuisance impacts during construction. This could result in an increased use of existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River Trail is disrupted. Thus, construction activities under the overall *2020 LA River Master Plan* could increase the use of nearby existing neighborhood and regional parks or other recreational facilities for an extended period such that substantial physical deterioration of the facility would occur or be accelerated, without mitigation.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure REC-1: Minimize Disruption of Recreational Uses During Construction.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The *2020 LA River Master Plan* includes the implementation of multi-benefit projects that would serve a range of functions and uses including flood management, ecological uses, and recreational uses. Examples of recreational facilities and uses include trails, parks, skate parks, cafes, amphitheaters, farmers' markets, and arts and culture facilities. This would increase the amount of recreational resources available in the study area. Additionally, as specified in the Design Guidelines, subsequent projects along the LA River under the *2020 LA River Master Plan* would require the submission and approval of a 3-year maintenance and monitoring program. Operation of the *2020 LA River Master Plan* would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant.

Impact 3.15(b): Would the proposed Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Typical Projects

Common Elements

Construction

Throughout all nine frames, the Common Elements Typical Project would include the construction of recreational facilities or require the construction or expansion of recreational facilities such as pavilions, cafes, and arts/performance space that might have an adverse physical effect on the environment. Construction of these elements would require demolition, grading, and excavation activities and the construction of permanent facilities. These construction activities would result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetics, biological resources, cultural resources, geology, hydrology and water quality, land use, traffic, and utilities. Refer to Sections 3.1, *Aesthetics*; 3.2, *Air Quality*; 3.3, *Biological Resources*; 3.4, *Cultural Resources*; 3.5, *Energy*; 3.6, *Geology, Soils, and Paleontological Resources*; 3.7, *Greenhouse Gas Emissions*; 3.8, *Hazards and Hazardous Materials*; 3.9, *Hydrology and Water Quality*; 3.10, *Land Use and Planning*; 3.11, *Mineral Resources;* 3.12, *Noise*; 3.13, *Population and Housing*; 3.14, *Public Services*; 3.16, *Transportation*; 3.17, *Tribal Cultural Resources*; 3.18, *Utilities and Service Systems*; and 3.19, *Wildfire*, for detailed descriptions of the Common Elements Typical Projects and potential construction impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the Common Elements Typical Project construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the Common Elements Typical Project construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Common Elements Typical Projects would result in the operation of new recreational facilities, which could attract up to 500 users and 10 FTE operations and maintenance staff. Other sections in this PEIR describe potential significant impacts (including Sections 3.1 through 3.14 and 3.16 through 3.19) that could result from operations of the Common Elements Typical Project. The operation of new and expanded recreational facilities may result in an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the Common Elements Typical Project operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the Common Elements Typical Project operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Multi-Use Trails and Access Gateways

Construction

Construction impacts of the Multi-Use Trails and Access Gateways Typical Project would be similar to those discussed for the Common Elements Typical Project above under Impact 3.15(b). Construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to the Common Elements Typical Project construction, but would last up to 20 months, disturb a larger area, and have fewer number of daily workers, but with more extensive construction equipment use (such as hydraulic impact hammers, forklifts, and truck mounted cranes). These construction activities would result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on biological resources, cultural resources, and hydrology and water quality, among other resource areas. This impact would be potentially significant for the same reasons as described under Common Elements Typical Project construction impacts. Refer to the Common Elements Typical Project construction impacts discussion under Impact 3.15(b) above for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the Multi-Use Trails and Access Gateways Typical Project construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the Multi-Use Trails and Access Gateways Typical Project construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Operation of the Multi-Use Trails and Access Gateways Typical Project would attract up to 1,000 users and 3 FTE operations and maintenance staff. Other sections in this PEIR describe potentially significant impacts (including Sections 3.1 through 3.14 and 3.16 through 3.19) that would result from operations of this Typical Project.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the Multi-Use Trails and Access Gateways Typical Project operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the Multi-Use Trails and Access Gateways Typical Project operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

2020 LA River Master Plan Kit of Parts

For all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements, see above. The impact discussion below focuses on specific KOP categories only.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project, which is analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP Category 1: Trails and Access Gateways* heading.

Construction

This KOP category includes a variety of construction activities for recreational facilities, ranging from trail modifications to development of facilities, habitat corridors, and channel access ramps anywhere in the study area. The specific location (in-channel or off-channel) and design for these design components has not been determined yet and would depend on numerous factors, including the project proponent and availability of funding. Nonetheless, construction activities under KOP Category 1 would result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetic resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and transportation. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of construction impacts for KOP Category 1, which could have a potentially significant physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 1 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Apply the mitigation measures described in in Sections 3.1, 3.2, 3.3, 3.4, 3.6, 3.9, 3.10, 3.12, and 3.16.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the KOP Category 1 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Design components of KOP Category 1 would provide new and enhanced access to the LA River and opportunities for recreation and community engagement. Considering this KOP category includes equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridors, operation of KOP Category 1 may have an adverse physical effect on the environment. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of operations impacts for KOP Category 1, which could be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 1 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the KOP Category 1 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

KOP Category 2

Construction

Construction impacts would be substantially similar to those identified for KOP Category 1 under Impact 3.15(b) because, like KOP Category 1 design components, design components under KOP Category 2 could serve as recreational facilities (e.g., terraced banks being used as amphitheaters), the construction of which could result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetic resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and transportation. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of construction impacts for KOP Category 2, which could have an adverse physical effect on the environment. This impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 2 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the KOP Category 2 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Considering this KOP category would include landscapes, parks, and recreational facilities, operation of KOP Category 2 could have an adverse physical effect on the environment. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of operations impacts for KOP Category 2, which could have an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 2 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the KOP Category 2 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

KOP Category 3

Construction

Construction impacts would be substantially similar to those identified for KOP Category 1 under Impact 3.15(b) because, like KOP Category 1 design components, design components under KOP Category 3 could serve as recreational facilities (e.g., a cantilever being used as a lookout and pedestrian/bike/equestrian bridges), the construction of which could result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetic resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and transportation. Refer to 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.16, 3.17, 3.18, and 3.19 for a qualitative discussion of construction impacts for KOP Category 3, which could have an adverse physical effect on the environment. This impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 3 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the KOP Category 3 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Operations of KOP Category 3 would include the operation of new recreational facilities such as recreational fields and parks. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of operations impacts for KOP Category 3, which could have an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 3 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the KOP Category 3 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

KOP Category 4

Construction

Construction impacts would be substantially similar to those identified for KOP Category 1 under Impact 3.15(b) because, like KOP Category 1 design components, design components under KOP Category 4 could serve as recreational facilities (e.g., wetlands created within a park), the construction of which could result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetic resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and transportation. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of construction impacts for KOP Category 4, which could have an adverse physical effect on the environment. This impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 4 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the KOP Category 4 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

While KOP Category 4 primarily consists of flood management, water quality, and ecological uses, KOP Category 4 could also provide new recreational opportunities such as side channels that can provide for flood management during storm events and educational purposes during dry events. Accordingly, with the inclusion of potential recreational uses under KOP Category 4 operations, Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of operations impacts for KOP Category 4, which could have an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 4 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the KOP Category 4 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

KOP Category 5

Construction

Construction impacts would be substantially similar to those identified for KOP Category 1 under Impact 3.15(b) because, like KOP Category 1 design components, design components under KOP Category 5 include recreational facilities, such as recreation fields, the construction of which could result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetic resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and transportation. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of construction impacts for KOP Category 5, which could have an adverse physical effect on the environment. This impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 5 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the KOP Category 5 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Operations of KOP Category 5 would include the operation of new recreational facilities such as parks and farmers' markets. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of operations impacts for KOP Category 5, which could have an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 5 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the KOP Category 5 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

KOP Category 6

Construction

Construction impacts would be substantially similar to those identified for KOP Category 1 under Impact 3.15(b) because, like KOP Category 1 design components, design components under KOP Category 6 include recreational facilities, such as art and culture facilities and recreation fields, the construction of which could result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on aesthetic resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and transportation. Refer to Sections 3.1 through 3.14 and 3.16 through 3.19 for a qualitative discussion of construction impacts for KOP Category 6, which could have an adverse physical effect on the environment. This impact would be potentially significant for the same reasons as described under KOP Category 1 construction impacts. Refer to the KOP Category 1 construction impacts discussion for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 6 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the KOP Category 6 construction impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Operations

Operations of KOP Category 6 would include the operation of new recreational facilities such as playgrounds, recreational fields, and arts and culture facilities. Refer to 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.16, 3.17, 3.18, and 3.19 for a qualitative discussion of operations impacts for KOP Category 6, which could have an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the KOP Category 6 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to the significance after required mitigation identified for the KOP Category 6 operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

The *2020 LA River Master Plan* would involve construction and operations activities to implement 107 projects that include recreational facilities that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel) and design for these components along with associated operation and maintenance activities have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Construction and operations activities under the *2020 LA River Master Plan* could have impacts on various environmental resources such as biological resources, cultural resources, hydrology and water quality. Refer to the impacts discussion for the overall *2020 LA River Master Plan* in Sections 33.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.16, 3.17, 3.18, and 3.19 of this PEIR for a qualitative analysis of construction and operation impacts of the overall *2020 LA River Master Plan*, which could have an adverse physical effect on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Refer to mitigation measures identified for the Overall 2020 *LA River Master Plan* construction and operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Significance after Required Mitigation

Refer to significance after required mitigation identified for the Overall *2020 LA River Master Plan* construction and operations impacts in Sections 3.1 through 3.14 and 3.16 through 3.19.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on recreation is Los Angeles County, as this geographic area contains the regional and neighborhood recreational resources most commonly used by local residents and visitors. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on recreation, if, in combination with other projects within the defined geographic context, it would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated or would include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Cumulative Condition

Past and present development in the County has resulted in increased population that has, in turn, increased demand for neighborhood, community, and regional parks and recreational facilities. The County has a goal of 6 acres of regional parkland per 1,000 residents and 4 acres per 1,000 residents for community and local facilities.

Implementation of development, infrastructure, and other projects in the County has the potential to increase population to the point where overuse and deterioration of existing parks and recreational facilities could occur. As noted in the EIR for the *Los Angeles County General Plan* (2014), the deterioration that would occur to local parks and recreational facilities from regional population growth may be offset with funding from new development such as in-lieu fees for parks or donation of parkland pursuant to the Quimby Act. As discussed, the Quimby Act is a funding mechanism for parkland acquisition for jurisdictions. As allowed by this act, most cities in the County have park dedication ordinances as part of their municipal codes. The park dedication ordinances require most residential subdivisions to dedicate parkland or pay in-lieu fees (or both, in some circumstances) to enable the jurisdictions to acquire local parkland at ratios between 3 acres and 5 acres per 1,000 residents. In order to accommodate future demand for parks and recreational facilities from population growth in the Los Angeles County region, additional parks and recreational facilities will be developed and constructed throughout the region. Other cumulative projects, such as schools or residential projects in adjacent jurisdictions, would increase the need for recreational facilities in the region.

Cumulative development would still incrementally increase the need for new or expanded facilities, which would have the potential to result in adverse environmental effects. However, as discussed,

existing regulations do not ensure that the funding for parkland acquisition would be proportional to increases in population. As noted, the County sets minimum requirements of parkland per 1,000 residents. As a result, there is an inherent deficit between the ratio of local parkland the County would like to maintain and the amount of parkland it can provide in accordance with County Code Section 21.24.340. Therefore, although much of the demand for local parkland can be accommodated, a deficit of parkland would remain compared to the County's goal.

Grants from State and county bond sources are available to fund parks and recreational facilities in urban areas and funding for maintenance of those facilities would be provided through property assessments and taxes. Other regulations including the Mello-Roos Community Facilities Act of 1982 and the Landscaping and Lighting Act of 1972 would serve as supplemental sources of funding for parkland. Enforcement of existing parkland dedication requirements would serve to reduce the potential for deterioration of facilities by allowing for adequate funding for the provision and maintenance of recreational facilities. While existing regulations, general plan update policies, and implementation programs address in part the need for parkland acquisition and maintenance, considering the deficit of parkland compared to the County goal, a cumulative condition with respect to recreation exists in the County.

Contribution of the Project to Cumulative Impacts

The proposed Project would increase opportunities for recreation for residents and visitors. The Project would provide additional recreational trails and multi-use facilities as well as connectivity to the existing County and local trail networks. Therefore, the proposed Project would add to the current inventory of parks and recreational facilities within the County. As there is no current cumulative condition with respect to recreation in the County, the proposed Project would not make a contribution to a cumulative impact on recreation; in fact, the proposed Project would result in a beneficial contribution to recreational opportunities within Los Angeles County.

Section 3.16
Transportation

3.16.1 Introduction

This section describes the geographic and regulatory setting for transportation, discusses the construction and operations impacts of the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The Transportation Impact Analysis (TIA) Report prepared for the *2020 LA River Master Plan* documents the assumptions, methodologies, and findings of the potential transportation impacts of the proposed Project and is the basis for the evaluation of impacts in this section (Appendix I). Preparation of trip generation estimates and distribution of trips for individual project elements and intersection operational analysis was not included in the TIA because specific design and locations are not known at this time. In response to Senate Bill (SB) 743, the Los Angeles County Department of Public Works has developed new Transportation Impact Guidelines (hereafter "Guidelines") that include a comprehensive systematic approach to the assessment of transportation impacts. Part of the Guidelines, the County's screening criteria were used to identify those typical elements/design components under the six kit of parts (KOP) categories, which, when implemented as part of a subsequent project, would be subject to subsequent vehicle miles traveled (VMT) analysis. Section 3.16.3.3, *Impacts and Mitigation Measures,* below describes the overall methods and criteria used in assessing the proposed Project's impacts.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.16.2 Setting

3.16.2.1 Geographic

Regional Setting

The *2020 LA River Master Plan* study area is located within a 2-mile-wide, 51-mile-long corridor of the LA River that stretches across the San Fernando Valley in the west, from the San Gabriel

Mountains and Angeles National Forest in the northeast, and south through Central Los Angeles down to Long Beach and the Pacific Ocean. This area includes much of urbanized South Los Angeles County, but excludes West Los Angeles and the coastal cities in the South Bay area of the County. The transportation system serving this area is a complex, built-out, multimodal network designed to carry both people and goods. It consists of major freeways, roadways, bicycle facilities, sidewalks, public transit, freight railways, airports, seaports, and intermodal terminals. There is also a network of trails through the extensive open areas and mountains that lie between the urbanized areas. Major components of the transportation network within the study area are described below. Table 3.16-1 presents a comparison of existing transportation facilities and amenities by river frame.

Table 3.16-1. Existing Transportation Amenities by Frame

River Frame		Bicycle Facilities (Miles) Existing/Proposed				Trails Length (Miles)		Trail Access Points	Transit Routes Counts	Park % Land Area[1]
ID	Name	Class I	Class II	Class III	Class IV	Existing	Proposed			
1	Estuary	8.2	1.7	8.2	2.2	4.0	0.0	8	40	2%
		1.8	8.5	2.1	0.2					
2	South Plain	6.0	5.6	0.7	0.0	4.4	0.0	5	16	2%
		1.1	15.5	2.7	0.0					
3	Central Plain	8.2	0.7	1.1	0.0	5.6	4.0	15	18	5%
		9.5	23.9	23.2	0.0					
4	North Plain	2.5	0.0	0.0	0.0	0.0	5.5	5	18	1%
		7.7	7.2	5.8	0.0					
5	Heights	0.1	12.8	10.3	0.0	1.1	5.0	2	81	1%
		9.6	19.8	18.9	18.1					
6	Narrows	14.1	17.5	15.8	0.0	5.4	4.5	31	28	37%
		12.3	19.6	22.1	7.1					
7	East Valley	0.3	13.1	1.4	0.0	1.0	0.0	0	18	7%
		7.8	8.5	10.2	6.2					
8	Mid Valley	1.3	13.9	1.0	0.0	0.3	0.0	16	27	5%
		7.1	13.2	15.3	1.8					
9	West Valley	34.3	11.4	1.5	0.0	0.0	0.0	15	31	20%
		7.1	8.6	30.0	10.4					
Total		**75.1**	**76.7**	**40.0**	**2.2**	**21.7**	**19.0**	**97.0**	**277.0**	**9%**
		64.0	**124.8**	**130.4**	**43.8**					

[1] Percentage of land area dedicated to parks.

Existing and Proposed Bicycle Facilities

Figures 3.16-1 through 3.16-3 present the existing and proposed bicycle facilities within the study area. Proposed facilities include all known facilities proposed by any jurisdiction within the study area. As shown in Table 3.16-1, there are almost 195 miles of existing bicycle facilities within the study area, including just over 75 miles of Class I bicycle paths that run primarily along the LA River,

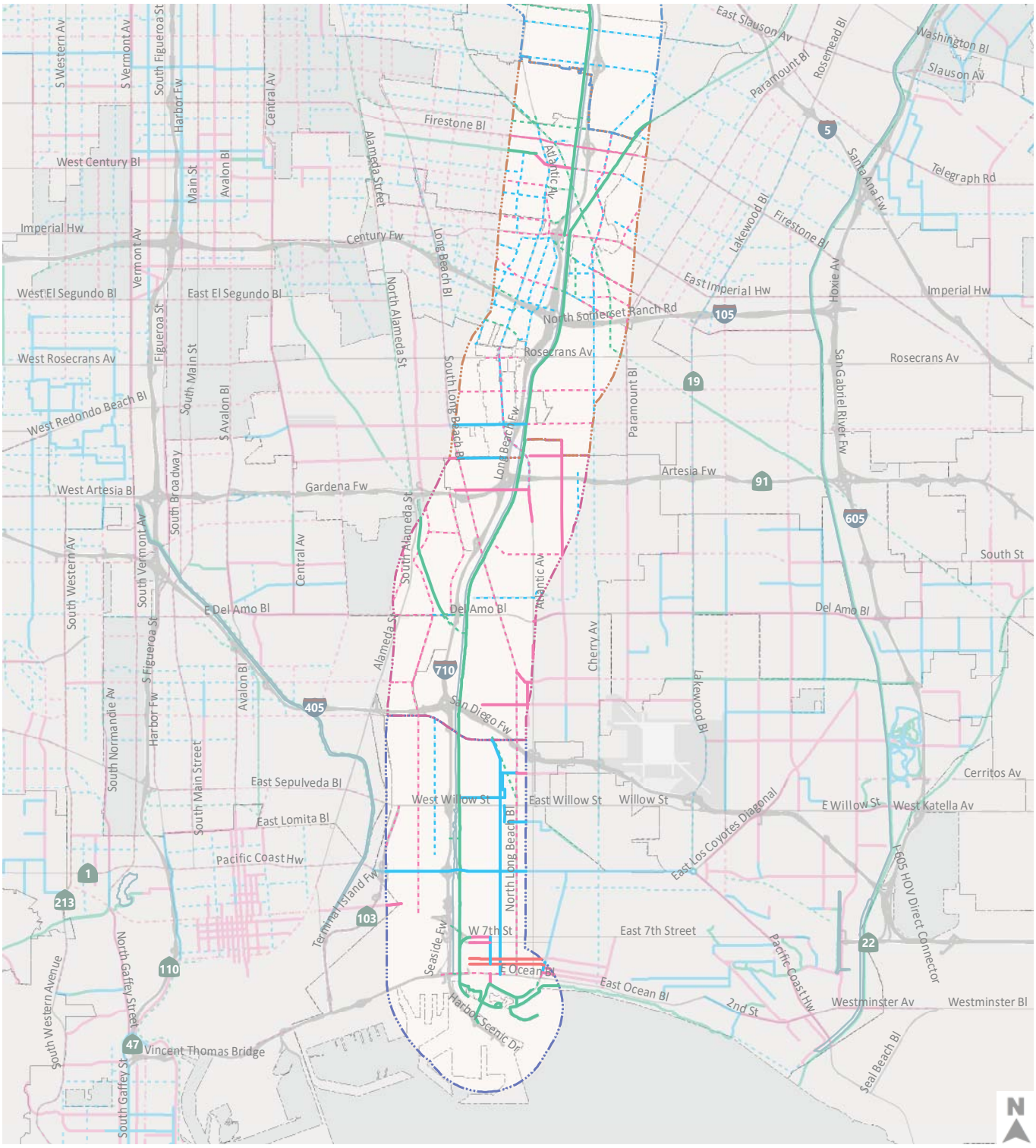


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Figure 3.16-1
Existing and Planning Bicycle Facilities in Frames 1, 2, and 3

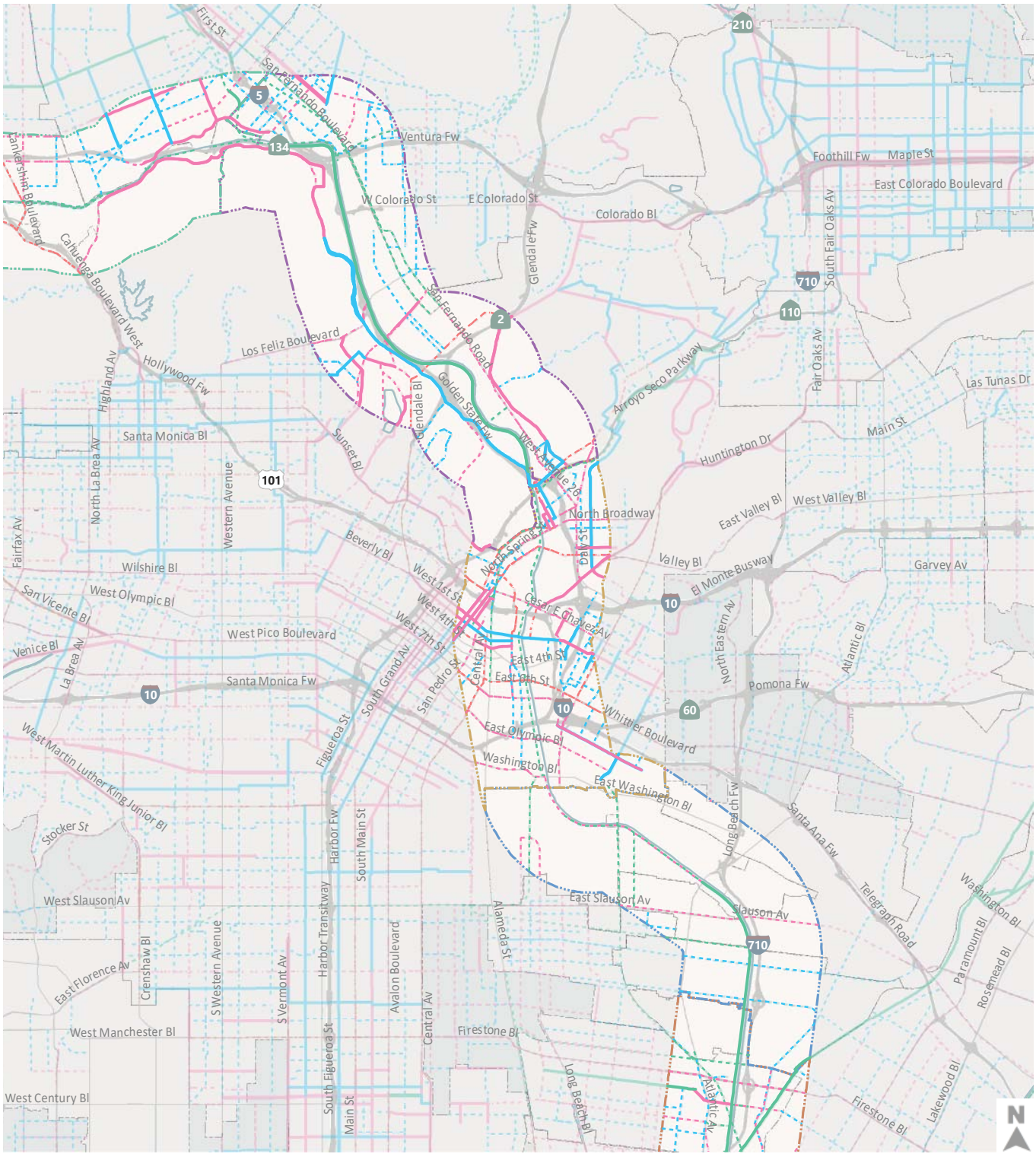

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Figure 3.16-2
Existing and Planning Bicycle Facilities in Frames 4, 5, and 6

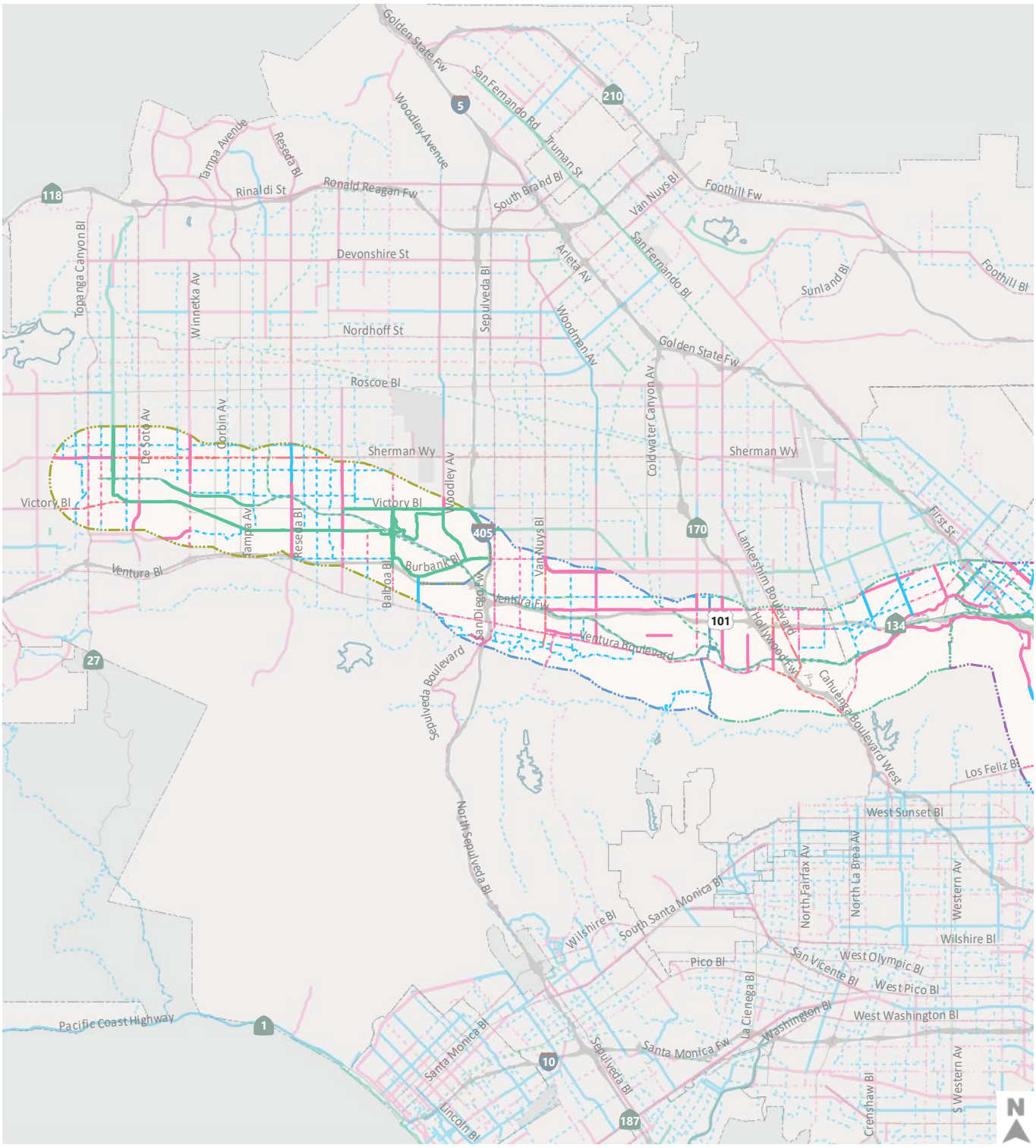

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Figure 3.16-3
Existing and Planning Bicycle Facilities in Frames 7, 8, and 9

almost 77 miles of Class II bicycle lanes, 40 miles of Class III sharrowed[1] or signed bicycle facilities, and just over 2 miles of Class IV bicycle tracks. Class II bicycle lanes represent a plurality of the bicycle facility typologies within the study area despite the presence of bicycle paths along both sides of the river in many locations. Class I bikeways are defined as off-street bicycle paths, Class II bikeways are defined as striped lanes within streets, Class III bikeways are defined as signed or sharrowed bicycle routes, and Class IV bikeways are defined as bicycle facilities on roadways that provide a physical vertical barrier between bicyclists and vehicular traffic.

The bicycle network within the study area is not fully built out. Almost 365 miles of the planned bikeways in the study area are yet to be built, almost double the number of miles already on the ground. Of the planned miles of bicycle facilities, Class III sharrowed facilities represent a plurality (just over 130 miles), with Class II bicycle lanes representing an almost equal share (just under 125 miles). There are almost 110 miles of planned Class I and Class IV facilities.

In addition to these dedicated bicycle facilities, numerous multi-modal bridges over the LA River for exclusive use of bicyclists and pedestrians (and sometimes also for equestrians) have recently or will soon open across the LA River, including the Riverwalk Bridge in Glendale, the Garden Bridge connecting to Zoo Drive, and the North Atwater La Kretz Bridge, the Sunnynook Bridge, the Red Car Bridge, and the Taylor Yard Bridge farther to the south. These bridges will cross the river and connect communities on the river's north or east side to existing segments of the LA River Bike Path.

Existing Public Transit Service and Freight Rail Service

The regional public transit system includes heavy rail transit operations, regional commuter rail services, regional and municipal bus operations, and local shuttles. The Los Angeles County Metropolitan Transportation Authority (Metro) is the largest provider of public transit service in the study area, and its service is supplemented by numerous municipal transit lines and local shuttle services.

Figures 3.16-4 through 3.16-6 present the existing transit routes within the study area. The study area is served by eight transit providers on 188 routes, including by Metro, DASH (Los Angeles Department of Transportation), Antelope Valley Transit Authority, Santa Clarita Transit, Big Blue Bus (Santa Monica), Foothill Transit, Torrance Transit, and Long Beach Transit. Metro rail and bus rapid transit service within the study area includes the A Line (formerly, the Blue Line) within the Long Beach area, the C Line (formerly, the Green Line) in South Los Angeles, and the G Line (formerly, the Orange Line) in the San Fernando Valley.

National and regional passenger rail service in the study area is operated by Amtrak and Metrolink. The two services, in some places, share use of tracks with the Union Pacific Railroad (UPRR), which operates a vast rail network that extends throughout the State and the nation. Planning is underway for development of a high-speed rail line that will link Southern California with Central California and the Bay Area, and portions of the alignments under study include segments that lie adjacent to the LA River.

[1]A sign showing a bicycle under two wide arrows that is painted on a road to show that people riding bicycles and those driving cars must share the road.

Existing Streets and Freeways

Figures 3.16-7 through 3.16-9 present the existing roadway network within the study area, including freeways, arterials, secondary streets, and local roads. The network of freeways and State highways supports high-capacity limited-access travel, whereas the arterial network provides high levels of signalized street capacity and serves as a feeder system for the regional freeways and local street system. The freeway and highway system is the primary means of regional person and goods movement, providing for direct vehicular access to river access points, and to employment, services, and goods.

In many locations, arterial streets provide the only local access crossing points over the LA River, with many secondary and especially local roads dead-ending at the river's fence line.

Los Angeles County and the City of Los Angeles both have Vision Zero plans, which aim to reduce traffic fatalities and/or injuries to zero. Each agency has identified specific roadway corridors that experience higher than average collisions, injuries, and fatalities. Within the study area, Los Angeles County has identified Rosecrans Avenue and Compton Boulevard, both located in the East Rancho Dominguez unincorporated area and Santa Fe Avenue, located in the Rancho Dominquez unincorporated area (in Frame 3), as Collision Concentration Corridors. Similarly, the City of Los Angeles has identified the following streets within the study area as being part of a High Injury Network:

- East Olympic Boulevard
- South Alameda Street
- East 7th Street
- East 6th Street
- North Broadway
- North Figueroa Street
- San Fernando Road
- Cahuenga Boulevard
- Ventura Boulevard
- Riverside Drive
- Balboa Boulevard
- Victory Boulevard
- Reseda Boulevard
- Vanowen Street
- Tampa Boulevard
- De Soto Avenue
- Sherman Avenue
- Fallbrook Avenue

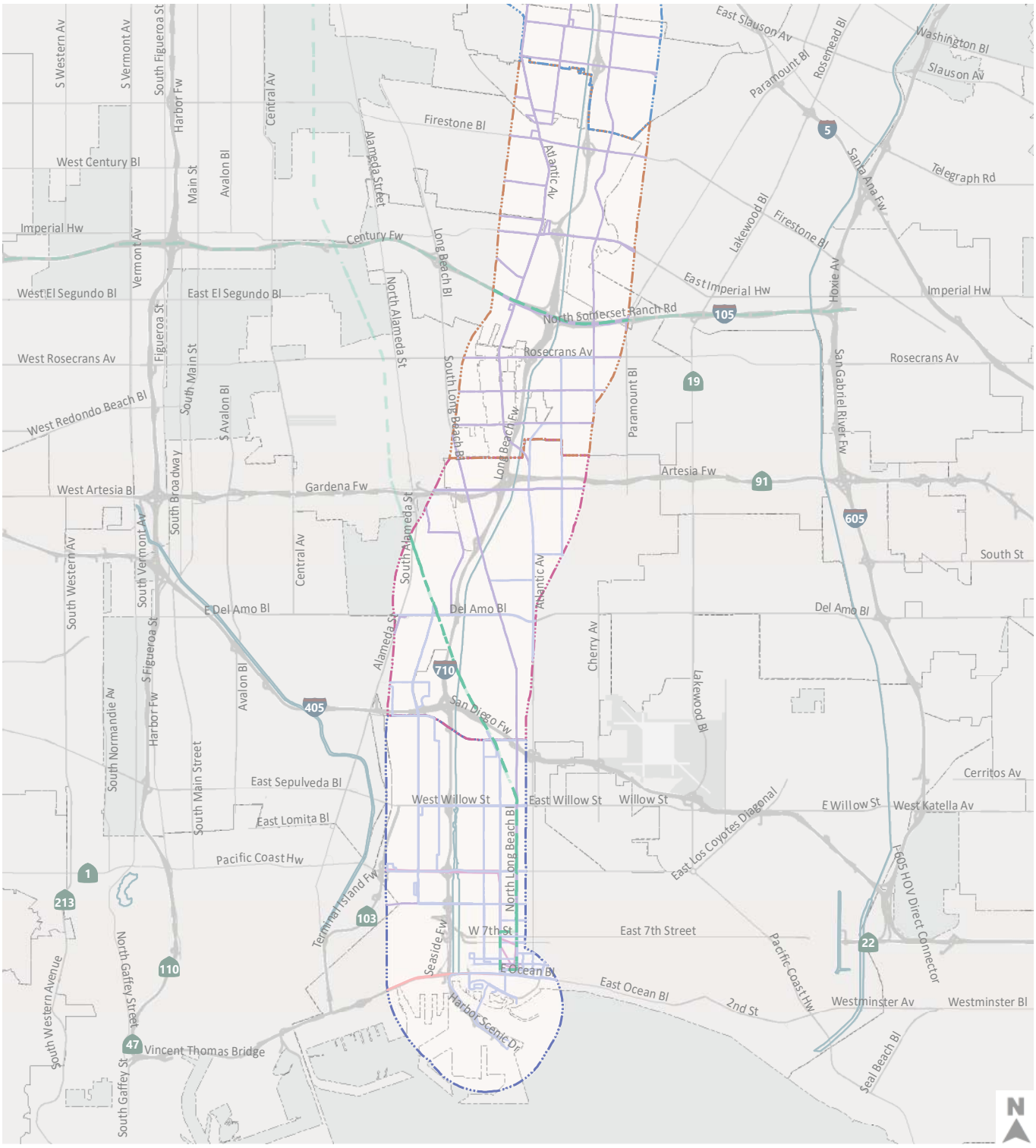

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Figure 3.16-4
Existing Public Transit Routes in Frames 1, 2, and 3

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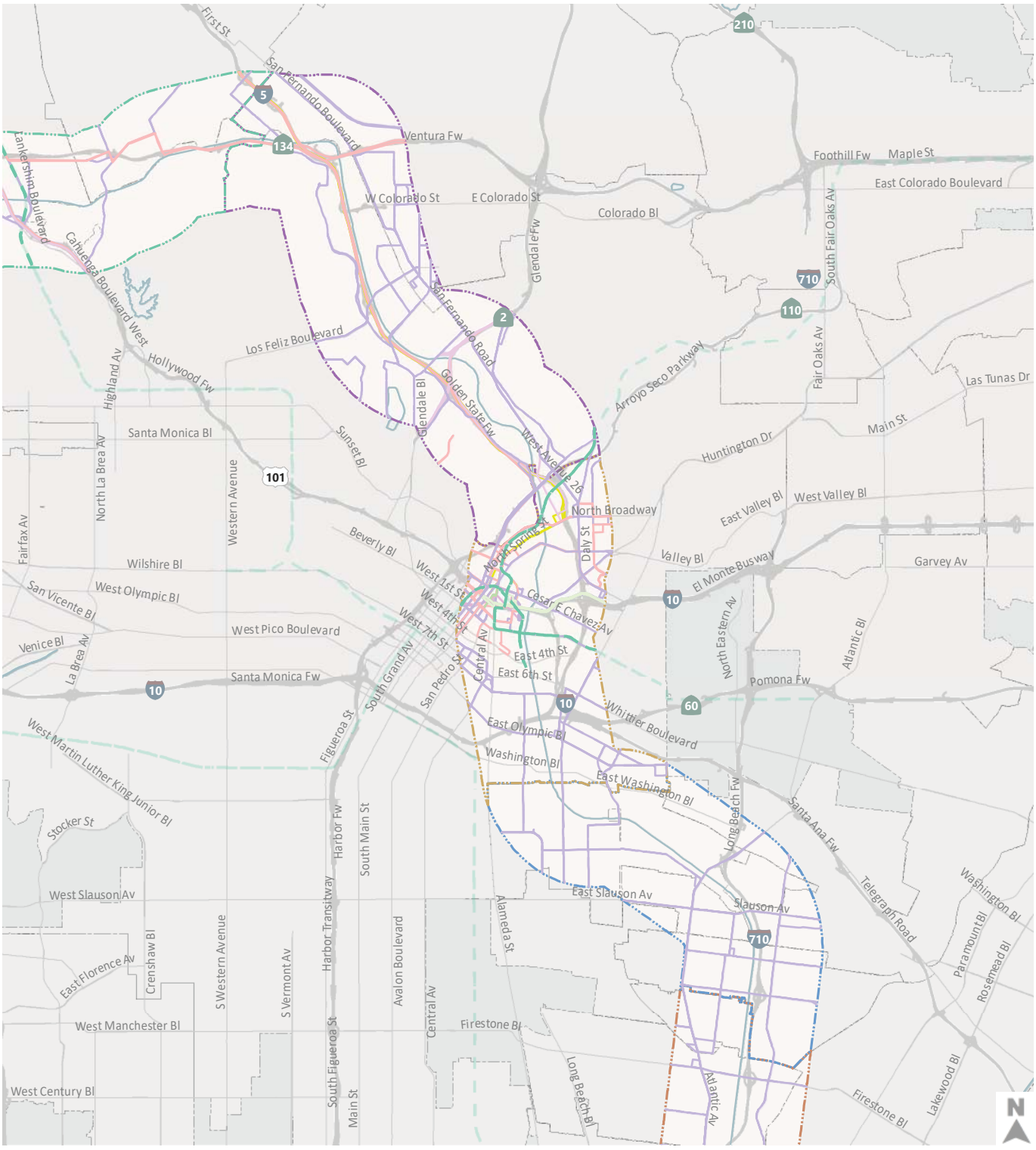

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Figure 3.16-5
Existing Public Transit Routes in Frames 4, 5, and 6

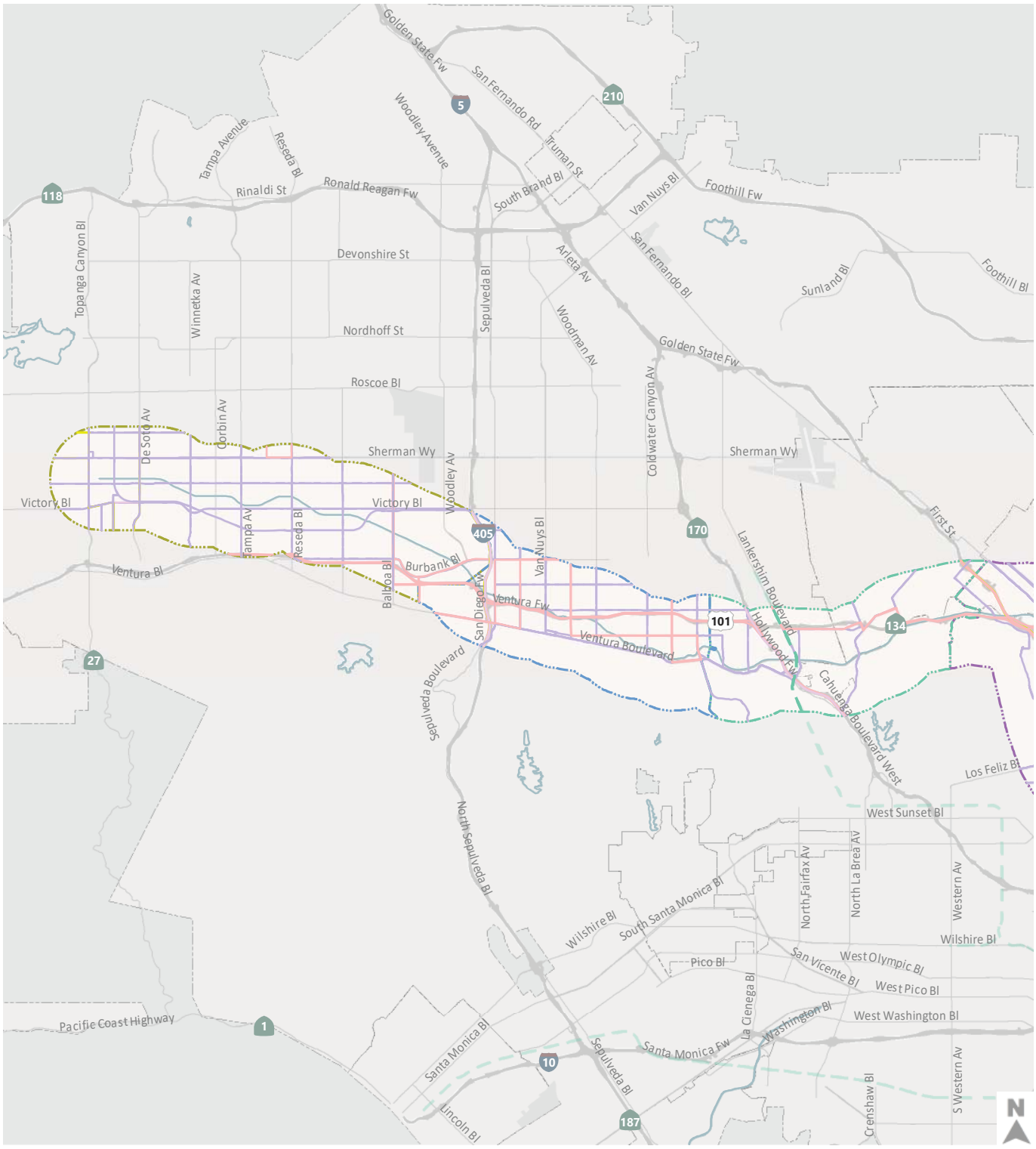

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Figure 3.16-6
Existing Public Transit Routes Frames 7, 8, and 9

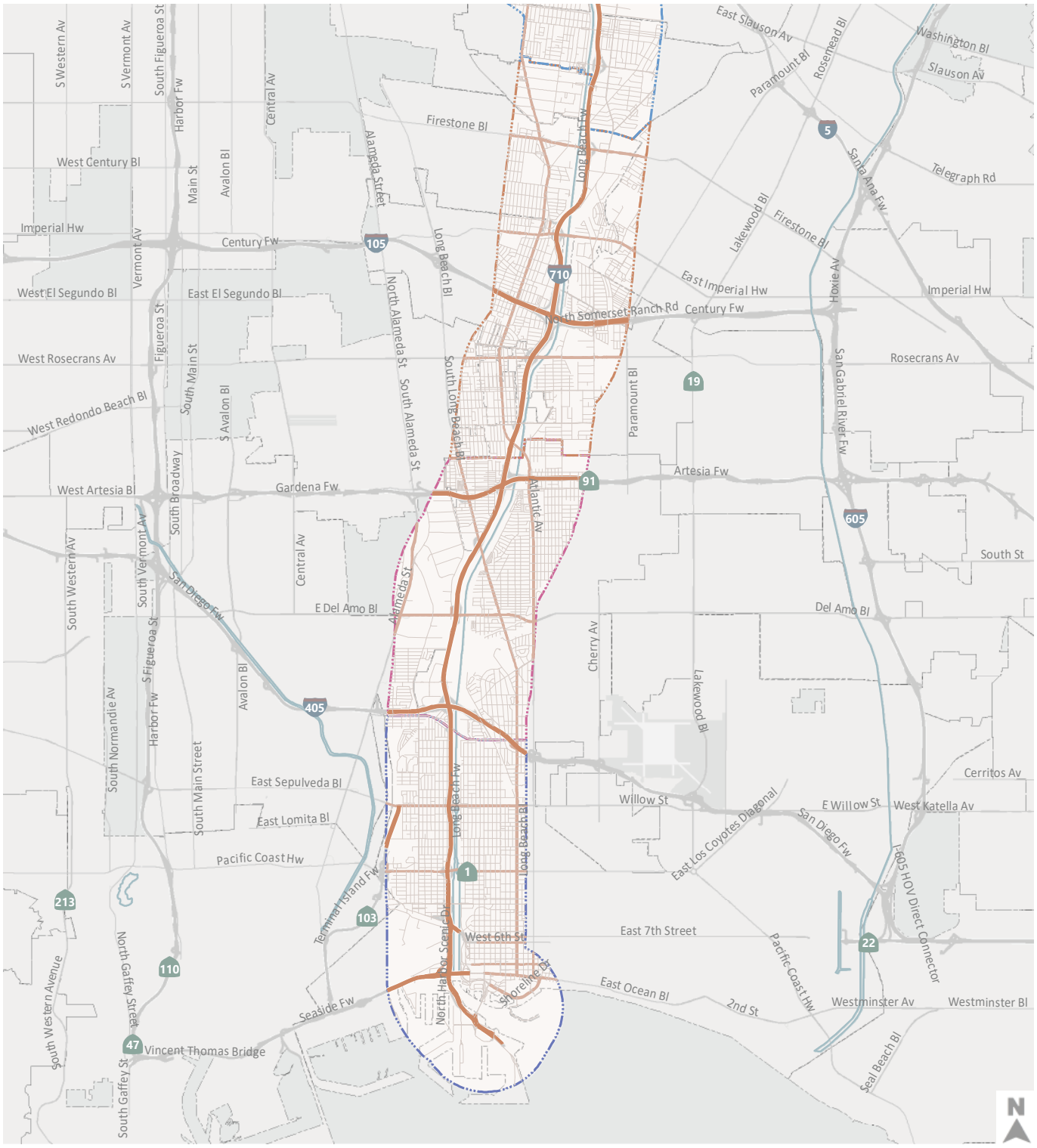

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Figure 3.16-7
Roads and Freeways Frames 1, 2, and 3

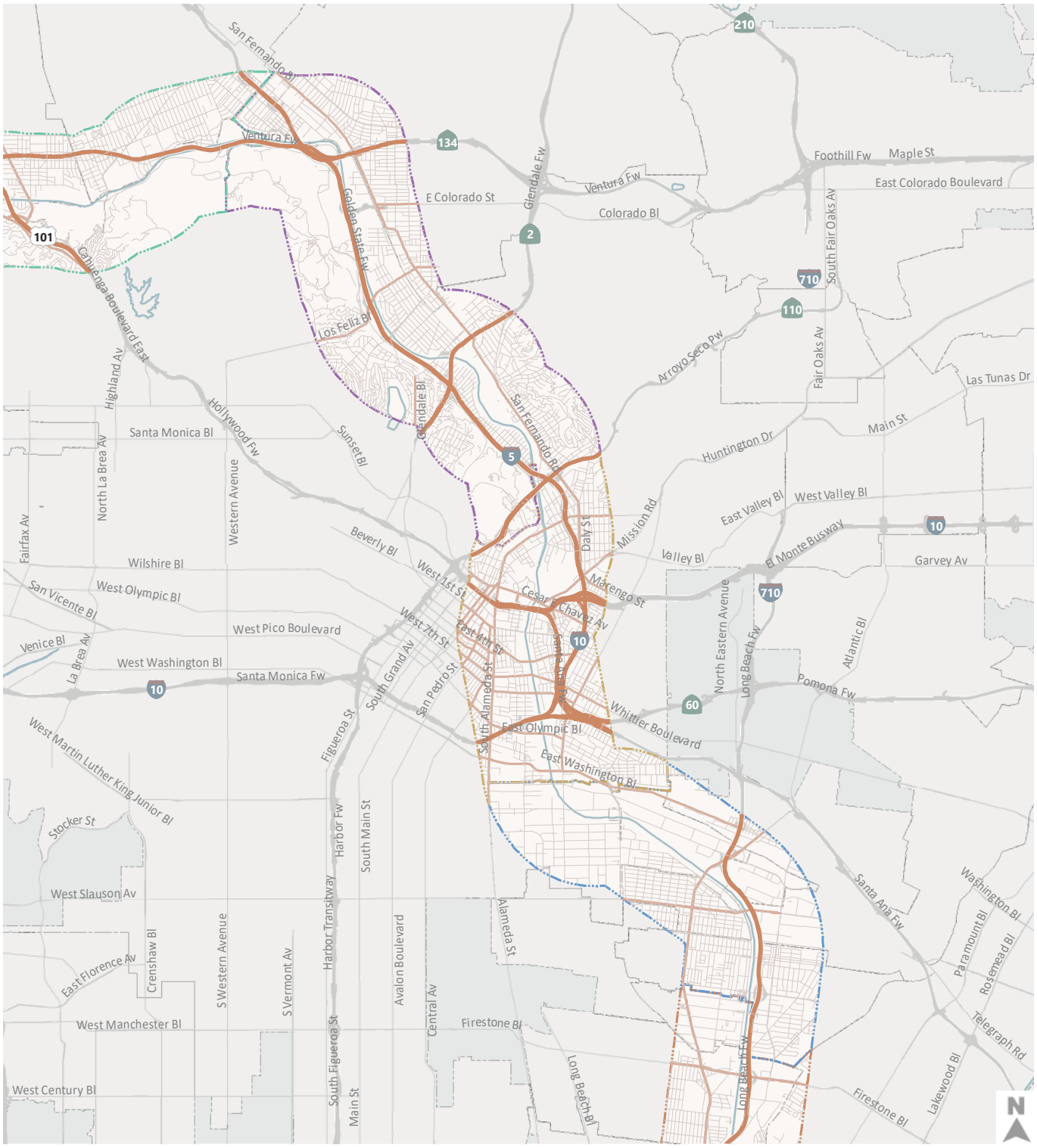

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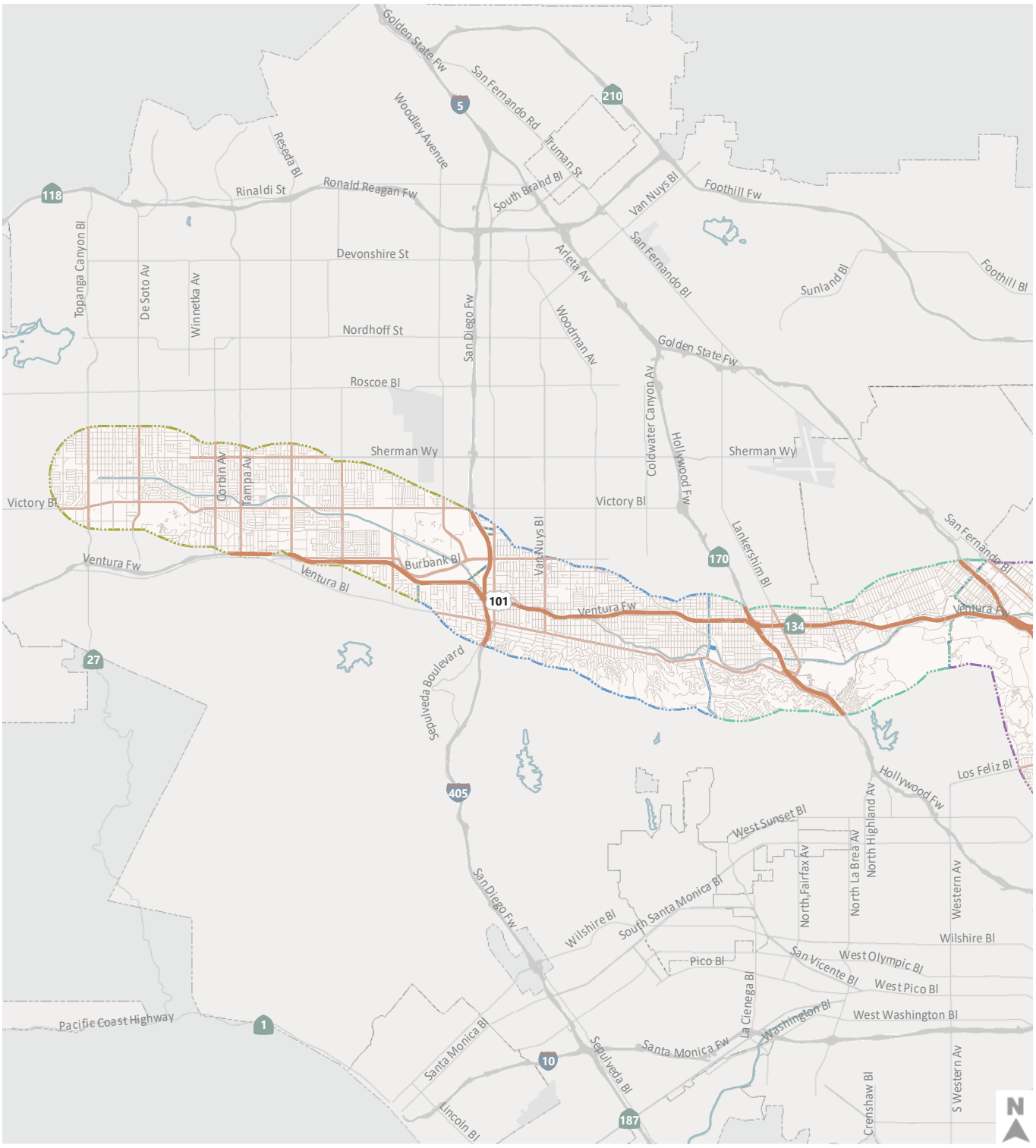
Figure 3.16-8
Roads and Freeways Frames 4, 5, and 6



Roads & Freeways
- Freeways
- Primary Streets
- Secondary, Tertiary Streets

City Boundaries

LA River Frames
- 6 - Narrows
- 7 - East Valley
- 8 - Mid Valley
- 9 - West Valley

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Figure 3.16-9
Roads and Freeways in Frames 7, 8, and 9

Major freeways serving the study area include Interstate (I-) 710, I-105, State Route (SR) 91, SR-1, SR-60, I-10, SR-2, SR-110, I-5, SR-2, SR-134, United States Route (US-) 101, SR-170, I-405, and SR-27. I-710 forms a spine along the river's southern reach in River Frames 1 through 4, while I-5 does the same in River Frame 6. US-101 runs east-west through much of the study area in Frames 6 through 9, but does not run as nearly parallel to or as close to the river as I-710 and I-5 do.

Existing River Access Points, Trails, and Park Lands

Figures 3.16-10 through 3.16-12 present the existing river access points, existing and planned trails, and park lands within the study area. There are 97 existing river access points along the LA River, and more than 26 miles of existing trails within the study area with an additional almost 23 miles planned. Major existing trails in the study area include the LA River County River Bikepath in the Long Beach area in Frame 1, the LA River Trail and the LA River Trail Extension in South Los Angeles in Frames 2–4, the Arroyo Seco Trail north of Downtown Los Angeles in Frame 6, and the Rim of the Valley Trail, which runs through Griffith Park, also in Frame 6.

Almost 10 square miles, or approximately 9 percent of the study area, is existing park land. Frame 6, the Narrows, where the river bends around Griffith Park, and Frame 9, the West Valley, which includes Balboa Park, have the highest percentage of land area devoted to parks, at 37 percent and 20 percent, respectively.

Frame 1 through Frame 9

To support context-sensitive planning that accounts for local needs, the *2020 LA River Master Plan* study area has been subdivided into nine distinct geographical sections or planning frames. Frames are numbered 1 through 9, beginning in Long Beach with Frame 1 and ending in Canoga Park with Frame 9. Some planning frames include just one jurisdiction, while others include multiple local jurisdictions. As shown above, the major components of the transportation network within the study area were presented in Figures 3.16-1 through 3.16-12, which also illustrated Frames 1 through 9 within their respective geographic context. Similarly, Table 3.16-1 presents a quantitative data comparison of transportation facilities and amenities by river frame.

3.16.2.2 Regulatory

State

California Environmental Quality Act

State CEQA Guidelines Section 15064.3(a) establishes increases in VMT as the most appropriate measure of transportation impacts, and states that other considerations may include effects on transit and non-motorized travel. VMT as a metric for impacts is consistent with a broad range of State legislation, regional and local programs, and plans and policies, and as such, the State CEQA Guidelines also require consideration of whether a project may conflict either directly or indirectly with plans, policies, programs, or ordinances addressing circulation, particularly related to increases in VMT and associated reductions in greenhouse gas (GHG) generation. The State has set ambitious targets for reductions in GHG generation, which in turn relates to transportation and required reductions in VMT, as transportation is the largest generator of GHGs by sector in the State (41 percent). Thus, legislation, programs, plans, and policies that target GHG generation and climate

change relate directly to transportation and the need to reduce VMT. SB 743, which amended the State CEQA Guidelines with respect to VMT, is discussed in detail below.

Statewide Transportation Improvement Program

The California Transportation Commission (CTC) administers transportation programming. Transportation programming is the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. It commits expected revenues over a multi-year period to transportation projects. The Statewide Transportation Improvement Program (STIP) is a multi-year Capital Improvement Program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The California Department of Transportation (Caltrans) manages the operation of State Highways, including the freeways passing through Los Angeles County.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, recognizes that California is a major contributor to U.S. GHG emissions. AB 32 acknowledges that such emissions cause significant adverse impacts on human health and the environment, and therefore must be identified and mitigated where appropriate. AB 32 also establishes a State goal of reducing GHG emissions to 1990 levels by 2020, a reduction of approximately 30 percent from projected State emission levels and 15 percent from current State levels, with even more substantial reductions required in the future. Pursuant to AB 32, the California Air Resources Board (CARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. As the largest single sector of the economy that generates GHGs, changes in transportation are a focus of these efforts.

SB 32/Executive Order B-30-15

This executive order sets in place a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. This order acts as an intermediate goal to achieving 80 percent reductions by 2050.

California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by Executive Order S-3-05 of reducing emissions 80 percent under 1990 levels by 2050. Such reductions will require major changes in the transportation sector. This intermediate target was codified into law by SB 32, which was signed into law by Governor Jerry Brown on September 8, 2016.

SB 375

The adoption of SB 375 on September 30, 2008, created a process whereby local governments and other stakeholders must work together within their region to achieve the GHG reductions specified in AB 32 through integrated development patterns, improved transportation planning, and other transportation measures and policies. Under SB 375, CARB is required to set regional vehicular GHG reduction targets for 2020 and 2035. Additionally, SB 375 required that those targets be incorporated within a Sustainable Communities Strategy (SCS), a newly required element within the Metropolitan Planning Organization's (MPO's) Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets that require a 7–8 percent

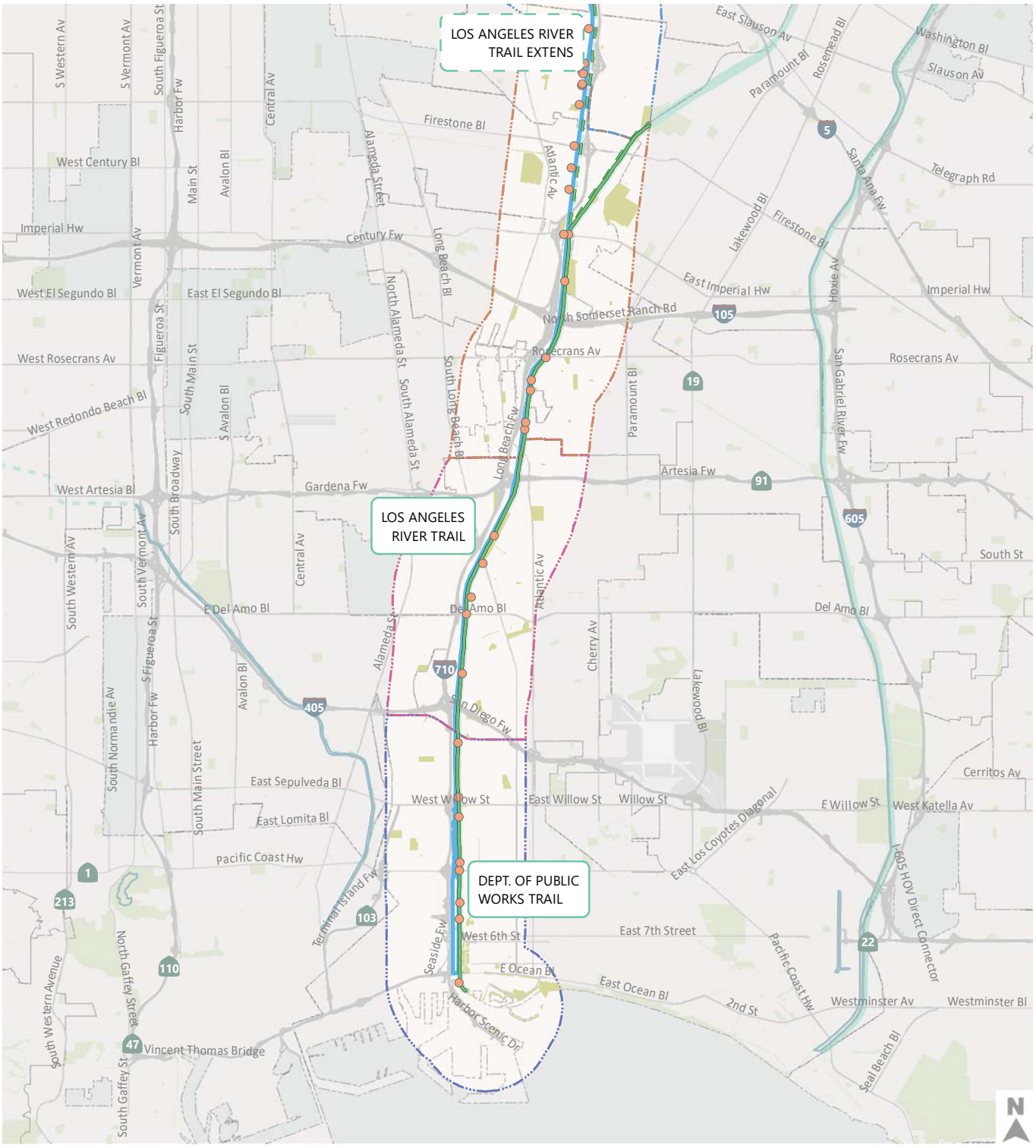

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Figure 3.16-10
Trails, Parks, and Trail Access Locations in Frames 1, 2, and 3

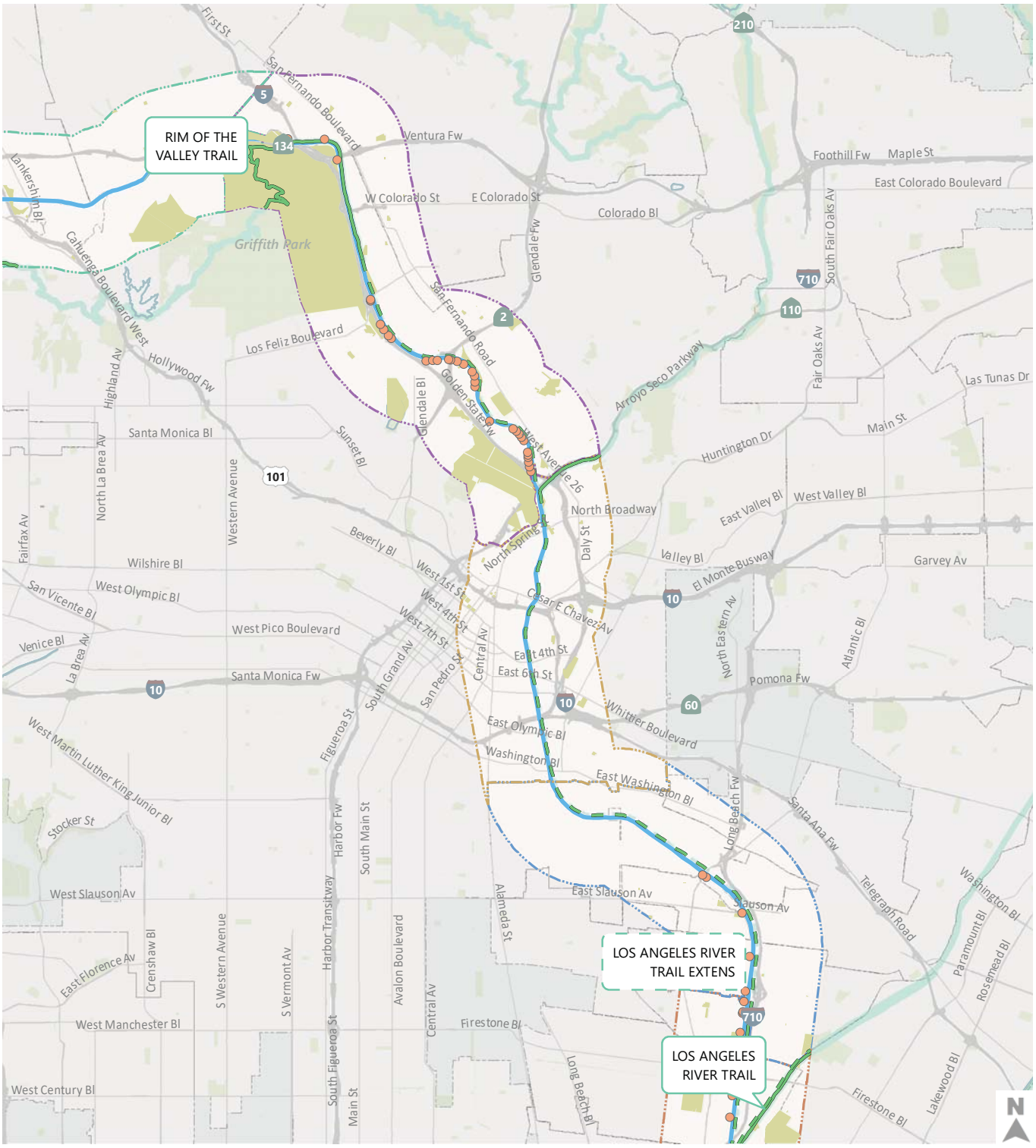

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Figure 3.16-11
Trails, Parks, and Trail Access Locations in Frames 4, 5, and 6

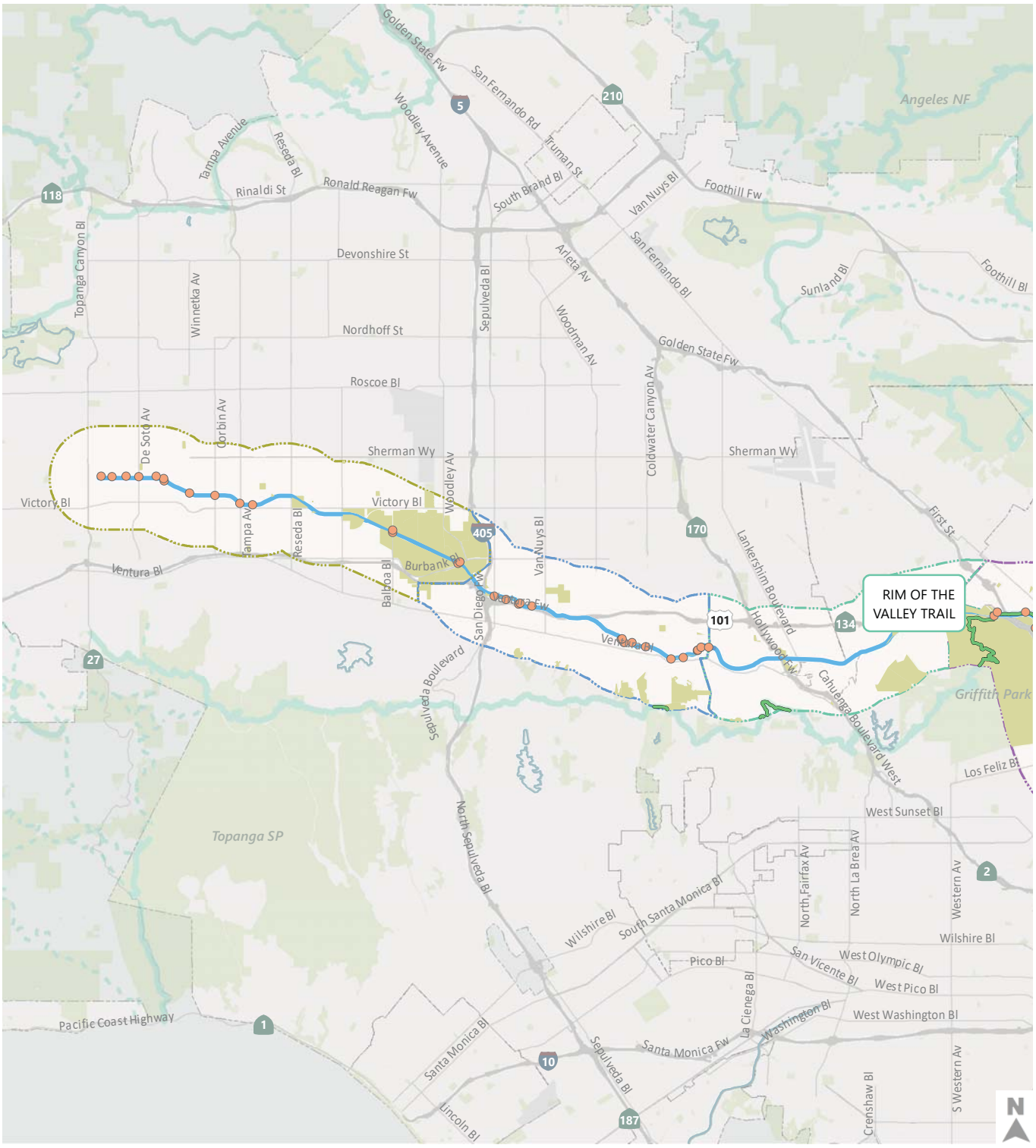

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Figure 3.16-12
Trails, Parks, and Trail Access Locations in Frames, 7, 8, and 9

reduction by 2020 and between 13 and 16 percent reduction by 2035 relative to emissions in 2005 for each MPO. Southern California Association of Governments (SCAG) is the MPO for the Southern California region and is required to work with local jurisdictions, including the City of Los Angeles. CARB has determined SCAG's reduction target for per capita vehicular emissions to be 8 percent by 2020 and 13 percent by 2035. Achieving such reductions will require major changes in the transportation sector, travel behavior and mobility choices.

SB 743

To further the State's commitment to the goals of SB 375, AB 32, and AB 1358, Governor Brown signed SB 743 on September 27, 2013. SB 743 adds Chapter 2.7*, Modernization of Transportation Analysis for Transit-Oriented Infill Projects*, to Division 13 (Section 21099) of the Public Resources Code. Key provisions of SB 743 include eliminating the measurement of vehicle delay, or level of service (LOS), as a metric that can be used for measuring traffic impacts. Under SB 743, the focus of transportation analysis shifts from LOS to the reduction of VMT through the creation of multimodal transportation networks and promotion of a mix of land uses to reduce VMT. SB 743 required the Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly for areas served by transit (i.e., transit priority areas [TPAs]), those alternative criteria must "promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses" (New Public Resources Code Section 21099[b][1]). Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." OPR also has discretion to develop alternative criteria for areas that are not served by transit, if appropriate.

Pursuant to the mandate in SB 743, OPR adopted the revised State CEQA Guidelines in December 2018, recommending the use of VMT for analyzing transportation impacts under CEQA. In turn, Section 15064.3 was added to the State CEQA Guidelines and states "generally, vehicle miles traveled [VMT] is the most appropriate measure of transportation impacts." The revised State CEQA Guidelines require that lead agencies remove automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a criterion for determining a significant impact on the environment pursuant to CEQA, except in locations specifically identified in the revised guidelines, if any. In accordance with this requirement, State CEQA Guidelines Section 15064.3(a), adopted in December 2018, states "a project's effect on automobile delay does not constitute a significant environmental impact." The requirements of SB 743 went into full effect as of July 1, 2020. Los Angeles County has developed Transportation Impact Guidelines consistent with SB 743, which are described below; these guidelines have been internally approved by Public Works, and Board approval is expected in 2021 following an extensive public outreach effort. Note that the guidelines are subject to change prior to adoption and/or may not ultimately be adopted.

Caltrans Vehicle Miles Traveled-Focused Transportation Impact Study Guide

In May 2020, Caltrans published a VMT-based *Transportation Impact Study Guide* (TISG) consistent with SB 743 (Caltrans 2020a). The TISG replaces the *Guide for the Preparation of Traffic Impact Studies*. A key change is that CEQA documents will now consider different types of transportation impacts than previously examined. When analyzing the impact of VMT on the State Highway System resulting from local land use projects, the focus will no longer be on traffic at intersections and roadways immediately around project sites. Instead, the focus will be on how projects are likely to influence the overall amount of automobile use. The TISG is intended for use in analyzing land use

projects or plans that may impact or affect the State Highway System. It includes screening criteria to identify projects presumed to have a less-than-significant impact on VMT. For projects without a presumption of less-than-significant impact, Caltrans suggests use of OPR's 15 percent below existing city or regional VMT per capita recommended threshold of significance for land use projects and may request mitigation from projects and plans that do not meet those thresholds.

Caltrans Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioner's Guide

In July 2020, Caltrans published the *Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioner's Guide* (Caltrans 2020b). This document establishes project effects on roadway safety as a potential transportation impact area under CEQA. The guidance is interim and does not establish thresholds of significance. It applies to proposed land use projects and plans affecting the State Highway System. Local agencies may also use the interim guidance as a model for review of local facilities. District traffic safety staff should use Caltrans' latest "Highway Safety Improvement Program Guidelines" to identify safety impacts based on traffic safety investigations generated by network screening, or initiated by the district, that may be affected by the proposed Project or plan and should assess safety improvements to mitigate potential conflicts or adverse impacts on potential or programmed remedial measures. Instructions on conducting an intergovernmental traffic safety review are provided in the interim guidance.

Regional

Regional Transportation Improvement Plan/Sustainable Communities Strategy

SCAG is the designated MPO for six Southern California counties (Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial), and is federally mandated to develop plans for regional transportation, land use and growth management, and air quality. The County is one of many local and regional jurisdictions comprising SCAG.

SCAG updates its long-range (i.e., minimum 20 years) RTP/SCS every 4 years, per federal law (23 U.S. Code Section 134 et seq.) and State law (SB 375). The SCS is a required element of the RTP that provides a plan for meeting GHG emissions reduction targets set forth by CARB. SCAG's 2016–2040 RTP/SCS "Connect SoCal" (SCAG 2020) was adopted in May 2020 for federal transportation conformity purposes; due to the Covid-19 pandemic the plan was approved in its entirety on September 3, 2020. The SCS is a required element of the RTP that provides a plan for meeting GHG emissions reduction targets set forth by CARB. It provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the South Coast Air Quality Management District (SCAQMD). CARB has determined SCAG's reduction target for per capita vehicular emissions to be 8 percent by 2020 and 13 percent by 2035 relative to the 2005 baseline.

Successfully meeting these targets will require substantial effort to reduce VMT. The 2020–2045 RTP/SCS calls for investing $638 billion over the 25-year term of the plan toward over 4,000 transportation projects, all of which collectively are expected to result in a 5 percent reduction in daily VMT per capita and a more than 25 percent decrease in traffic delay per capita. Investments will focus on maintaining and better managing the existing transportation network, expanding mobility choices, and increasing investment in transit and complete streets. Of the ten goals presented in the 2016–2040 RTP/SCS, five are applicable to transportation:

- **Goal 2:** Improve mobility, accessibility, reliability, and travel safety for people and goods.
- **Goal 3:** Enhance the preservation, security, and resilience of the regional transportation system.
- **Goal 4:** Increase person and goods movement and travel choices within the transportation system.
- **Goal 7:** Adapt to a changing climate and support an integrated regional development pattern and transportation network.
- **Goal 8:** Leverage new transportation technologies and data-driven solutions that result in more efficient travel.

Metro's Our Next LA Long Range Transportation Plan

Metro's *2020 Long Range Transportation Plan* (LRTP), titled *Our Next LA*, was adopted by the Metro Board of Directors on September 24, 2020 and is the first update to the LRTP since 2009, and provides a vision for transportation in Los Angeles County through 2047. The plan aims to address population growth, changing mobility needs and preferences, technological advances, equitable access to opportunity, and adaptation to a changing environment. The plan details construction of an additional 100 miles of fixed-guideway transit, investments in arterial and freeway projects to reduce congestion, and construction of regional-scale bicycle and pedestrian projects to increase active transportation, including the Rail to Rail Active Transportation Corridor and the LA River Path. Other efforts detailed in the plan include traffic management practices for congested roadways (e.g., Express Lanes toll lanes), maintaining and upgrading the existing transportation system for all modes, and partnering with local, State, and federal agencies, and the private sector. *Our Next LA* includes transit and highway improvements funded by Measure M, as well as expansions of off-peak transit service, of the active transportation network, and of programs such as Express Lanes, partnerships to provide bus only lanes and freight management policies, and bold policy proposals, including free transit, faster bus trips, and sub-regional congestion pricing. (Metro 2020.)

Local

Los Angeles County Transportation Impacts

In response to SB 743, the Los Angeles County Department of Public Works has developed an update to its Transportation Impact Analysis Guidelines ("County Guidelines") that includes a comprehensive methodological approach to the assessment of transportation impacts. The County Guidelines are based upon OPR technical guidance, but also reflect local conditions. The updated set of guidelines, methods, and impact criteria for CEQA analyses focus on VMT, roadway and intersection geometric hazards, and policy conflicts. They include VMT-based thresholds of significance and a process to screen out projects that will not require VMT analysis (due to their size, location, proximity to transit, or other factors). The new County Guidelines provide guidance on thresholds for new development projects that should be determined based on a project's land use, as described in the County Guidelines. (Public Works 2020.)

Los Angeles County Bicycle Master Plan

In 2012, Los Angeles County updated its bicycle master plan, which is currently in the process of being updated by the County. It includes a vision for a diverse regional bicycle system of interconnected bicycle corridors, support facilities, and programs to make bicycling more practical and desirable. It focused on expanding the existing network, connecting gaps, addressing

constrained areas, providing greater connectivity at both the local and regional level, and encouraging more residents to bicycle more often. The plan proposed 831 miles of new bikeways over 20 years, including more than 70 miles of Class I bicycle facilities, almost 275 miles of Class II bicycle facilities, almost 465 miles of Class III sharrowed facilities, and more than 20 miles of bicycle boulevards. It also outlined a range of recommendations to increase bicycling, including developing complete streets, improving safety, increasing public awareness and supporting bicycling.

The County maintains a 16.7-mile portion of the LA River Bike Path extending from the Shoreline Bikeway in Long Beach to Atlantic Boulevard in the City of Vernon. The communities of Rancho Dominguez and East Rancho Dominguez are the only unincorporated communities adjacent to the LA River Bike Path. South of Imperial Highway, the LA River Bike Path runs along the east bank of the river. At Imperial Highway in South Gate, at the confluence of the LA River and Rio Hondo, the path splits into two directions. The LA River Bike Path continues north, although the path switches over to the west bank where it continues along the river until its terminus at Atlantic Boulevard. The path along the east bank becomes Rio Hondo Path north of Imperial Highway, and continues northeasterly along the Rio Hondo. The following goals, policies, and implementation actions from the *Los Angeles County Bicycle Master Plan* are relevant to transportation (Los Angeles County 2012).

Goal 1 – Bikeway System – Expanded, improved, and interconnected system of county bikeways and bikeway support facilities to provide a viable transportation alternative for all levels of bicycling abilities, particularly for trips of less than five miles.

- **Policy 1.1** – Construct the bikeways proposed in 2012 County of Los Angeles Bicycle Master Plan over the next 20 years.
    - **IA 1.1.1** – Propose and prioritize bikeways that connect to transit stations, commercial centers, schools, libraries, cultural centers, parks, and other important activity centers within each unincorporated area and promote bicycling to these destinations.
    - **IA 1.1.2** – Coordinate with adjacent jurisdictions and Metro to implement bicycle facilities that promote connectivity.
- **Policy 1.4** – Support the development of bicycle facilities that encourage new riders.
    - **IA 1.4.2** – Provide landscaping along bikeways where appropriate.
    - **IA 1.4.4** – Allow the use of and promote new and/or innovative bicycle facility designs and standards on County bicycle facilities.
- **Policy 1.6** – Develop a bicycle parking policy.
    - **IA 1.6.1** – Identify where bicycle parking facilities are needed and identify the appropriate type.

Goal 2 – Safety – Increased safety of roadways for all users.

- **Policy 2.2** – Encourage alternative street standards that improve safety such as lane reconfigurations and traffic calming.
    - **IA 2.2.3** – Investigate the use of reflective striping alternatives on Class I bike paths that would address concerns with slippery conditions that generally result from traditional reflective striping.
- **Policy 2.3** – Support traffic enforcement activities that increase bicyclists' safety.
    - Encourage enforcement agencies to conduct traffic enforcement on Class I Bikeways.
- **Policy 2.4** – Evaluate impacts on bicyclists when designing new or reconfiguring streets.
    - **IA 2.4.2** – Conduct biennial counts of bicyclists on key bikeways to gauge the effectiveness of the county's bicycle facilities in increasing bicycle activity.

- **IA 2.4.3** – Use alternative Level of Service standards that account for bicycles and pedestrians.

Goal 4 – Encouragement Programs

- **Policy 4.2** – Encourage non-automobile commuting.
- **Policy 4.3** – Develop maps and wayfinding signage and striping to assist navigating the regional bikeways.

Los Angeles River Master Plan (1996)

The *Los Angeles River Master Plan* was adopted by Los Angeles County in 1996 (Los Angeles County 1996). Its overarching goal was to improve the aesthetic, recreational, and environmental condition of the LA River and its tributary, the Tujunga Wash, while still recognizing the primary need for flood management. The plan envisioned a continuous bikeway along both the LA River and the Tujunga Wash. It included strategies to improve conditions for bicyclists using the river path for both transportation and recreational cycling, for example planting a continuous greenway of trees along the river to provide shade and visual relief along the corridor and implementation of zoning requirements and development incentives for properties along the river to potentially increase access to destinations. Plan design guidelines provided a framework for bike path landscaping, access improvements, signage, fencing, and maintenance. Plan projects fell into six groupings:

- Aesthetic improvements
- Economic development
- Environmental enhancements
- Flood management and water conservation
- Jurisdiction and public involvement
- Recreation

Given the primary need for flood management, all projects were to be designed in accordance with U.S. Army Corps of Engineers (USACE) and Los Angeles County flood management standards. It was assumed that impacts on the transportation system would be less than significant.

Los Angeles River Revitalization Master Plan (2007)

The *Los Angeles River Revitalization Master Plan* (LARRMP) (City of Los Angeles 2007) provides a framework for restoring the river's ecological function and for transforming it into an amenity for residents and visitors. The LARRMP was prepared for the 32-mile length of the LA River within the City of Los Angeles. The plan's goals include the following:

- Revitalize the Los Angeles River through enhanced flood storage, water quality, public safety, and ecosystem.
- Green the neighborhoods with a continuous Los Angeles River greenway, extended open space and recreation, and public art along the Los Angeles River.
- Capture community opportunities by making the Los Angeles River the focus of activity, providing opportunities for educational and public facilities, and celebrating the cultural heritage of the Los Angeles River.
- Create value with improved quality of life, focused attention on underused areas and disadvantaged communities, and increased employment, housing, and retail space opportunities.

The LARRMP includes recommendations for the following:

- Physical improvements to the Los Angeles River corridor and to the green space network in adjacent neighborhoods
- Management of public access on a policy level and ensuring public health and safety
- Recommendations for a Los Angeles River governance and management structure; and
- Recommendations for short- and long-term priority projects and potential funding strategies.

The long-term vision for the LARRMP includes restoring a continuous, functioning riparian ecosystem along the LA River corridor. This would involve restoring riparian vegetation to support birds and mammals and, ideally, developing fish passages, fish ladders, and riffle pools to allow for restoration of steelhead trout habitat. The City of Los Angeles' Adopted Capital Improvement Expenditure Program includes a listing of projects that relate to the LA River revitalization effort, as reported by the City's administrative officer. The project listing includes bridges, recreational bike paths, parks and associated facilities, and riparian restoration features.

Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment

In 2016, the Los Angeles County Department of Parks and Recreation published the *Comprehensive Parks and Recreation Needs Assessment*. The assessment was designed to quantify the need for parks and recreation resources and the potential costs of meeting that need. The assessment identified parks as key urban infrastructure and used five metrics to identify overall park need: park condition, park access, park amenities, park land, and park pressure. Park pressure examines the effect on parks of population density by capturing the potential demand if each resident of the County were to use the park closest to them. If population density surrounding a park is high and/or park acreage is low, there is likely to be a park need that would otherwise escape detection using only park land and access metrics. Parks with a small number of acres per 1,000 nearby residents are likely to be more heavily used than parks with a larger number of acres per 1,000 residents. Areas surrounding the LA River's east-west stretch through the San Fernando Valley were identified as being park-rich, whereas almost all the areas surrounding the river's north-south stretch through Downtown Los Angeles and South Los Angeles were identified as having a high or very high park need. (Los Angeles County Department of Parks and Recreation 2016.)

Lower LA River Revitalization Plan

The *Lower LA River Revitalization Plan* seeks to achieve the LA River's potential value as a place for relaxation, discovery, recreation, tourism, and economic development. It is organized around three overarching themes: interconnectedness of the people, the culture, the river, and the watershed; nontraditional education pathways and place-based learning, engaging a wide audience; and multiple benefit thinking, leveraging education and connectedness. The plan describes opportunities for improving the environment and quality of life along the river. Along with specific project opportunities, the plan includes four project templates designed to enable rapid revitalization, connectivity, and consistency between new projects. It also provides tools to help prevent the displacement of residents and local businesses as revitalization-induced investments occur throughout the corridor. A Community Stabilization Toolkit (the Toolkit) was developed to highlight policies and programs that can be used to protect the existing river-adjacent communities. (Lower Los Angeles River Working Group 2018.)

Los Angeles County Vision Zero Action Plan

The *Vision Zero Los Angeles County: A Plan for Safer Roadways*, published in November 2019 and adopted by the Los Angeles County Board of Supervisors in August 2020, focuses County efforts for the years 2020–2025 to achieve the goal of eliminating traffic-related fatalities on unincorporated County roadways by 2035. The plan includes a vision for the future, objectives, and actions to enhance traffic safety. It is guided by principles of health equity, data driven processes, and transparency. It identifies Collision Concentration Corridors throughout the unincorporated areas of the County, any half-mile roadway segment on which three or more fatal or severe injury collisions occurred over a 5-year period from 2013–2017. Strategies to enhance roadway safety and reduce collisions include a wide range of roadway enhancements, such as lighting, curb extensions, and pedestrian signal timing, and a commitment to collaborate on data analysis and develop partnerships across jurisdictions. The plan is structured around five objectives: enhancing County processes and collaboration; addressing health inequities and protecting vulnerable users; collaborating with communities to enhance roadway safety; fostering a culture of traffic safety; and transparency, responsiveness, and accountability. (Los Angeles County 2019.)

Municipal General Plans, Bicycle Master Plans, and Climate Actions Plans

The 18 jurisdictions (17 cities and unincorporated area) within the study area set transportation policy through the circulation or mobility element of their general plans, and through other policy documents such as bicycle master plans or climate action plans. While it is good practice for these documents to be updated regularly, there is no regulatory timeframe governing their update, and some cities have not updated their general plans or circulation elements since the early 1990s. Additionally, while almost all of the cities identify specific policy goals surrounding transportation along the LA River, not all do, and in most cases, there is little framework in place for interjurisdictional coordination between river cities toward LA River development.

The relevant policies from each city's regulatory documents are provided below.

Frame 1

City of Long Beach

Mobility Element of the City's General Plan (City of Long Beach 2013)

- **Strategy No. 1** – Establish a network of complete streets that complements the related street type.
    - **MOP Policy 1-9** – Increase mode shift of transit, pedestrians, and bicycles.
- **Strategy No. 2** – Reconfigure streets to emphasize their modal priorities.
    - **MOP Policy 2-16** – Close gaps in the existing bikeway system[2].
- **Strategy No. 5** – Reduce the environmental impacts of the transportation system.
    - **MOP Policy 5-2** – Reduce vehicle miles traveled (VMT) and vehicle trips through the use of alternative modes of transportation and TDM.

Bicycle Master Plan 2040 (City of Long Beach 2017)

- **Strategy 1** – Develop a comprehensive bikeway network.

[2] The Mobility Element planned seven bike/ped bridges across the LA River.

- **1.1** – Expand, improve, and connect the bikeway network to provide a viable transportation option for all levels of bicycling abilities.
- **1.4** – Upgrade bridges, intersections, freeway ramps, tunnels, and any other obstacles that impede safe and convenient bicycle passage.

Los Angeles County

Los Angeles County General Plan (Los Angeles County 2015a)

- **Goal M2** – Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths, and trails that promote active transportation and transit use.
  - **Policy M2.5** – Ensure a comfortable bicycling environment by implementing the following, whenever appropriate and feasible:
    - Appropriate lighting on all bikeways, including those in rural areas.
  - **Policy M2.7** – Require sidewalks, trails, and bikeways to accommodate the existing and projected volume of pedestrian, equestrian, and bicycle activity, consider both the paved width and the unobstructed width available for walking.
  - **Policy M2.8** – Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.
- **Goal M4** – An efficient multimodal transportation system that serves the needs of all residents.
  - **Policy M4.1** – Expand transportation options that reduce automobile dependence.
  - **Policy M4.10** – Support the linkage of regional and community-level transportation systems, including multimodal networks.
  - **Policy M4.12** – Work with adjacent jurisdictions to ensure connectivity and the creation of an integrated regional network.
- **Goal M7** – Transportation networks that minimize negative impacts to the environment and communities.
  - **Policy M7.1** – Minimize roadway runoff through the use of permeable surface materials, and other low impact designs, wherever feasible.

Community Climate Action Plan (Los Angeles County 2015b)

- **LUT-1** – Bicycle Programs and Supporting Facilities – Construct and improve bicycle infrastructure to increase bicycling and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and "end-of-trip" facilities.
- **LUT-11** – Sustainable Pavements Program – Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.

City of Los Angeles

Mobility Plan 2035: An Element of the General Plan (City of Los Angeles Department of City Planning 2016)

- **Chapter 1** – Safety First
  - **Policy 1.9** – Recreational Trail Safety – Balance user needs on the city's public recreational trails.
- **Chapter 2** – World Class Infrastructure

  - **Policy 2.3** – Pedestrian Infrastructure – Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.
  - **Policy 2.6** – Bicycle Networks – Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities.
  - **Policy 2.12** – Walkway and Bikeway Accommodations – Design for pedestrian and bicycle travel when rehabilitating or installing a new bridge, tunnel, or exclusive transit right-of-way.
- **Chapter 3** – Access for All Angelenos
  - **Policy 3.2** – People with Disabilities – Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.
  - **Policy 3.11** – Open Streets – Facilitate regular "open street" events and repurposing of the public right-of-way.
- **Chapter 4** – Collaboration, Communication & Informed Choices
  - **Policy 4.11** – Cohesive Regional Mobility – Communicate and partner with the Southern California Association of Governments, Metro, and adjacent cities and local transit operators to plan and operate a cohesive regional mobility system.
  - **Policy 4.14** – Wayfinding – Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels and including traditional signage and digital platforms.
- **Chapter 5** – Clean Environments & Healthy Communities
  - **Policy 5.1** – Sustainable Transportation – Encourage the development of a sustainable transportation system that promotes environmental and public health.
  - **Policy 5.2** – Vehicle Miles Traveled – Support ways to reduce vehicle miles traveled per capita.
  - **ENG.16** – Los Angeles River – Implement Greenway 2020 (a locally led effort to complete the bicycle path along the entire 32-mile stretch of the Los Angeles River by 2020) and Los Angeles River Greenway Trail to provide a multi-generational trail and provide active transportation options to disadvantaged communities.

Frame 2

City of Long Beach

Applicable regulations are described above.

City of Carson

Carson General Plan – Transportation and Infrastructure Element (City of Carson 2004)

- **Goal TI-4** – Increase the use of alternate forms of transportation generated in, and traveling through, the City of Carson.
  - **Policy TI-4.3** – Provide appropriate bicycle access throughout the City by implementing the Bicycle Plan.
  - **TI-IM-4.10** – Complete an approve Bicycle Plan (as defined by the MTA) and implement it as availability arises through private development, private grants, public grants

(particularly the MTA call for projects) signing of shared routes, and cooperation with other agencies such as the County of Los Angeles for bicycle routes along channels[3].

- **TI-IM-4.13** – Continue coordination of bicycle route planning and implementation with adjacent jurisdictions and regional agencies.

City of Compton

Draft Compton General Plan 2030 (City of Compton 2011)

The *Draft Compton General Plan 2030* does not contain any river-specific transportation policies.

City of Compton Bicycle Master Plan (City of Compton 2015)

Plan Goals

- Improve the health of all Compton residents by making the healthy choice the easy choice.
  - Create a comprehensive system of bikeways that connects key destinations.

The *City of Compton Bicycle Master Plan* includes a number of facilities connecting to the LA River, including a new path on the west bank, as well as participation in Metro Bike, with a station along the LA River.

Unincorporated County

Applicable regulations for unincorporated County are described above in *Frame 1*.

Frame 3

City of Compton

Applicable regulations for Compton are described above.

City of Cudahy

Cudahy 2040 General Plan – Circulation Element (City of Cudahy 2018a)

- **Goal CE-2** – Improved mobility and safety through roadway, bicycle, and pedestrian facilities enhancements and increased public transit connectivity.
  - **Policy CE-2.1** – Create, adopt, and implement a Bicycle Master plan.

LA River Access

Increasing access points and enhancing connections to the River is a priority. Planned connections on Clara, Elizabeth, and Cecilia Streets.

River Road Repurposing

River Road will be closed to vehicular traffic and redesigned as a place for people to engage in active transportation and recreation. The River Road Green will also allow for direct pedestrian and bike connections to the LA River. The River Road Green streetscape elements include landscaping (including shade trees), pedestrian-scale lighting, and wayfinding signs.

[3] Master Plan of Bikeways completed in 2013, includes a proposed facility on Del Amo Boulevard which would connect to the LA River.

Cudahy 2040 General Plan – Open Space and Conservation Element (City of Cudahy 2018b)

- **Policy OSCE-2.12** – Consider ways to improve access to the LA River Trail from Cudahy by addressing differences in grade and increasing the number of points of access.

City of Downey

Downey Vision 2025 General Plan, Circulation Element (City of Downey 2005)

- **Goal 2.2.2.2** – Establish a bikeway master plan to link employment centers, recreational facilities, and bikeways along the Rio Hondo River, the San Gabriel River, UPRR, and those of neighboring communities via a network of bike routes, lanes, and paths.

City of Lynwood

City of Lynwood General Plan (City of Lynwood 2003)

- **Policy CIRC-2.2** – Lane and Trails Policy – Provide a circulation network that accommodates the safe and efficient movement of cyclists on bike lanes and bike trails.
    - **CIRC Implementation Measure 25.0** – Off-street bicycle trails should use open space corridors, flood control, and utility easements where possible. Such trails shall minimize automobile cross traffic within the City.

City of Paramount

Paramount General Plan – Land Use Element (City of Paramount 2007)

- **Land Use Element Policy 17** – The City of Paramount will develop new open space areas in utility rights-of-way, along the LA River, and as part of future park development.

City of South Gate

City of South Gate Bicycle Transportation Plan (City of South Gate 2012)

The proposed bikeway network…includes several new bicycle and pedestrian bridges over the I-710 and the LA River, and several access improvements to the bicycle path on the LA River.

- **Policy 1** – The City will develop a complete bikeway network throughout South Gate.

South Gate General Plan 2035 – Mobility Element (2009a)

- **Policy ME 1.2 P.1** – The City should improve the street system by adding to the street grid in the north-east part of the City to relieve the Firestone/Atlantic intersection, including providing additional overcrossings of the LA River and the I-710 freeway, and an additional north-south collector street between Atlantic Avenue and the LA river.
- **Policy ME 2.1 P.1** – The City should develop and maintain a citywide bicycle network of off-street bike paths, on-street bike lanes, and bike streets.
- **Implementation Action ME 1.4** – Area Bounded by I-710, Tweedy Boulevard, Atlantic Avenue, UP Railroad Corridor (east-west): Conduct studies to explore/implement improvements to the currently lacking street grid in this area in order to relieve pressure on the intersection of Firestone Boulevard and Atlantic Avenue.
- **Implementation Action ME 1.9** – Independence Avenue/Ardmore Avenue: Extend eastwards as a Collector Street to Atlantic Avenue, then easterly across the LA River and I-710 Freeway (with possible ramp connection) to Garfield Avenue. The cross-section should include bike lanes.
- **Implementation Action ME 1.11** – Southern Avenue: Extend east, as an Avenue (four lanes), across the LA River and the I-710 Freeway to connect to Garfield Avenue.

- **Action ME 21** – Improve bicycle access to the regional bike paths on the LA River and the Rio Hondo Channel.

South Gate General Plan 2035 – Green City Element (City of South Gate 2009b)

- **GC 2.1 P.1** – New trails should contribute to increased connectivity across the City by reducing pedestrian and cycle travel times, integrating with existing sidewalks, bike lanes, and other bicycle/pedestrian infrastructure, and providing an alternative mode of access to goods services, and other desirable destinations.
- **GC 2.1 P.3** – Whenever possible, trails should be multi-use, accommodating both cyclists and pedestrians.
- **GC 2.1 P.5** – The City should enhance the existing Class I bicycle facilities that run along the east side of the Rio Hondo Channel and the west side of the LA River, transforming them from underutilized pathways to beautified, connected pedestrian and bicycle thoroughfares with amenities such as benches, tables, and lighting.
- **GC 2.1 P.6** – The City will pursue a Class I trail along the LADWP right-of-way that connects the west side of the City to the LA River.
- **GC 2.1 P.7** – The City will pursue a Class I trail along the railroad right-of-way between Ardmore and Independence Avenues. This trail should connect the College District with the potential Gateway Transit Village and the LA River.
- **GC 2.2 P.1** – The City will plan for the continuation of equestrian facilities along the LA River and Rio Hondo Channel.

Unincorporated County

Applicable regulations are described above.

Frame 4

City of Bell

City of Bell 2030 General Plan (City of Bell 2018)

The *City of Bell 2030 General Plan* does not contain any river-specific transportation policies.

City of Bell Bicycle Master Plan (City of Bell 2016)

Goal 3 – Promote community health

- Create connectivity to community assets (parks, schools, riverbed)

City of Bell Gardens

City of Bell Gardens General Plan 2010 (City of Bell Gardens 1995)

The *City of Bell Gardens General Plan 2010* does not contain any river-specific transportation policies.

City of Commerce

City of Commerce 2020 General Plan (City of Commerce 2008)

The *City of Commerce 2020 General Plan* does not contain any river-specific transportation policies.

City of Huntington Park

City of Huntington Park 2030 General Plan – Mobility Element (City of Huntington Park 2017)

- **Mobility & Circulation Element Policy 18** – The City of Huntington Park shall work with adjacent jurisdictions and Metro to develop a network of on-street bike lanes or off-street bike paths.

City of Maywood

City of Maywood General Plan – Circulation Element (City of Maywood 2008)

- **Policy 4.3** – Support efforts to link the bicycle path system to the LA River Bicycle Trail. Coordinate with organizations such as the Northeast Trees to create regional bicycle path system.
    - **Action C-12** – Coordinate with the County and Metro to improve City bicycle route connections to the LA County bicycle route system. Encourage links to transit stations and the LA River Bicycle Trail.

City of Vernon

City of Vernon General Plan – Circulation and Infrastructure Element (City of Vernon 2015a)

- **Atlantic Boulevard Bridge Widening** – The City of Vernon is planning to widen the Atlantic Boulevard Bridge over the LA River. The project plans to widen bridge to six lanes.
- **Policy CI-1.1** – Continue to improve the street system to meet the minimum standards contained in this Element.
- **Policy CI-1.12** – Cooperate with the Metropolitan Transportation Authority and other local agencies in their efforts to complete a bicycle path along the levee of the LA River connecting to adjacent jurisdictions.

City of Vernon General Plan – Resources Element (City of Vernon 2015b)

- **Policy R-3.2** – Cooperate with regional efforts to upgrade the appearance and open space value of the LA River Channel.

City of Vernon Bicycle Master Plan (City of Vernon 2017)

- **Objective 1.B** – Eliminate barriers and gaps in the bikeway network.
    - **Strategy 1.B.1** – Pursue construction of a Class I bicycle path along the LA River between the current path terminus at Atlantic Boulevard and the northern city boundary.
    - **Strategy 1.B.2** – Identify connections to and from the existing and planned LA River bicycle path.
    - **Strategy 1.B.3** – Identify opportunities to improve bicycle connectivity across the LA River and I-710.
    - **Strategy 1.B.4** – Coordinate with neighboring jurisdictions to construct bikeways that provide continuous connections across jurisdictional boundaries.

Unincorporated County

Applicable regulations are described above.

Frame 5

City of Los Angeles

Applicable regulations are described above.

Frame 6

City of Los Angeles

Applicable regulations are described above.

City of Glendale

City of Glendale General Plan – Circulation Element (City of Glendale 1998)

- **Goal 2** – Construct the complete bikeway system as identified in the Bikeway Master Plan.

Greener Glendale Plan (City of Glendale 2012a)

> Glendale is…committed to using 100% of its LA riverfront as a recreational amenity. The riverfront will provide nearly a mile of multi-use trail, several small riverfront parks, and an equestrian facility.

- **Urban Nature Objective UN4** – Ensure there is accessible park and recreational open space to serve residents.
    - **Urban Nature Strategy UN4-C** – Continue to maintain and develop recreational trails.

Bicycle Transportation Plan (City of Glendale 2012b)

- **Policy 1** – The City will develop a complete bikeway network throughout Glendale
    - **Action** – Implement planned citywide network of bikeway improvements.

According to the *City of Glendale Bicycle Transportation Plan*, the City of Glendale proposes to "add a multipurpose bicycle and pedestrian path along north side of LA River from Flower St. to Verdugo Wash/LA River confluence (near Fairmont Ave. Flyover)." It also "plans to build a bridge over the LA River to connect Glendale to the LA River bicycle path and Griffith Park."

- Potential river access at Doran Street

Frame 7

City of Los Angeles

Applicable regulations are described above.

City of Burbank

City of Burbank Bicycle Master Plan (City of Burbank 2009)

- **Objective B** – Identify and implement a network of bikeways that is feasible, fundable, and that serves all bicyclists' needs, especially for travel to employment centers, schools, commercial and retail districts, transit stations, and institutions, while not excluding the needs of recreational cyclists.
- **Objective B Policy Action 8** – Create strong connections between the regional Class I bike paths (Los Angeles River, Chandler, and San Fernando), as well as Metrolink Stations.

Burbank2035 General Plan – Mobility Element 2035 (City of Burbank 2013a)

- **Goal 2** – Sustainability
  - **Policy 2.1** – Improve Burbank's alternative transportation access to local and regional destinations through land use decisions that support multimodal transportation.
  - **Policy 2.3** – Prioritize investments in transportation projects and programs that support viable alternatives to automobile use.
- **Goal 5** – Bicycle and Pedestrian Mobility
  - **Policy 5.2** – Implement the Bicycle Master Plan by maintaining and expanding the bicycle network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.

The LA River bike bridge is a funded project.

Greenhouse Gas Reduction Plan (City of Burbank 2013b)

- **Measure T-1.4** – Bicycle Infrastructure Expansion

The bicycle master plan identifies an additional 12.0 miles of Class I and Class II facilities as top priority projects. Approximately 5.0 miles of these top priority projects have already received funding and are currently in various stages of development, including the South Channel Bikeway, the San Fernando Bikeway, extension of the Verdugo bike lanes, the Keystone Bicycle Boulevard project, and the LA River Bike Bridge project. Future bicycle lane expansion should focus on connecting high-visitation sites (e.g., dense residential areas, commercial and employment centers, transit hubs, parks and recreation areas) with Class I and II facilities to encourage a travel mode shift from cars to bicycles, especially for non-commute trips.

Unincorporated County

Applicable regulations are described above.

Frame 8

City of Los Angeles

Applicable regulations are described above.

Frame 9

City of Los Angeles

Applicable regulations are described above.

3.16.3 Impact Analysis

3.16.3.1 Methods

State CEQA Guidelines Section 15064.3(a) establishes increases in VMT as the most appropriate measure of transportation impacts, and states that other considerations may include effects on transit and non-motorized travel. VMT as a metric for impacts is consistent with a broad range of State legislation, regional, and local programs, and plans and policies, and as such, the State CEQA

Guidelines also require consideration of whether a project may conflict either directly or indirectly with plans, policies, programs, or ordinances addressing the circulation system, particularly related to increases in VMT and associated reductions in GHG generation, including transit, roadway, bicycle, and pedestrian facilities. The State has set ambitious targets for reductions in GHG generation, which in turn relates to transportation and required reductions in VMT, as transportation is the largest generator of GHGs by sector in the State (41 percent).

Thus, legislation, programs, plans, and policies that target GHG generation and climate change relate directly to transportation and the need to reduce VMT. The proposed Project's objectives to provide 51 continuous miles of equitable, inclusive, and safe multi-use trails, and to enhance opportunities for equitable access to the river corridor directly support State VMT reduction goals. The proposed Project's consistency with applicable legislation, plans, and policies is discussed below under Impact 3.16(a); while the potential impacts on VMT associated with implementation of the *2020 LA River Master Plan* are assessed in the context of State CEQA Guidelines Section 15064.3(b) under Impact 3.16(b). Impact 3.16(c)/(d) addresses the issue of whether implementation of the *2020 LA River Master Plan* would substantially increase hazards because of geometric design features or could result in inadequate emergency access.

In response to SB 743, the Los Angeles County Department of Public Works has approved an update to its Transportation Impact Guidelines that includes a comprehensive systematic approach to the assessment of transportation impacts. The County's Transportation Impact Guidelines are based upon OPR technical guidance, but also reflect local conditions. The updated guidelines, methods, and impact criteria for CEQA analyses focus on VMT, roadway and intersection geometric hazards, and policy conflicts. They include guidance on VMT-based thresholds of significance and a process to screen out projects that will not require VMT analysis (due to their size, location, proximity to transit, or other factors). The analysis contained herein is consistent with a uniform approach across all 17 cities through which the study area extends. This uniform approach is appropriate because Los Angeles County is the lead agency for the PEIR and because all of the other jurisdictions currently are at some stage in the process of transitioning from LOS to VMT methodologies for CEQA compliance.

The following screening checklist from the Guidelines, developed by the County aligned with the OPR *Technical Advisory on Evaluating Transportation Impacts* (December 2018) for use in transportation impact analysis, was reviewed to help evaluate whether the *2020 LA River Master Plan* would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(1) by causing substantial increases in vehicle miles traveled.

For land use projects:

- **Non-Retail Project Trip Generation:** Would the land use project generate a net increase of 110 or more daily trips?
- **Retail Project Site Plan:** Would the project contain retail uses that exceed a net 50,000 square feet of gross floor area?
- **Location-based:** Would the project be located within one-half mile of a major transit stop or high-quality transit corridor?

  This screening criteria has not been considered in this VMT impact evaluation. Locations of major transit stops or high-quality transit corridors may change over the 25-year buildout timeframe for the 2020 LA River Master Plan. When specific locations for subsequent projects

have been selected, applicability of this screening criteria should be considered based on adjacency to transit stops and corridors existing at that time. Transit accessibility is recommended as a specific criterion in site selection to ensure maximum accessibility via non-private vehicle modes.

- **Residential Land Use:** Would the project consist of 100% affordable housing?

For transportation projects:

- Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?; and
- Would the project include the addition of through-traffic lanes on existing or new highways, including general purples lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than one mile in length designed to improve roadway safety)?

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six KOP categories, and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately.

3.16.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.16(a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

3.16(b) Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).

3.16(c) and (d)
Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) OR result in inadequate emergency access.

3.16.3.3 Impacts and Mitigation Measures

Impact 3.16(a): Would the proposed Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction is a temporary condition (assumed to range from 10 to 20 weeks), and there are very few plans, programs, or policies addressing the construction phase that are relevant to the Common Elements or Multi-Use Trails and Access Gateways Typical Projects. Therefore, due to the similarity of impacts, the construction period impacts for Common Elements and Multi-Use Trails and Access Gateways Typical Projects are discussed together in the following section.

Construction

No long-term closures of offsite roadways, bicycle or equestrian paths, or sidewalks are anticipated. As such, while the specific details of the location, design, and construction phasing of subsequent projects under Typical Projects are not known, traffic and circulation impacts are not anticipated to be of a magnitude such that they could conflict with any programs, plans, or policies addressing the circulation system, or transit, roadway, bicycle, or pedestrian facilities. However, the Typical Project elements could involve intermittent lane and sidewalk closures during construction of those elements, which could impede vehicle, pedestrian, equestrian, and bicycle circulation. These impacts have the potential to be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The *2020 LA River Master Plan* Actions that directly relate to transportation include:

1. Action 2.1 Create 51 miles of connected spaces along the river.
2. Action 2.2 Complete the LA River Trail so that there is a continuous route along the entire river and encourage future routes on both sides where feasible.

3. Action 2.2.1 In places where the right of way is too narrow for a river trail, pursue easements on adjacent property to complete the trail or utilize bridges, platforms, or cantilevers.
4. Action 2.2.2 Increase the extent of multi-use trails parallel to the river with separate paths for active transport, pedestrians, and equestrians, especially in areas of high traffic.
5. Action 2.2.3 Provide bicycle parking and encourage bicycle rental facilities and bike share along the river.
6. Action 4.1 Create welcoming access points and gateways to the LA River and LA River Trail to optimize physical access along its length, on both sides.
7. Action 4.1.1. Make the river trail and gateways universally accessible and inclusive.
8. Action 4.1.2 Prioritize access for areas with limited access or areas that need improvements to existing access points.
9. Action 4.1.3 Prioritize access near major destinations, including schools, libraries, parks, transit stops, and job centers.
10. Action 4.1.4 Encourage the development of safe routes to the river.
11. Action 4.1.5 Obtain easements adjacent to the river to create access.
12. Action 4.2 Increase safe transportation routes to the river.
13. Action 4.2.1 Coordinate with LA County transportation plans, including Vision Zero, the Bicycle Master Plan, Metro plans, municipally adopted transportation plans, and the Step by Step Pedestrian Plan.
14. Action 4.2.2 Provide pedestrian and bicycle connections across the river every half mile.
15. Action 4.2.3 Encourage all new pedestrian or road bridges over the river to provide pedestrian and bicycle access to the river trail.
16. Action 4.2.4 Provide continuous pathways between the river and nearby recreation spaces.
17. Action 4.2.5 Encourage cities to adopt complete streets policies to better connect neighborhoods to the river.
18. Action 4.2.6 Increase the extent of multiuse trails that connect to the river with separate paths for active transport, pedestrians, and equestrians.
19. Action 4.2.7 Coordinate with transportation agencies to enhance public transit to and along the river.
20. Action 4.2.8 Coordinate with transportation planning to encourage transit lines that cross the river to have stops that provide access to the river trail.
21. Action 4.2.9 Promote the use of public transportation to get to and from the river trail.
22. Action 4.2.10 Develop information materials and signage that highlight the river trail as a transportation route to major job centers and destinations.
23. Action 7.5.2 Encourage existing river-adjacent development to orient its “front door” toward the river and public transportation.

The transportation elements of the *2020 LA River Master Plan* are only one component of a much broader project with a focus on flood management, habitat restoration, biological resource

preservation, and community engagement. These transportation-related actions can be grouped into three high-level categories:

- The creation of a continuous trail along both river banks for the entirety of the LA River's 51 miles
- Provision of equitable, inclusive, and safe parks, open spaces, and trails
- Enhancement of opportunities for equitable access to the river corridor

For more than a decade, transportation plans and policies at the State level have focused on reducing GHG emissions to meet State climate goals. Local plans and policies have focused on building and expanding bicycle and pedestrian networks, improving roadway safety, and reducing collisions, expanding access to open spaces, and improving regional and local transit connectivity.

Implementation of the proposed Project would create a continuous 51-mile trail, providing a comfortable off-road backbone facility through Los Angeles County, free of conflicts with vehicles, for long-distance commuting via active transportation modes such as bicycles, scooters, and walking or running. Access points would be provided every half mile along the path, increasing neighborhood connectivity to the trails and open spaces developed within the River Corridor, creating new neighborhood parks and reducing or eliminating the need to travel extended distances via private vehicle to reach a neighborhood park for the tens of thousands of people who live adjacent to the LA River. Pedestrians, bicyclists and other micro-mobility mode users and equestrians would find space for travel and recreation along the River Corridor on multi-use trails designed to equally accommodate them.

Implementation of the *2020 LA River Master Plan* will allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Of importance in a county without many long-distance Class I bicycle trails in developed areas, the *2020 LA River Master Plan* will allow for cross-county commuting via active transportation. Increasing the active transportation mode share and the ability to replace long-distance vehicle commute trips with an active transportation trip will reduce VMT, consistent with State and regional policy initiatives, including SB 743 and SCAG's RTP. It is also consistent with RTP Goal 6, which seeks to protect the environment and the health of SCAG region residents by improving air quality and encouraging active transportation.

Locally, the *Los Angeles County Bicycle Master Plan* sets forth a vision for a regional bicycle system of interconnected corridors with support facilities to encourage and make bicycling more comfortable. The robust suite of common elements—including pavilions and benches for rest and shade, bicycle racks to lock up a bicycle, bathrooms to meet bodily needs, and cafes for refreshment—intended to be placed frequently along the path will support bicycle trips in general, particularly longer-distance ones, and encourage hesitant bicyclists to hit the trail. Implementation of the *2020 LA River Master Plan* particularly addresses *Los Angeles County Bicycle Master Plan* Policy 1.4, which supports the development of bicycle facilities that encourage new riders, Implementation Action 1.4.2 to provide landscaping along bikeways where appropriate, and Implementation Action 1.4.4 to allow the use of and promote new and/or innovative bicycle facility designs and standards on County bicycle facilities.

Los Angeles County's *Vision Zero* action plan seeks to eliminate traffic-related fatalities and severe injuries on unincorporated County roadways by 2035. By providing a framework for construction of a 51-mile continuous off-street path for active transportation trips, implementation of the *2020 LA*

River Master Plan will provide Los Angeles County residents with a safe corridor for active transportation trips free of risk from injury or death by collision with a motor vehicle.

Implementation of the *2020 LA River Master Plan* will allow the County to achieve many of the goals and policies from its general plan Mobility Element. Goals and policies supported by *2020 LA River Master Plan* implementation include Goal M2, Policies M2.5 and M2.7; Goal M4, Policies M4.1, M4.10, and M4.12; and Goal M7, Policy M7.1, all of which relate to active transportation and reducing automobile dependence.

Similarly, implementation of the *2020 LA River Master Plan* is consistent with active transportation-related goals, policies, and policy actions of the other 17 jurisdictions through which the river flows, as detailed in Chapter 2, *Project Description*. As such, the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with the KOPs discussed below. Therefore, for potential impacts of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects, see above. The impact discussion below focuses on specific KOPs only.

The design components analyzed in this section include those listed in Chapter 2, *Project Description*. Each KOP is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Construction activities for KOP Categories 1 through 6 would be similar, as would construction equipment. The larger projects would involve the use of cranes and jackhammers to break concrete. Staging areas for construction equipment would be located in the right-of-way (ROW) or on appropriate vacant areas for in-channel or off-channel projects. Construction activities for KOP Categories 1 through 6 could include more complex amenities and thus would generally last longer than construction of the Typical Projects, with additional construction equipment. As the location, design details, and construction phasing of subsequent projects under KOP Categories 1 through 6 are not known, it is possible that construction activities could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

For the same reasons listed above for Typical Projects, impacts associated with the KOP Categories 1 through 6 would be potentially significant, requiring mitigation in the form of a construction management plan. The reader is referred to the discussion under *Typical Projects, Construction,* for details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

KOP Categories 1 through 6

Under the *2020 LA River Master Plan*, the multi-benefit design components can be implemented individually or in combination with other design components as subsequent projects. The specific location (in-channel/off-channel, frame, etc.) and design details of these subsequent projects would depend on numerous factors, including the project proponent, the implementing agency, community needs, policy decisions, and availability of funding. New vehicular, bicycle, pedestrian, and equestrian bridges will increase connectivity between neighborhoods on opposite sides of the river and will reduce the distance required to travel in order to make a crossing using the more limited number of existing, mostly vehicularly focused arterial bridges. Within the context of consistency with programs, plans, and policies, what the Typical Projects and the KOP categories have in common is that they would provide amenities, new structures, art work, and additional recreational uses and trails. Therefore, for the same reasons as described under *Typical Projects, Operations,* above, impacts associated with operations of KOP Categories 1 through 6 would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the Project's nine objectives. These would include the Typical Projects that would be implemented in specific spacing along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together comprise the entirety of the *2020 LA River Master Plan*. As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and 1 extra-large project (150+ acres/10+ miles in size).

Construction

The discussion of construction impacts for overall implementation would be the same as for the Typical Projects and KOP categories. Some projects would cover more area than others, but the same general construction equipment and activities would be involved (e.g., the use of backhoes, trucks, hand-held power equipment, generators, etc.). As noted, some projects would be larger than others and include a wide variety of project design components. While the specific details of the location, design details, and construction phasing of subsequent projects under the Overall *2020 LA River Master Plan* Implementation are not known, traffic and circulation impacts are not expected to be of a magnitude such that they would result in a conflict with any programs, plans, or policies addressing the circulation system, or transit, roadway, bicycle, or pedestrian facilities. However, there could be intermittent lane and sidewalk closures during construction, which could impede circulation. These impacts have the potential to be significant.

Therefore, construction impacts would be potentially significant for the same reasons as described under *Typical Projects, Construction,* and *KOP Categories 1 through 6, Construction,* above.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The *2020 LA River Master Plan* would provide gateways, amenities, new structures, art work, and additional recreational uses, and trails. Under the *2020 LA River Master Plan*, the multi-benefit design components can be implemented individually or in combination with other design components as subsequent projects. The specific location (in-channel/off-channel, frame, etc.) and

design details of these subsequent projects would depend on numerous factors, including the project proponent, the implementing agency, community needs, policy decisions, and availability of funding. As described above for Typical Projects and KOP Categories 1 through 6, within the context of consistency with programs, plans, and policies, what all subsequent projects have in common is that they would provide amenities, new structures, art work, and additional recreational uses and trails. Therefore, for the same reasons as described under *Typical Projects, Operations* and *KOP Categories 1 through 6, Operations,* above, operation impacts associated with implementation of the 107 projects under the *2020 LA River Master Plan* would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.16(b): Would the proposed Project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?

For the purposes of this PEIR, more detail is provided for the Common Elements and the Multi-Use Trails and Access Gateways Typical Projects. However, for the purposes of the transportation analysis, two critical pieces of detail regarding the Typical Projects are still unknown: specific project location of the Typical Projects and square footage of individual elements in the Common Elements Typical Project. Without these pieces of information, trip generation estimates and user vehicle trip lengths for the Typical Projects cannot be developed and cannot be evaluated quantitatively. Thus, the Typical Projects have been evaluated qualitatively in this analysis, as is allowed under CEQA Section 15064.3, subdivision (b)(3).

The KOP Categories and the Overall *2020 LA River Master Plan* Implementation also have been evaluated qualitatively, using the same approach developed to analyze the Typical Projects. The qualitative analysis allows for the identification of the potential to result in a significant impact, but not for the identification of a significant impact itself, which can only be determined when subsequent project location and programming (function/use, size, capacity etc.) specifics are known and after quantitative analysis has been undertaken. Given the wide range of individual project elements, including land use projects, transportation projects, and other infrastructure projects that are neither land use nor transportation projects, such as trail lighting or a terraced river bank, that together form the *2020 LA River Master Plan*, each project element was evaluated individually for its potential to generate VMT and to result in a significant VMT impact. The two Typical Projects were evaluated for their collective potential as a grouping of a specific set of elements to generate VMT and to result in a significant transportation impact, based on whether any of their individual elements were identified as having that potential (Appendix I, *Transportation Impact Assessment*).

The following screening checklist from the Guidelines, developed by the County based on the OPR technical advisory for use in transportation impact analysis, was reviewed to help evaluate whether the *2020 LA River Master Plan* would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(1) by causing substantial increases in vehicle miles traveled:

For land use projects:

- Non-Retail Project Trip Generation: Would the land use project generate a net increase of 110 or more daily trips? [Transportation Impact Analysis Guidelines Section 3.1.2.1]
- Retail Project Site Plan: Would the project contain retail uses that exceed a net 50,000 square feet of gross floor area? [Section 3.1.2.2]
- Location-based: Would the project be located within one-half mile of a major transit stop or high-quality transit corridor? [Section 3.1.2.3]
    - This screening criteria has not been considered in this VMT impact evaluation. Locations of major transit stops or high-quality transit corridors may change over the 25-year buildout timeframe for the *2020 LA River Master Plan*. When specific locations for subsequent projects sites have been selected, applicability of this screening criteria should be considered based on adjacency to transit stops and corridors existing at that time. Transit accessibility is recommended as a specific criterion in site selection to ensure maximum accessibility via non-private vehicle modes.
- Residential: Would the project consist of 100% affordable housing? [Section 3.1.2.4]

For transportation projects:

- Would the project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(2)? [Section 3.2.1]
- Would the project include the addition of through-traffic lanes on existing or new highways, including general purples lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than one mile in length designed to improve roadway safety)? [Section 3.2.2]

Depending on the answer to each of the screening checklist questions above for each project element/design component individually and the two Typical Projects as a whole, a less-than-significant impact or potentially significant impact determination for VMT impacts could be made based on State CEQA Guidelines Section 15064.3(b)(1) and (b)(2). For projects determined to have a less-than-significant impact on VMT based upon the screening criteria, no further transportation impact analysis, including VMT analysis, is required when they are implemented as individual subsequent projects in the future. For those projects elements or Typical Projects for which the screening criteria do not automatically identify a less-than-significant impact on VMT, all that can be known at this time is that that project element/design component or Typical Project has the potential to result in a significant VMT impact, not that it definitively does. Quantitative VMT impact analysis will be required for projects that include those elements in the future when the specific locations of subsequent projects, and their configurations, size, and other project details are developed.

Impact Criteria

The County's VMT impact criteria were developed based on guidance from OPR and CARB. Per the criteria, project VMT impact thresholds as described in the County Guidelines vary depending on the project type, as follows:

- For residential development land use projects, the project would generate residential VMT[4] per capita exceeding 16.8% below the existing[5] residential VMT per capita for the Baseline Area in which the project is located.
- For office land use projects, the project would generate employment VMT[6] per employee exceeding 16.8% below the existing[5] (employment VMT per employee for the Baseline Area in which the project is located).
- For regional serving retail land use projects, entertainment projects, and/or event center land uses, the project would result in a net increase in existing Total VMT.[7] Trips associated with these land uses are typically discretionary trips, which may be either substitute trips to other, closer destinations, or new trips entirely. A project-specific customized approach will be required to estimate VMT for such projects. The methodology should be developed in consultation with and approved by Public Works staff at the outset of the study.
- For unique land uses in which a land use project does not fit into any of the above categories, a project-specific customized approach may be required to estimate daily trips and VMT, but may be based on the existing employment trip element using an approach similar to that for office projects, above. The methodology and thresholds to be used in such cases should be developed in consultation with and approved by Public Works staff at the outset of the study.
- For transportation projects, a VMT impact will be found if the project will increase the study area VMT, as measurable by the SCAG RTP/SCS base year Travel Demand Forecasting model plus an induced travel elasticity factor per lane mile. Transit and active transportation projects and projects that reduce roadway capacity generally also reduce VMT and are therefore presumed to a cause a less-than-significant impact.

The impact criteria are not applicable at a qualitative level of evaluation, but are presented here for informational purposes as they will be applicable for any quantitative transportation impact evaluation required in the future for project elements or Typical Projects not screened from VMT analysis, as described above, when project site-specific locations and other relevant information are known. Depending on their location, some project sites will be wholly under County control, while others will be wholly or partly under the control of other local agencies that may choose to utilize their own local transportation impact analysis criteria to evaluate the potential for project impacts.

Typical Projects

Common Elements

Construction

Per County Guidelines, construction impacts, if they occur, can be discussed on a qualitative basis. Construction of the Common Elements Typical Project may result in short-term increases in VMT. To

[4] Residential VMT is the VMT generated by Home-Based Work and Home-Based Other trip productions.

[5] As referenced by the VMT reduction goals discussed in the California ARB's *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Goals*, January 2019, Figure 3.

[6] Employment VMT is the VMT generated by Home-Based Work trip attractions.

[7] As referenced by the VMT reduction goals discussed in OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018.

account for potential impacts to traffic circulation, transportation impacts related to construction activities for the Common Elements Typical Project would be considered potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning*.

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The results of the project VMT impact evaluation are presented in Table 3.16-2 for the Common Elements Typical Projects. As shown in Table 3.16-2, the majority of the Common Elements design components, such as an access ramp, stairs, and site furnishings (e.g., a bench, hygiene facilities and restrooms, trash and recycling, drinking fountains, guard rail, emergency call box, bike rack, environmental graphics, lighting, plantings, fences and gates, and stormwater Best Management Practices) are screened from VMT analysis and therefore would result in a less-than-significant impact. However, two design components of the Common Elements Typical Projects are not screened out and were determined to have the potential to result in a significant VMT impact:

- Tier III Pavilions – Tier III pavilions are anticipated to accommodate up to 500 visitors per day. Maximum visitation based on a conservative assumption that each visitor drove to the site alone would result in 1,000 daily vehicle trips, exceeding the screening criteria of 110 net daily trips. Many pavilion visitors would arrive to the project site via foot or bicycle, and many would be pass-by visitors stopping on their way along the LA River Trail. Once specific sites have been determined, an appropriate mode split can be identified to determine what percentage of visitors would arrive via vehicle, bicycle, foot, or transit. Local transportation characteristics and other databases can be utilized to determine an appropriate average vehicle occupancy to further refine estimates as to the number of daily vehicle trips to the site.
- Art/Performance Spaces – The scale of performances programmed for the art/performance spaces is estimated to be small and local. However, maximum daily visitation could reach 500 visitors, which could result in a significant VMT impact.

The café design component is unique amongst the Common Element Typical Projects in that it has been screened from the VMT analysis requirement but has nevertheless been identified as potentially VMT generating in Table 3.16-2 based on the nature of the design component. However, the café would have a less-than-significant VMT impact because it meets the County Guidelines screening criteria set forth in Sections 3.1.2.1 (generates less than 110 net daily trips) and 3.1.2.2 (retail use with a gross floor area of less than 50,000 square feet).

Table 3.16-2. Typical Projects – VMT Impact Evaluation Matrix

Design Component	Common Element or Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transportation Impact Analysis Required?
Pavilion – Tier III	**Common Element**	**Land Use**	**No**	**Not screened out**	**Yes**	**Yes**	**Yes**
Café	Common Element	Land Use	Yes	Land Use	Yes	No	No
Art/Performance Space	**Common Element**	**Land Use**	**No**	**Not screened out**	**Yes**	**Yes**	**Yes**
Access Stairs	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Ramps	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Benches	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Hygiene Facilities and Restrooms	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Trash and Recycling	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Drinking Fountains	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Guard Rail	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Emergency Call Box	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Bike Rack	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Environmental Graphics	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Lighting	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No

Design Component	Common Element or Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transportation Impact Analysis Required?
Site Furnishings – Plantings	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Fences and Gates	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Stormwater Best Management Practices	Common Element	Other (water management)	Yes	Not Applicable	No	No	No
Common Elements Typical Project (inclusive of all Common Elements)	**Common Element**		**No**	**Not screened out**	**Yes**	**Yes**	**Yes**
River Gateway	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Pedestrian Trail	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Bike Trail	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Equestrian Trail	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Multi-Use Trail	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Multi-Use Trails and Access Gateways Typical Project (inclusive of all Trails and Access Gateways Elements)	**Trails and Access Gateways**		**Yes**	Transportation	**Yes**	**No**	**No**

[1] Screening Criteria:
LU 3.1.2.1 – Generation of 110 or more net daily trips
LU 3.1.2.2 – Retail uses with gross floor area > 50,000 square feet.
LU 3.1.2.3 – Adjacency to transit
LU 3.1.2.4 – 100% affordable housing
TRANS 3.2.1 – Conflict with State CEQA Guidelines Section 15064.3, subdivision (b)(2)
TRANS 3.2.2 – Addition of through-traffic lanes

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

For any subsequent projects that include project elements that are identified in the VMT Impact Evaluation Matrix as having the potential to generate a significant VMT impact, the implementing agency will conduct the following two-step screening process:

- **Step 1**. Conduct a trip generation analysis to determine whether a project would generate a net increase of 110 or more daily trips, or determine whether the location is located within one-half mile of a major transit stop or high-quality transit corridor based on its County Transportation Impact Analysis Guidelines Sections 3.1.2.1 and 3.1.2.3. If the subsequent project is screened out once project design and location details are known, then no further actions are required.

If the subsequent project is not screened out after Step 1, the implementing agency will move on to Step 2.

- **Step 2**. Perform a VMT analysis for the subsequent project using the County's VMT impact criteria that have been developed based on guidance from OPR and CARB. Per the criteria, project VMT impact thresholds vary depending on the project type, as follows:
    - For residential development land use projects, the project would generate residential VMT per capita exceeding 16.8 percent below the existing residential VMT per capita for the Baseline Area in which the project is located.
    - For office land use projects, the project would generate employment VMT per employee exceeding 16.8 percent below the existing employment VMT per employee for the Baseline Area in which the project is located.
    - For regional serving retail land use projects, entertainment projects, and/or event center land uses, the project would result in a net increase in existing Total VMT. Trips associated with these land uses are typically discretionary trips, which may be either substitute trips to other, closer destinations, or new trips entirely. A project-specific customized approach will be required to estimate VMT for such projects. The methodology should be developed in consultation with and approved by Public Works staff at the outset of the study.
    - For unique land uses in which a land use project does not fit into any of the above categories, a project-specific customized approach may be required to estimate daily trips and VMT, but may be based on the existing employment trip element using an approach similar to that for office projects, above. The methodology and thresholds to be used in such cases should be developed in consultation with and approved by Public Works staff at the outset of the study.

If the subsequent project cannot be screened out but the VMT is determined to not exceed the threshold based on the applicable guideline and project type, then no further action is needed.

If the subsequent project cannot be screened out and the VMT is determined to exceed the threshold based on the applicable guideline and project type, then Mitigation Measure TRA-1b will be implemented:

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

The implementing agency (County or other jurisdictional agency) will implement a subsequent project-specific program utilizing transportation demand management (TDM) strategies and neighborhood or site enhancements to reduce VMT, and any other appropriate strategies to address identified impacts and reduce VMT to the River Corridor.

The program to reduce VMT will be based on the suite of eligible TDM strategies included in the County Guidelines or other measures with substantial evidence, or, if the subsequent project is located in an incorporated city, the program will be based on that city's list of qualifying VMT mitigation strategies. Specific measures can include but are not limited to:

- Increasing transit accessibility
- Relocating a project in order to be adjacent to transit
- Pricing any provided parking at river access sites to discourage vehicle trips to the River Corridor
- Implementation of neighborhood or site enhancements such as pedestrian network improvements (for example, high-visibility crosswalks, continuous sidewalks, and Americans with Disabilities Act [ADA]-compliant directional curb cuts at intersections), and traffic calming measures such as speed humps or chicanes

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Multi-Use Trails and Access Gateways

Construction

Per County Guidelines, construction impacts, if they occur, can be discussed on a qualitative basis. Construction of a Multi-Use Trails and Access Gateways Typical Project may result in short-term impacts related to increases in VMT. Thus, any transportation impacts related to construction activities for the Multi-Use Trails and Access Gateways Typical Project would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning.*

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The results of the VMT impact evaluation are presented in Table 3.16-2 for Multi-Use Trails and Access Gateways Typical Projects. Table 3.16-2 shows that, unlike Common Elements projects, all of the components are screened from VMT analysis and therefore would result in a less-than-significant impact because they would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements, see above. The impact discussion below focuses on specific KOP categories only.

The design components analyzed in this section include those listed in Chapter 2, *Project Description*. Each KOP is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together.

Construction

KOP Categories 1 through 6

Per County Guidelines, construction impacts, if they occur, can be discussed on a qualitative basis. Construction of subsequent projects under the six KOP categories may result in short-term impacts related to increases in VMT. Thus, any transportation impacts related to construction activities for any of the KOP Categories would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning.*

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operation

KOP Category 1

Certain design components of the Trails and Access Gateways KOP inform the Multi-Use Trails and Access Gateways Typical Project analyzed previously. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.

KOP Category 1 projects could include a variety of recreational uses, such as equestrian facilities and trails, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridors. The results of the project VMT impact evaluation are presented in Table 3.16-3 for KOP Category 1. Table 3.16-3 shows that all of the components associated with KOP Category 1 except for the equestrian facility are screened from VMT analysis and therefore would result in a less-than-significant impact because they would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) for the same reason as described under *Typical Projects* above.

KOP Category 1 design components that are screened out from required VMT analysis and that have been identified in Table 3.16-3 as not having the potential to generate VMT would result in a less-than-significant impact as they would not generate VMT and thus would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3 (b); these include: light tower/water tower, lookout, boardwalk, channel access, vehicular access, underpass/overpass, vegetated buffer, and habitat corridor.

Certain KOP Category 1 design components have been screened from required VMT analysis but have been identified as potentially VMT generating in Table 3.16-3 based on the nature of the design component; these include river gateway, pedestrian trail, bike trail, equestrian trails, and multi-use trails. However, these design components would have a less-than-significant VMT impact because they meet the County Guidelines screening criteria set forth in Section 3.2.1 (i.e., they would not conflict with State CEQA Guidelines Section 15064.3(b)(2) because they would reduce VMT by providing an active transportation option or they would not have an impact on VMT) or Section 3.2.2 (i.e., they would not include the addition of through-traffic lanes). Thus, implementation of these design components would not conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b).

Table 3.16-3 shows the equestrian facility design component as having the potential to generate a significant VMT impact. Programming and size of facility details would be required to determine the potential for significant VMT impacts. For example, a small equestrian facility to serve neighborhood residents and/or equestrians already on the trail would generate fewer trips than a top regional facility. Not only would a local-serving facility attract fewer equestrians, but many may walk to a facility within their own neighborhood as opposed to driving to one farther away. Thus, implementation of this design component could conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3(b), which would be a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Table 3.16-3. Kit of Parts Components – VMT Impact Evaluation Matrix

Design Component	Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transport-ation Impact Analysis Required?
River Gateway	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Pedestrian Trail	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Bike Trail	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Equestrian Trail	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Equestrian Facility	**KOP 1: Trails and Access Gateways**	**Land Use**	**No**	**Not Screened Out**	**Yes**	**Yes**	**Yes**
Multi-Use Trail	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Light Tower/Water Tower	KOP 1: Trails and Access Gateways	Other (infrastructure)	Yes	Not Applicable	No	No	No
Lookout	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Boardwalk	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Channel Access	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Vehicular Access	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Underpass/Overpass	KOP 1: Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Vegetated Buffer	KOP 1: Trails and Access Gateways	Other (water management)	Yes	Not Applicable	No	No	No

Design Component	Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transport-ation Impact Analysis Required?
Habitat Corridor	KOP 1: Trails and Access Gateways	Other (water management)	Yes	Not Applicable	No	No	No
Terraced Bank	**KOP 2: Channel Modifications**	**Other (water management)**	**No**	**Not Screened Out**	**Yes**	**Yes**	**Yes**
Check Dam	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Levee	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Armored Channel	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Storm Drain Daylighting	KOP 2: Channel Modifications Off-Channel Land Assets	Other (water management)	Yes	Not Applicable	No	No	No
Vertical Wall	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Channel Smoothing	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Texturizing or Grooving	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Concrete Bottom	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Soft Bottom/Concrete Removal	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Sediment Removal	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Bridge Pier Modification	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No

Design Component	Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transport-ation Impact Analysis Required?
Access Ramp	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Reshape Low Flow	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Deployable Barrier	KOP 2: Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Pedestrian Bridge	KOP 3: Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Bike Bridge	KOP 3: Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Equestrian Bridge	KOP 3: Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Multi-Use Bridge	KOP 3: Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Cantilever	KOP 3: Crossings and Platforms	Transportation	Yes	Transportation	No	No	No
Platform	**KOP 3: Crossings and Platforms**	**Transportation**	**No**	**Not Screened Out**	**Yes**	**Yes**	**Yes**
Diversion Pipe	KOP 4: Diversions	Other (water management)	Yes	Not applicable	No	No	No
Side Channel	**KOP 4: Diversions KOP 5: Floodplain Reclamation**	**Other (water management)**	**No**	**Not Screened Out**	**Yes**	**Yes**	**Yes**
Diversion Channel	KOP 4: Diversions	Other (water management)	Yes	Not applicable	No	No	No
Pump	KOP 4: Diversions	Other (water management)	Yes	Not applicable	No	No	No
Diversion Tunnel	KOP 4: Diversions	Other (water management)	Yes	Not applicable	No	No	No

Design Component	Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transport-ation Impact Analysis Required?
Overflow Weir	KOP 4: Diversions	Other (water management)	Yes	Not applicable	No	No	No
Underground Gallery	KOP 4: Diversions	Other (water management)	Yes	Not applicable	No	No	No
Wetland (In-Channel)	KOP 5: Floodplain Reclamation KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Wetland (Off-Channel)	KOP 5: Floodplain Reclamation KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Naturalized Bank	KOP 5: Floodplain Reclamation	Other (water management)	Yes	Not applicable	No	No	No
Braided Channel	KOP 5: Floodplain Reclamation	Other (water management)	Yes	Not applicable	No	No	No
Field	**KOP 5: Floodplain Reclamation**	**Land Use**	**No**	**Not screened out**	**Yes**	**Yes**	**Yes**
Recreation Field	**KOP 5: Floodplain Reclamation KOP 6: Off-Channel Land Assets**	**Land Use**	**No**	**Not screened out**	**Yes**	**Yes**	**Yes**
Urban Agriculture/ Composting	**KOP 6: Off-Channel Land Assets**	**Land Use**	**No**	**Not screened out**	**Yes**	**Yes**	**Yes**
Solar Power	KOP 6: Off-Channel Land Assets	Other (infrastructure)	Yes	Not applicable	No	No	No
Natural Treatment System	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No

Design Component	Kit of Parts Category	Project Type Transportation/ Land Use/Other	Screened Out?	Applicable Screening Criteria[1]	Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transport-ation Impact Analysis Required?
Surface Storage	KOP 5: Floodplain Reclamation KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Subsurface Storage	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Injection Well	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Water Treatment Facility	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Purple Pipe Connection	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Dry Well	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Spreading Ground	KOP 6: Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Affordable Housing[2]	KOP 6: Off-Channel Land Assets	Land Use	Yes	Land Use	No	No	No
Art and Culture Facility	KOP 6: **Off-Channel Land Assets**	**Land Use**	**No**	**Not Screened Out**	**Yes**	**Yes**	**Yes**

[1] Screening Criteria:
LU 3.1.2.1 – Generation of 110 or more net daily trips
LU 3.1.2.2 – Retail uses with gross floor area > 50,000 sf.
LU 3.1.2.3 – Adjacency to Transit
LU 3.1.2.4 – 100% affordable housing
TRANS 3.2.1 – Conflict with CEQA Guidelines Section 15064.3, subdivision (b)(2)
TRANS 3.2.2 – Addition of through-traffic lanes.

[2] Assumes fewer than 110 daily trips.

KOP Category 2

Potential impacts from operation of the design components under the Channel Modifications KOP would vary depending on the specific design component and its intended function, as well as on the specific location, including in-channel or off-channel. The specific locations (in-channel or off-channel) and designs for these design components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding.

Historically, modifications to the channel have primarily been made to increase its capacity. Depending on the channel modification implemented, benefits may include improving access and safety, making places for people and habitat, and improving channel capacity to reduce flood risk. The following design components could be constructed under KOP Category 2: terraced bank, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. The results of the *2020 LA River Master Plan* VMT impact evaluation are presented in Table 3.16-3 for KOP Category 2. Table 3.16-3 shows that all of the components associated with KOP Category 2, except for the terraced bank design component, are screened from VMT analysis and therefore would result in a less-than-significant impact because they would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) for the same reason as described under *Typical Projects* above. KOP Category 2 design components that are screened out from VMT analysis and have been identified in Table 3.16-3 as not having the potential to generate VMT would result in less-than-significant impacts as they would not generate VMT and thus would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); these include: check dam, levee, armored channel, storm drain daylighting, vertical wall, channel smoothing, texturizing or grooving, concrete bottom, soft bottom/concrete removal, sediment removal, bridge pier modification, access ramp, reshape low flow, and deployable barrier.

Table 3.16-3 shows that the terraced bank design component has the potential to generate a significant VMT impact. Terraced banks could serve a variety of flood management or ecological uses, none of which would result in a significant transportation impact. However, they could also be used to develop amphitheaters for public performances or parks. Site-specific details regarding site programming and acreage would be required to determine the potential for these public serving uses to be eligible for screening or to result in a VMT impact. Thus, the implementation of this design component could conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b), which would be a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

KOP Category 3

KOP Category 3 includes a range of functions comprising ecological and recreational uses. Ecological uses include water features and connections for habitat communities, while recreational uses include recreational fields, parks, and channel overlooks. Operation of ecological functions would not attract a large number of users; the recreational uses under KOP Category 3 would attract additional users, and would increase the amount of recreational resources available to users in the study area.

Given its width and length, the LA River Channel can separate communities and be an obstacle for connectivity. Crossings can connect existing or proposed communities or assets on one side of the river with existing or proposed communities or assets on the other side. The following design components could be constructed under the Crossings and Platform KOP: bridges (pedestrian, bike, equestrian, habitat/wildlife, and multi-use), cantilevers, and platforms. The results of the *2020 LA River Master Plan* VMT impact evaluation are presented in Table 3.16-3 for KOP Category 3. Table 3.16-3 shows that all of the components associated with KOP Category 3, except for the platform, are screened from VMT analysis and therefore would result in a less-than-significant impact because they would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) for the same reason as described under *Typical Projects* above.

KOP Category 3 design components that are screened out from VMT analysis and have been identified in Table 3.16-3 as not having the potential to generate VMT would result in less-than-significant impacts as they would not generate any VMT and thus would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); these include: cantilever.

Certain KOP Category 3 design components have been screened from required VMT analysis but have been identified as potentially VMT generating in Table 3.16-3 based on the nature of the design component; these include: pedestrian bridge, bike bridge, equestrian bridge, and multi-use bridge. However, these design components would have a less-than-significant VMT impact because they meet the County Guidelines screening criteria set forth in Section 3.2.1 (i.e., they would not conflict with State CEQA Guidelines Section 15064.3 (b)(2) because they would reduce VMT by providing an active transportation option or they would not have an impact on VMT) or Section 3.2.2 (i.e., they would not include the addition of through-traffic lanes). Thus, implementation of these design components would not conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b).

Table 3.16-3 shows that the platform design component has the potential to generate a significant VMT impact. While crossings typically will provide for transport across the river for pedestrians, bicyclists, and equestrians, platforms are envisioned as wider facilities providing space for parks, recreation, and wildlife habitats. Platforms could host a range of habitat typologies and would allow for wildlife migration. Such habitat-focused uses would not generate VMT beyond incidental maintenance trips, and their impacts would automatically be assumed to be less than significant. For the public-serving uses, including parks and recreation spaces, site-specific details regarding site programming and acreage would be required to determine the potential for these uses to be eligible for screening or to result in a VMT impact. Thus, the implementation of this design component could

conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b), which would be a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

KOP Category 4

KOP Category 4 includes a range of functions including flood management, recreational, and ecological uses such as pumps, wetlands, diversion channels, and overflow weirs.

Used for reducing flood risk and benefiting local water supply reliability, diversions also provide opportunities for treatment and reuse of water for groundwater recharge, habitat features, or recreational opportunities during smaller storm events, or in the dry season when flows are reduced. The following design components could be constructed under the Diversions KOP: pumps, diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors, and wetlands. The results of the *2020 LA River Master Plan* VMT impact evaluation are presented in Table 3.16-3 for KOP Category 4. Table 3.16-3 shows that all of the components associated with KOP Category 4, except the side channel, are screened from VMT analysis and therefore would result in no impact or a less-than-significant impact because they would not conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) for the same reason as described under *Typical Projects* above.

KOP Category 4 design components that are screened out from VMT analysis and have been identified in Table 3.16-3 as not having the potential to generate VMT would result in less-than-significant impacts as they would not generate any VMT and thus would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); these include: the diversion pipe, diversion channel, pump, diversion tunnel, overflow weir, and underground gallery.

Table 3.16-3 shows that the side channel design component has the potential to generate a significant VMT impact. Diversions are primarily flood management measures intended to address storm event high water flows; however, during the dry season when water flows are reduced, diversion channels may also provide the setting for education programs (e.g., those focused on ecosystem function). Programming and location specifics for the educational uses would need to be provided for screening eligibility or the potential to result in a significant impact. Thus, implementation of this design component could conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b), which would be a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

KOP Category 5

KOP Category 5 includes a range of functions including flood management, recreational, and ecological uses such as wetlands, naturalized banks, braided channels, fields, storage, side channels, and recreational uses (e.g., boardwalk platforms and a farmers' market).

Historically, the LA River had a vast floodplain, and the river would commonly shift its course after major floods. In the 1930s, the USACE channelized the river and replaced the shifting floodplain to prevent further flooding. This ultimately allowed for future development and urbanization. Floodplain reclamation in the LA River includes wetlands, naturalized banks, braided channels, fields, storage, and side channels. The results of the *2020 LA River Master Plan* VMT impact evaluation are presented in Table 3.16-3 for the KOP Category 5 components. Table 3.16-3 shows that all of the components associated with KOP Category 5, except the field and recreational field, are screened from VMT analysis and therefore would result in a less-than-significant impact because they would not conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) for the same reason as described under *Typical Projects* above.

KOP Category 5 design components that are screened out from VMT analysis and have been identified in Table 3.16-3 as not having the potential to generate VMT would result in less-than-significant impacts as they would not generate any VMT and thus would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); these include: wetland (in-channel), wetland (off-channel), naturalized bank, and braided channel.

Table 3.16-3 shows that the following design components have the potential to generate a significant VMT impact:

- Fields – May include play fields, farmers' markets, or other uses. When more refined programmatic and acreage information is available based on a site-specific project configuration, daily trip generation estimates can be developed to determine the potential for VMT screening or impacts.
- Recreation Fields – Programming and size of facility details will be required to determine the potential for significant VMT impacts. For example, recreation fields with four individual soccer fields supporting regional tournaments will have a very different trip generation, mode split, and trip length profile from a neighborhood park with one softball diamond.

For these two public-serving uses, site-specific details regarding site programming, configuration, and facility size details would be required to determine the potential for these uses to be eligible for screening or to result in a VMT impact. Thus, the implementation of this design component could conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b), which would be a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

KOP Category 6

Based on the limitations on what can be located within the LA River ROW, off-channel land assets can be used for projects that are essential to the *2020 LA River Master Plan* but cannot be located in the channel or adjacent ROW. Off-channel land assets combined with ROW improvements can further ensure projects are multi-benefit, addressing multiple needs. Off-channel land assets include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks.

KOP Category 6 design components that are screened out from VMT analysis and have been identified in Table 3.16-3 as not having the potential to generate VMT would result in less-than-significant impacts as they would not generate any VMT and thus would not conflict with nor be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b). These include: solar power, natural treatment system, surface storage, subsurface storage, injection well, water treatment facility, purple pipe connection, dry well, spreading ground, and affordable housing.[8]

Table 3.16-3 shows that the following design components have the potential to generate a significant VMT impact:

- Recreation Fields – Programming and size of facility details will be required to determine the potential for significant VMT impacts. For example, recreation fields with four individual soccer fields supporting regional tournaments will have a very different trip generation, mode split, and trip length profile from a neighborhood park with one softball diamond.

[8] Development of affordable housing under KOP 6 would encourage a mix of supportive housing, affordable rental, and affordable homeownership units in both new construction and preservation buildings, which is designed to increase affordable housing in the area rather than create new housing for people outside of the County.

- Urban Agriculture/Composting – Urban agriculture may include community gardens and compost facilities or plant nurseries. More refined programmatic, size, and location information will be required to determine the potential to result in a VMT impact.
- Art and Culture Facilities – Arts and culture facilities could include museums, galleries, libraries, or other public facilities. More refined programmatic and size information will be required to determine the potential to result in a VMT impact.

As discussed above, and shown in Table 3.16-3, the three specific components—recreational fields, urban agriculture/composting, and art and culture facilities—were not screened out of the VMT analysis and were subsequently determined to be potentially VMT generating. For these three components, information regarding programming, location, and facility size would be required to determine the potential for these uses to be eligible for screening or to result in a VMT impact. Thus, the implementation of this design component could conflict with or be inconsistent with the criteria set forth in State CEQA Guidelines Section 15064.3 (b), which would be a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

Per County Guidelines, construction impacts, if they occur, can be discussed on a qualitative basis. The construction impacts associated with the 107 projects under the overall *2020 LA River Master Plan* would be similar to those described in the KOP categories; these projects are expected to be constructed throughout the 25-year life of the Project. The same general construction equipment and activities would be involved (i.e., the use of backhoes, trucks, hand-held power equipment, generators, etc.), and the extent and duration would vary based on overall project design and location. As the location, design details, and construction phasing of subsequent projects under the *2020 LA River Master Plan* are not known, it is possible that construction activities of the 107 projects could conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b). Development of subsequent projects under the 107 projects may result in short-term increases in VMT. These impacts have the potential to be significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning.*

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operation of the 107 projects under the *2020 LA River Master Plan* would include various flood management improvements, recreational facilities and amenities, habitat restoration, affordable housing, and arts and cultural facilities. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together comprise the entirety of the *2020 LA River Master Plan*.

Table 3.16-2 and Table 3.16-3 identified that the Common Elements Typical Projects, including individual common elements such as pavilions and art/performance spaces, have the potential to result in a significant impact related to VMT, as do some design components under the six KOP categories. Given the expected cadence of common elements as well as the overall number of projects that could be developed under the *2020 LA River Master Plan*, the potential exists for implementation of the entirety of the *2020 LA River Master Plan* to incrementally result in a significant impact on VMT. As stated in Appendix I, each individual project's potential to result in a significant transportation impact would need to be evaluated by the project proponent when the project's exact location, configuration, and scale are known, and cannot be determined based on the current level of project specificity.

Recent County modeling efforts completed during the County's process to develop SB 743-compliant CEQA thresholds and guidelines utilized the SCAG transportation demand forecasting model to identify unique average or baseline per capita and per employee VMT for the north and south areas of the County for residential vehicle trips that start within the County or employment trips that end there, and to forecast 2040 conditions. While the horizon year of the County's modeling efforts for that project are 5 years before the 2045 horizon year for the *2020 LA River Master Plan*, it is likely that the long-term VMT trends identified in that effort would continue in the years between 2040 and 2045. In general, VMT on a per capita basis is projected to go down throughout the SCAG region due to increasing population and job density, infill development, and greater active transportation and transit usage. Within the study area, areas with residential VMT per capita lower than the baseline established in the County's SB 743 modeling efforts increase to almost a quarter of all land area from 10 percent today. Similarly, areas with employee VMT below the County baseline are forecast to increase from 10 percent today to almost 20 percent by 2040. This trend of decreasing VMT in general and specifically within the study area also decreases the likelihood of finding a significant impact on VMT resulting from implementation of the full *2020 LA River Master Plan* as projects are brought forth over time.

Despite the VMT trend, 11 project elements were not screened from requiring VMT analysis and were determined to be potentially VMT generating. These elements include tier III pavilions;

art/performance spaces; equestrian facilities, terraced banks, platforms, side channels, fields; recreation fields; urban agriculture/composting; and art and culture facilities. The exact locations or extent of the 107 projects that could be proposed are currently unknown, as are the Common Elements Typical Projects, and these may include any of the 11 non-screened elements. Further VMT analysis will continue to be required for any project containing one of these potentially impactful project elements. Therefore, while the likelihood of an impact arising from implementation of the full *2020 LA River Master Plan* decreases over time, the impact on VMT is determined to be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TRA-1a: Determine VMT Based on Type of Subsequent Project.

Mitigation Measure TRA-1b: Implement Transportation Demand Management Strategies and/or Enhancements to Reduce VMT (if applicable).

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.16(c)/(d): Would the proposed Project substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or result in inadequate emergency access?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction of Common Elements or Multi-Use Trails and Access Gateways Typical Projects may result in short-term roadway effects (e.g., localized increases in delay and traffic queuing that stems from lane closures), which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and to adjacent land uses (e.g., due to driveways affected by lane closures).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning.*

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications to and from the Common Elements and the Multi-Use Trails and Access Gateways Typical Projects may include safety, operational, or capacity impacts. The specific locations of river access points are unknown at this time, and therefore it is also unknown whether any geometric design hazards exist that would need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries. As such, the Common Elements and the Multi-Use Trails and Access Gateways Typical Projects Plan could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. However, all access points would be required to be designed according to *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, Project Description, and included in Appendix B) applicable at the time of project development, and, where applicable, of the local agency in which they are located. Among the requirements for river access points is that they must be well-lit and provide clear lines of sight. Development of some access points may require site acquisition or easements to provide appropriate, safe access, including clear lines of sight.

To ensure safety along the river during both regular use and in periodic flood events, the Design Guidelines require that the entirety of the 51 miles of the LA River maintain emergency access for first responders and emergency personnel and vehicles, including through the provision of minimum 12-foot paved or unpaved service roads along the top of the channel in a limited landscape zone. The limited landscape zone is designed to extend 17 feet from the channel wall and prohibits any structures or obstructions. Plantings in this area are restricted to low-growing species, not to exceed 5 feet in height, to provide clear lines of sight and allow for emergency vehicle access, and would be pruned to maintain emergency access. Additionally, existing Los Angeles Flood Control District Maintenance Standards for emergency vehicle ingress and egress apply to both existing trails and future *2020 LA River Master Plan* projects.

Although some existing conditions along the river do not provide the level of access required by the *2020 LA River Master Plan*, all *2020 LA River Master Plan* development will comply with the *2020 LA River Master Plan* guidelines. Requests for variances due to ROW constraints would be reviewed and approved by the appropriate jurisdiction. Mile markers would be placed every half mile along the landside of the trail, facing both directions of travel, which allows people to easily locate themselves along the river for emergency responders.

Given the access point design standards and emergency vehicle access requirements described above, the Typical Projects would not result in inadequate emergency access during project operations.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Categories 1 through 6

Construction

Under the *2020 LA River Master Plan*, the multi-benefit design components of the KOP categories can be implemented individually or in combination with other design components as subsequent projects. Potential impacts from construction of the design components under KOP Category 1 through KOP Category 6 would vary depending on the specific location (in-channel/off-channel, frame, etc.), configuration, design component, and its intended function. Projects under the KOP categories would likely be larger than Typical Projects.

Similar to the Typical Projects, construction of the KOP categories may result in short-term roadway effects, for example localized increases in delay and traffic queuing that stems from lane closures, which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and to adjacent land uses (e.g., due to driveways affected by lane closures).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning.*

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Similar to the Typical Projects, impacts related to a potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications to and from the KOP categories may include safety, operational, or capacity impacts. For example, alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with County approval or the relevant local agency's approval. Service road access from arterial streets must allow for a 20-foot

setback of vehicular access gates where feasible and must provide a 40-foot centerline turning radius for truck ingress and egress. Given the access point design standards and emergency vehicle access requirements of the Design Guidelines, the KOP categories would not result in inadequate emergency access during project operations.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction

Although the specific timing and duration of construction of the 107 projects of the *2020 LA River Master Plan* over the 25-year project period is not known, some overlap of these projects is likely to occur. Similar to the Typical Projects, construction of all 107 projects of the *2020 LA River Master Plan* over 25 years may result in short-term roadway effects, for example localized increases in delay and traffic queuing that stems from lane closures, which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and to adjacent land uses (e.g., due to driveways affected by lane closures).

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described in Section 3.10, *Land Use and Planning.*

Mitigation Measure LU-1: Prepare and Implement Construction Management Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications to and from all 107 projects under the *2020 LA River Master Plan* facilities may include safety, operational, or capacity impacts. River access points will be placed approximately every half mile. The specific locations of these river access points are unknown at this

time, and therefore it is also unknown whether any geometric design hazards exist that would need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries. However, similar to the Typical Projects discussion above, all access points would be required to be designed according to the Design Guidelines, and, where applicable, and to the local agency's guidelines in which they are located. Further, alterations to existing, or design of new, service roads providing access for maintenance and emergency vehicles must meet with County approval or the relevant local agency's approval. Given the access point design standards and emergency vehicle access requirements described in detail for Typical Projects, which would apply to all subsequent projects, implementation of the *2020 LA River Master Plan* would not substantially increase hazards or conflicts or result in inadequate emergency access. Furthermore, implementation of the *2020 LA River Master Plan* would remediate or improve existing substandard conditions and would therefore contribute to overall safety improvements along the entire river corridor.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative transportation impacts is the greater Los Angeles region to encompass the entire roadway/freeway system that could be affected by cumulative projects. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on transportation/traffic, if, in combination with other projects within the greater Los Angeles region, it would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or result in inadequate emergency access.

Cumulative Condition

Past projects in Los Angeles County (cities and unincorporated areas) have converted undeveloped and agricultural land to urban uses, resulting in residential and employment population increases and associated demand for expansions of roadway systems. The cumulative traffic impact of the County's and individual jurisdictions' general plan build-out will be largely mitigated through a combination of regional programs that are the responsibility of agencies such as cities and Caltrans.

The 2020 RTP/SCS, in addition to other projects from other regional plans (e.g., RTPs of adjacent jurisdictions), could result in additional impacts in the greater Los Angeles and SCAG regions. Recent

County modeling efforts completed during the County process to develop SB 743-compliant CEQA thresholds and guidelines utilized the SCAG transportation demand forecasting model to forecast 2040 conditions. While the horizon year of the County's modeling efforts for that project is 5 years before the 2045 horizon year for the proposed Project, it is likely that the long-term VMT trends identified in that effort would continue in the years between 2040 and 2045. In general, VMT on a per capita basis is projected to go down throughout the SCAG region due to increasing population and job density, infill development, and greater active transportation and transit usage. Within the study area, the percent of land area with residential VMT below the County baseline is forecast to increase from 10 percent today to 24 percent in 2040, with the percentage within some river frames increasing by almost 30 percent, and no frames experiencing a decrease in the percentage of land area with residential VMT below the County baseline. Similarly, percentage of total land area with employee VMT below the County baseline is forecast to increase between 2020 and 2040 by 10 percent, from 8 percent today to 18 percent in the future, with no frames experiencing a decrease in percent land area with employee VMT below the County baseline and one frame experiencing an increase of more than 25 percent in the percentage of land area that meets this metric. Table 3.16-4 presents the change in percent land area with residential and employee VMT below the County baseline by river frame and for the study area overall. Based on this information, there would be no cumulative condition with respect to transportation.

Table 3.16-4. Percent Change in Land Area with VMT Below the County Baseline

River Frame ID	Name	Residential VMT Below the County Baseline			Employee VMT Below the County Baseline		
		% Land Area			% Land Area		
		2020	2040[1]	% Change	2020	2040[1]	% Change
1	Estuary	6%	6%	0%	3%	7%	3%
2	South Plain	3%	8%	6%	6%	10%	4%
3	Central Plain	5%	5%	0%	3%	8%	5%
4	North Plain	36%	65%	29%	11%	26%	15%
5	Heights	23%	43%	21%	3%	9%	5%
6	Narrows	2%	28%	27%	2%	29%	27%
7	East Valley	6%	14%	9%	0%	11%	11%
8	Mid Valley	11%	12%	1%	1%	13%	12%
9	West Valley	9%	33%	25%	33%	33%	0%
	Total	**10%**	**24%**	**14%**	**8%**	**18%**	**10%**

[1] Data based on modeling done to support development of County SB 743 Guidelines. Model horizon year for that project was 2040; the *2020 LA River Master Plan* horizon year is 2045.

Contribution of the Project to Cumulative Impacts

As noted implementation of the *2020 LA River Master Plan* will allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Mitigation Measures LU-1, TRA-1a, and TRA-1b would reduce all potential impacts of the proposed Project to less than significant. As there is no cumulative condition with respect to transportation, the proposed Project would not make a cumulatively considerable contribution to transportation impacts.

Section 3.17
Tribal Cultural Resources

3.17.1 Introduction

A tribal cultural resource (TCR) is a site, feature, place, cultural landscape, sacred place, or object that is of cultural value to a recognized Native American tribe (Public Resources Code [PRC] § 21074). The resource may be listed in or eligible for listing on the California Register of Historical Resources (CRHR) or a local historic register or a lead agency may choose to treat a resource as a TCR based on consultation with a recognized Native American tribe pursuant to Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014, see below for a detailed description of TCRs and AB 52). This section describes the geographic and regulatory setting for TCRs, discusses impacts on TCRs that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of impacts. Where needed, this section identifies mitigation measures that would reduce or avoid any significant impacts, when feasible.

The analysis is based on consultation with Native American tribes traditionally and culturally affiliated with the proposed Project and through a Sacred Lands File (SLF) search conducted through the Native American Heritage Commission (NAHC). A records search for previously recorded archaeological sites was not conducted as part of the PEIR analysis. For a discussion of the proposed Project's effects on Cultural Resources, see Section 3.4, *Cultural Resources*.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.17.2 Setting

3.17.2.1 Geographic

The environmental and cultural setting sections are presented in Section 3.4, *Cultural Resources,* of the PEIR.

Ethnographic Setting

The *2020 LA River Master Plan* study area encompasses mainly the ethnographic territory of the Gabrieleño. The Tatavium and Chumash traditionally occupied the areas just to the north (San

Fernando Valley) and coastal areas to the west of the project study area; however, interaction within the Los Angeles Plain and Basin occurred. Additionally, the Serrano, traditionally located to the east of the Los Angeles Plain, interacted with and accessed the areas, resources, and other tribes of the Los Angeles Basin.

Gabrieleño

The Gabrieleño are a Native American people who have long inhabited the area in the Los Angeles Basin. The study area is entirely within the ethnographic territory of the Gabrieleño. Following the Spanish custom of naming local tribes after nearby missions, these people were called the *Gabrieleño*, *Gabrieliño*, or *San Gabrieleño* in reference to Mission San Gabriel Arcángel, which is northeast of the study area.

The Gabrieleño consist of a number of smaller bands, some of whom refer to themselves as *Tongva*, and others who refer to themselves as *Kizh.* Gabrieleño speaker Mrs. James Vinyard Rosemeyer told anthropologist C. Hart Merriam that Gabrieleño speakers referred to themselves as Tongva, and Merriam recorded the name (King 2011:5). McCawley (1996:9) states that Tongva was the term used by the Gabrieleño living near Tejon; however, the name also referred to a ranchería in the San Gabriel area. Today, some Gabrieleño have chosen to be known as Tongva (McCawley 1996:10). Yet another name that has been reported for the Gabrieleño is *Kizh* or *Kij*, perhaps derived from the word meaning *houses* (McCawley 1996:10; Stickel 2016). The latter term may refer specifically to Gabrieleño living in the Whittier Narrows (McCawley 1996:10). The Gabrieleño spoke a language that falls within the Cupan group of the Takic subfamily of the Uto-Aztecan language family. This language family is extremely large and includes the Shoshonean groups of the Great Basin. Given the geographic proximity of Gabrieleño and Serrano bands living in the area and the linguistic similarities, ethnographers have suggested that they shared the same ethnic origins (Kroeber 1925).

The Gabrieleño are considered one of the most distinctive tribes in all of California. They occupied a large area that was bordered on the west by the community of Topanga and the City of Malibu, the San Fernando Valley, the greater Los Angeles Basin, and the coastal strip south of Aliso Creek, south of San Juan Capistrano. Gabrieleño territory extended from the San Bernardino Mountains to the islands of Catalina, San Clemente, and San Nicolas and occupied most of modern-day Los Angeles and Orange Counties (Bean 1978:538–549). By 1500 B.P., permanent villages were built in the lowlands along rivers and streams. Over 50 villages may have been occupied simultaneously with populations of between 50 and 200 people per village (Bean and Smith 1978).

Very little has been written about early Gabrieleño social organization. The band was not studied until the 1920s and had already been greatly influenced by missionaries and settlers by that time (Kroeber 1925). Kroeber's (1925) work indicates that the Gabrieleño were a hierarchically ordered society with a chief who oversaw social and political interactions both within the Gabrieleño culture and with other groups. The Gabrieleño had multiple villages, ranging from seasonal satellite villages to larger, more permanent settlements. Resource exploitation was focused on village-centered territories, and hunting ranged from deer, rabbits, birds, and other small game to sea mammals. Fishing for freshwater fish, saltwater mollusks, and crustaceans, and gathering acorns and various grass seeds were also important (Bean and Smith 1978:538–549). Fishing technology included basket fish traps, nets, bonefish hooks, harpoons, and vegetable poisons, and ocean fishing was conducted from wooden-plank canoes lashed and asphalted together. Gabrieleño houses were large, circular, thatched, and domed structures of tule, fern, or carrizo that were large enough to house several families. Smaller ceremonial structures were also present in the villages and were used in a

variety of ways. These structures were earth-covered, and different ones were used as sweathouses, meeting places for adult males, menstrual huts, and ceremonial enclosures (*yuva'r*) (Heizer 1962:289–293).

The coastal Gabrieleño are among the few New World peoples who regularly navigated the ocean. They built seaworthy canoes, called *ti'at*, with wood planks that were sewn together, edge to edge, and then caulked and coated with pine pitch or, more commonly, the tar that was available either from the La Brea Tar Pits or asphaltum that had washed up on shore from offshore oil seeps. A ti'at could hold as many as 12 people, all of their gear, and all of the goods carried to trade with other people, either along the coast or on one of the Channel Islands. The Gabrieleño paddled out to greet Spanish explorer Juan Cabrillo when he arrived off the shores of San Pedro in 1542.

Modern place names with Gabrieleño origins include Pacoima, Tujunga, Topanga, Rancho Cucamonga, Azusa, and Cahuenga Pass. The name of their creation deity, Quaoar, has been used to name a large object in the Kuiper belt (a disc-shaped region of icy objects beyond the orbit of Neptune). A 2,656-foot summit in the Verdugo Mountains, in the City of Glendale, has been named Tongva Peak. The Gabrielino Trail is a 32-mile-long path through the Angeles National Forest.

Recorded ethnographic and archaeological sites associated with Gabrieleño settlements are rare. This is directly attributable to the extensive and prolonged urban development of the City of Los Angeles region over the last one and a half centuries (DPR 2005:16). In the 1990s, Kuruvungna Springs, a natural spring located on the site of a former Gabrieleño village on the campus of University High School in West Los Angeles, was revitalized due to the efforts of the Gabrieleño Springs Foundation. The spring, which produces 22,000 gallons (83,279 liters) of water each day, is considered by the Gabrieleño to be one of their last remaining sacred sites and is regularly used for ceremonial events.

Tataviam

The Tataviam were also at one time referred to as the *Alliklik* (Bright 1975). Tataviam territory included the mountainous canyons and valleys just north of the San Fernando Valley (Hudson 1982, Johnson and Earle 1990) and was primarily between 1,500 feet and 3,000 feet above sea level. Their territory included the upper reaches of the Santa Clara River drainage system east of Piru Creek and extended to the east to include what is now the Vasquez Rocks Natural Area Park in Agua Dulce (W&S Consultants 2001). Their territory also may have extended west to the Sawmill Mountains to the north. It included at least the southwestern fringes of the Antelope Valley, which were apparently shared with the Kitanemuk, who occupied the greater portion of the Antelope Valley.

The name *Tataviam* means "People who Face the Sun." The Tataviam may be among the larger "Shoshonean" migration into Southern California that occurred 2,000 to 3,000 years ago (Higgins 1996, Ventura County Resource Conservation District 2006). The Tataviam belong to the family of Serrano people who migrated into the Antelope, Santa Clarita, and San Fernando Valleys some time before 450 A.D. They also settled into the upper Santa Clara River drainage.

Tataviam settlements include *Nuhubit* (Newhall), *Piru-U-Bit* (Piru), *Tochonanga* (which is believed to have been located at the confluence of Wiley and Towsley Canyons), and the very large village of *Chaguibit*, the center of which is buried under the Rye Canyon exit of Interstate 5. The Tataviam also lived where Saugus, Agua Dulce, and Lake Elizabeth are located today. Although the Tataviam people lived primarily on the upper reaches of the Santa Clara River drainage system, they also inhabited

the upper San Fernando Valley, including the present-day City of San Fernando and neighborhood of Sylmar (which they shared with their inland Gabrieleño neighbors).

The Tataviam were hunters and gatherers. Larger game was generally hunted with the bow and arrow, while snares, traps, and pits were used for capturing smaller game. At certain times of the year, communal hunting and gathering expeditions were held. Faunal resources available to the Tataviam included deer, mountain sheep, antelope, rabbit, small rodents, and several species of birds. Meat was generally prepared by cooking in earthen ovens, boiling, or sun-drying. Cooking and food preparation utensils consisted primarily of lithic (stone) knives and scrapers, mortars and metates, pottery, and bone or horn utensils. Vegetal resources available to the Tataviam included honey mesquite, piñon nuts, yucca roots, mesquite, and cacti fruits (Solis 2008). These resources were supplemented with roots, bulbs, shoots, and seeds that, if not available locally, were obtained in trade with other groups.

The Tataviam people lived in small villages and were semi-nomadic when food was scarce. There is little available data regarding Tataviam social organization, although information shows similarities among Tataviam, Chumash, and Gabrieleño ritual practices. Like their Chumash neighbors, the Tataviam practiced an annual mourning ceremony in late summer or early fall, which would have been conducted in a circular structure made of reeds or branches.

At first contact with the Spanish in the late 18th century, the population of this group was estimated at less than 1,000 persons. By 1810 nearly all of the Tataviam population had been baptized at San Fernando Mission (King and Blackburn 1978).

Access to the rivers and creeks was of great importance to the Tataviam, as these environments provided resources necessary for subsistence. Particular care was allotted to familiarity with flooding or drainage patterns (River Project 2006). It was along these waterways that access to fresh water, food, and other materials necessary for the construction of traditional house structures, or *Ki'j*, such as willow or tule reeds, was possible (FTBMI 2012). Datura (or jimsonweed), native tobacco, and other plants found along the local rivers and streams provided raw materials for baskets, cordage, and netting.

3.17.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of TCRs in this PEIR.

State

California Environmental Quality Act

The State CEQA Guidelines Section 15064.5(b) prescribes that project effects that would "cause a substantial adverse change in the significance of an historical resource" are significant effects on the environment. Substantial adverse changes include physical changes to both the historical resource and its immediate surroundings. CEQA Guidelines Section 15064.5 provides specific guidance for determining the significance of impacts on historical resources (CEQA Guidelines § 15064.5(b)). Under CEQA these resources are called *historical resources,* whether they are of historic or prehistoric age. TCRs are often recorded as archaeological sites and, if considered eligible for the CRHR, they are considered historical resources under CEQA. Historical, unique archeological resources, and TCRs are further defined below.

Historical Resources

Historical resources are those listed, or eligible for listing, in the CRHR, or those listed in the historical register of a local jurisdiction (county or city) unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant (PRC § 21084.1). National Register of Historic Places (NRHP)-listed historic properties in California are considered historical resources for the purposes of CEQA and are also listed in the CRHR. The CRHR criteria for listing such resources are based on, and are very similar to, the NRHP criteria.

The term *historical resource* includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC § 5020.1(j)). Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC § 5020.1(k))
2. A local survey conducted pursuant to PRC § 5024.1(g)
3. Listed in or eligible for listing in the NRHP (PRC § 5024.1(d)(1))

Unique Archaeological Resources

A *unique archaeological resource* is defined in Section 21083.2 of the California PRC as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability of meeting any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR. For the purposes of this CEQA cultural resources study, a resource is considered significant if it meets the CRHR eligibility (significance and integrity) criteria. Individual resource assessments of eligibility are provided in this report.

Even without a formal determination of significance and nomination for listing in the CRHR, a lead agency can determine that a resource is potentially eligible for such listing, to aid in determining whether a significant impact would occur. The fact that a resource is not listed in the CRHR, or has not been determined eligible for such listing, and is not included in a local register of historic resources, does not preclude an agency from determining that a resource may be a historical resource for the purposes of CEQA.

Assembly Bill 52 and Tribal Cultural Resources

A TCR is a site, feature, place, cultural landscape, sacred place, or object that is of cultural value to a recognized Native American tribe. The resource may be listed on or eligible for listing on the CRHR or a local historic register, or a lead agency may choose to treat a resource as a TCR as the result of consultation with a recognized Native American tribe under AB 52.

Although Native American tribes sometimes were involved in the implementation of CEQA by State and local lead agencies, until recently tribes have not had a formal and consistent role in the environmental review process. Consequently, TCRs, sacred places, and Native American traditions often were overlooked or marginalized under CEQA. Therefore, AB 52 (Chapter 532, Statutes of 2014) established a formal consultation process for California tribes as part of CEQA and equates significant impacts on TCRs with significant environmental impacts (PRC § 21084.2).

According to the AB 52 statement of legislative intent, tribes may have expertise in tribal history and "tribal knowledge about land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources." The legislative intent also makes clear that CEQA analyses must consider TCRs, including "the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation."

PRC Section 21080.3.1 states "…Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources that may inform the lead agency in its identification and determination of the significance of tribal cultural resources" and therefore establishes the following requirements for consultation.

> Prior to release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, the lead agency shall begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project if:
>
> 1. The California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and
> 2. The California Native American tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation.

Health and Safety Code 7050.5 (HSC 7050.5)/PRC 5097.9

Health and Safety Code 7050.5 addresses the protection of human remains discovered in any location other than a dedicated cemetery and makes it a misdemeanor for any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law, except as provided in PRC Section 5097.99. It further states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in PRC Section 5097.98. If the coroner determines that the remains are not subject to his or her authority, and if the coroner recognizes the human remains to

be those of a Native American or has reason to believe that they are those of a Native American, he or she will contact the NAHC by telephone within 24 hours. Whenever the NAHC receives notification of a discovery of Native American human remains from the county coroner, it will immediately notify those people it believes to be the Most Likely Descendants (MLD) of the deceased Native American. The descendants may inspect the site of the discovery and make recommendations on the removal or reburial of the remains.

California Government Code Section 6254 (r) and 6254.10

California Government Code Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for:

> records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency.

California Native American Graves Protection and Repatriation Act of 2001

The California Native American Graves Protection and Repatriation Act conveys to American Indians of demonstrated lineal descendance those human remains and funerary items that are held by State agencies and museums. Human remains require special handling and must be treated with dignity. Procedures for the handling of human remains are pursuant to Section 15064.5e of the State CEQA Guidelines, Section 5097.98 of the PRC, and HSC 7050.5. In the event of the discovery of human remains and/or funerary items, the following procedures, as outlined by the NAHC, must be followed (14 CCR 15000 et seq.).

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a. The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
    b. If the coroner determines the remains to be Native American:
        1) The coroner shall contact the Native American Heritage Commission within 24 hours.
        2) The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
        3) The most likely descendant may make the recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or
2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance.
    a. The Native American Heritage Commission is unable to identify a most likely descendant, or the most likely descendant failed to make a recommendation within 24 hours after being notified by the commission.

b. The descendant identified fails to make a recommendation; or

c. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Regional

Los Angeles County

Los Angeles County General Plan

The *Los Angeles County General Plan*, Conservation and Natural Resources Element, contains the following policies regarding cultural resources protection (Los Angeles County 2015).

Goal 14: Protected historic, cultural, and paleontological resources.

- **Policy 14.1:** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- **Policy 14.2:** Support an inter-jurisdictional collaborative system that protects and enhances historic cultural, and paleontological resources.
- **Policy 14.4:** Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
- **Policy 14.5:** Promote public awareness of historic, cultural, and paleontological resources.
- **Policy 14.6:** Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

In unincorporated areas of the County, the County's Historic Preservation Program establishes the criteria and procedures for the designation, preservation and maintenance of landmarks and historic districts. The Historic Preservation Ordinance was adopted by the County Board of Supervisors in 2015; as of 2020, there are only three properties listed on the Los Angeles County Historical Landmarks Registry, none of which are designated historic districts or located in or near the study area. The resources included in Part A, 1-5 can include archaeological sites and TCRs. Most often, archaeological resources and TCRs are eligible under Criterion 4 for data potential if:

A. A structure, site, object, tree, landscape, or natural land feature may be designated as a landmark if it is 50 years of age or older and satisfies one or more of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of the history of the nation, state, county, or community in which it is located;
2. It is associated with the lives of persons who are significant in the history of the nation, state, county, or community in which it is located;
3. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the nation, state, county, or community in which it is located; or possesses artistic values of significance to the nation, state, county, or community in which it is located;
4. It has yielded, or may be likely to yield, significant and important information regarding the prehistory or history of the nation, state, county, or community in which it is located;
5. It is listed, or has been formally determined eligible by the United States National Park Service for listing, in the National Register of Historic Places, or is listed, or has been

formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resources.

Local

City of Long Beach

The City of Long Beach participates in the Certified Local Government (CLG) program. As a CLG, they have the responsibility of reviewing and commenting on development projects for compliance with State (and federal) environmental regulations. It has a Cultural Heritage Ordinance that allows for the designation of individual structures and district, and the City of Long Beach Cultural Heritage Commission advises the Planning Commission and City Council about historic preservation issues. The City of Long Beach Cultural Heritage Commission may also administer design guidelines for designated buildings (City of Long Beach 2010)

As a CLG, with a Cultural Heritage Ordinance in place and overseen by a Cultural Heritage Commission, this municipality will require coordination regarding historic resources when a plan is proposed within their borders.

The City of Long Beach Historic Preservation Ordinance, located in Chapter 2.63 of Volume 1, *Administration and Personnel*, of the city's municipal code, states, "the recognition, preservation, protection, and use of cultural resources are necessary to the health, property, social and cultural enrichment, and general welfare of the people." Specific sections referring to cultural resources and archaeological sites, which could include TCRs, are included in Part J.

A resource may be recommended for designation as a landmark or landmark district if it "is, or has been, a valuable information source important to the prehistory or history of the city, the Southern California region or the state" (City of Long Beach 2010).

Archaeological resources are included in the list of potential resources which could be designated as a landmark or landmark district by the Cultural Heritage Commission and meeting criteria described in the Long Beach Municipal Code Part 2.63.040.

City of Los Angeles

Cultural Heritage Ordinance

The City of Los Angeles maintains a list of all sites, buildings, and structures within its jurisdiction that have been designated through the Cultural Heritage Ordinance as Historic-Cultural Monuments (HCMs). TCRs may be included in a local register of historical resources and would be considered historical resources under CEQA.

City of Los Angeles General Plan Conservation Element

The *City of Los Angeles General Plan* Conservation Element*,* Chapter II: Resource Conservation and Management. Section 3: Archaeological and Paleontological, identifies that the City of Los Angeles has a primary responsibility in protecting significant archaeological resources (City of Los Angeles 2001). Under the archaeological and paleontological objective, policy, and program, the policy is to continue to identify and protect significant archaeological and paleontological sites or resources known to exist or that are identified during land development, demolition, or property modification activities.

Responsible City of Los Angeles departments include Building and Safety, City Planning and Cultural Affairs, and Community Redevelopment Agency (which has been eliminated since 2001), and the lead agency responsible for the permit implementation.

Other Cities in the Study Area

Refer to Section 3.4, *Cultural Resources*, of the PEIR for a description of specific general plans and ordinances related to historic preservation and archaeological and cultural resources for the following cities: Carson, Compton, Cudahy, Downey, Lynwood, Paramount, Southgate, Bell, Bell Gardens, Commerce, Huntington Park, Maywood, Vernon, Glendale, and Burbank.

3.17.3 Impact Analysis

3.17.3.1 Methods

Efforts to identify TCRs included an SLF search with the NAHC and consultation with Native American tribes through AB 52. Neither a detailed records search through the South Central Coastal Information Center nor field surveys were conducted as part of this PEIR. Also, specific project locations and components are not known at this time. Location-specific impact analyses for TCRs for the proposed Project cannot be estimated in this PEIR as this analysis will depend on location of the subsequent projects, existence or absence of TCRs, and proposed activities during construction and/or operation. Therefore, this impacts analysis uses a generalized analysis approach based on the proposed project components and their potential to be located anywhere in the nine planning frames along the 51-mile-long and 2-mile-wide (1 mile on each side of the LA River) study area.

Impacts associated with Typical Projects (i.e., Common Elements and Multi-Use Trails and Access Gateways Typical Projects), the six kit of parts (KOP) categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

Consultation

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts on TCRs, and reduce the potential for delay and conflict in the environmental review process (PRC § 21083.3.2). Information may also be available from the NAHC's SLF, per PRC Section 5097.96, and the California Historical Resources Information System, administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

In compliance with AB 52, ICF contacted the NAHC on behalf of the County on March 5, 2020, requesting a search of the SLF and a listing of potentially interested Native American groups and individuals. The NAHC responded on March 12, 2020, stating that a search of the SLF was positive

for Sacred Lands or traditional cultural properties located on two U.S. Geological Survey (USGS) quadrangle vicinities in the study area.

California Native American tribes traditionally and culturally affiliated with the project area, and that have requested project notifications from the County, are required to be consulted pursuant to PRC Section 21080.3.1. Five tribes requested to the County in writing to be informed in all project notifications pursuant to PRC Section 21080.3.1. The five tribes are the Fernandeño Tataviam Band of Mission Indians, Gabrieleño Band of Mission Indians—Kizh Nation, Gabrieleño/Tongva San Gabriel Band of Mission Indians, San Manuel Band of Mission Indians, and Tejon Indian Tribe.

On May 20, 2020, the County sent out letters via certified mail to five Native American tribes who have previously requested notification under AB 52 to seek recommendations or concerns regarding the proposed Project. Letters were sent to Mr. Jairo Avila, Tribal Historic and Cultural Preservation Officer of the Fernandeño Tataviam Band of Mission Indians; Mr. Andrew Salas, Chairman of the Gabrieleño Band of Mission Indians—Kizh Nation; Mr. Anthony Morales, Chief of the Gabrieleño/Tongva San Gabriel Band of Mission Indians; Mr. Lee Clauss, representing the San Manuel Band of Mission Indians; and Mr. Octavio Escobedo, Tribal Chair of the Tejon Indian Tribe.

To date, written responses have been received from Alexandria McCleary, Tribal Archaeologist, who responded for the San Manuel Band of Mission Indians; Mr. Jairo Avila, Tribal and Historic and Cultural Preservation Officer of the Fernandeño Tataviam Band of Mission Indians; and Chairman Andrew Salas of the Gabrieleño Band of Mission Indians—Kizh Nation. The San Manuel Band of Mission Indians declined consultation in an email dated June 10, 2020, and the Fernandeño Tataviam Band of Mission Indians and Gabrieleño Band of Mission Indians—Kizh Nation have requested formal consultation.

The County formally initiated consultation with the Fernandeño Tataviam Band of Mission Indians via a teleconference on July 8, 2020. At that confidential meeting, the County and the Tribal representatives discussed the proposed Project and the PEIR analytical approach, as well as the Tribe's initial input on the proposed Project and suggestions for potential mitigation measures. On October 23, 2020, the County shared the draft Cultural and Tribal Cultural Resources mitigation measures, which incorporated the Tribe's input, with the Fernandeño Tataviam Band of Mission Indians Tribal representatives via e-mail for review and comment. On November 6, 2020, the Tribal representatives provided additional comments and edits to the mitigation language via e-mail. On November 30, 2020, the County responded to the Tribe's comments and incorporated requested edits via e-mail. On December 1, 2020, the Fernandeño Tataviam Band of Mission Indians agreed to conclude the Native American consultation for the Project via e-mail to Public Works from Mr. Jairo Avila. As a result of the consultation, the Tribe's comments regarding mitigation measures on the enclosed have been incorporated into the PEIR. A letter was sent via certified mail to Mr. Jairo Avila on January 13, 2021 concluding consultation pursuant to PRC Section 21080.3.2(b) (see Appendix I of this PEIR).

The County formally initiated consultation with the Gabrieleño Band of Mission Indians—Kizh Nation via a teleconference on August 19, 2020 and continued the initial consultation meeting with the Tribe on August 26, 2020. At that confidential meeting, the County and the Tribal representatives discussed the proposed Project and the PEIR analytical approach. The Tribal representatives described the importance of the LA River to the Gabrieleño Band of Mission Indians—Kizh Nation and its ancestors. On October 22, 2020, the County shared the draft Cultural and Tribal Cultural Resources mitigation measures, which incorporated the Tribe's input on the

discussion about the mitigation measures, with the Gabrieleño Band of Mission Indians—Kizh Nation Tribal representatives via e-mail for review and comment. On December 16, 2020, the Gabrieleño Band of Mission Indians—Kizh Nation agreed to conclude the Native American consultation for the Project via e-mail to Public Works from the Kizh Administrative Specialist. A letter was sent via certified mail to Chairman Andrew Salas on January 13, 2021 concluding consultation pursuant to PRC Section 21080.3.2(b) (see Appendix I of this PEIR).

3.17.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.17(a) Cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is either of the following:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k).

b. A resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying this criteria, the lead agency will consider the significance of the resource to a California Native American tribe.

3.17.3.3 Impacts and Mitigation Measures

Impact 3.17(a), Would the proposed Project cause a substantial adverse change in the significance of a TCR defined in PRC Section 21074 as a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is either of the following:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?

b. A resource determined by the lead agency to be significant pursuant to criteria in PRC Section 5024.1(c). In applying this criteria, the lead agency will consider the significance of the resource to a California Native American tribe?

TCRs can be identified through a cultural resources records search or NAHC SLF search for Part A, above, and through Native American Consultation (per Part B, above).

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction of the Typical Projects would involve site disturbance, movement of construction equipment, and import and export of materials. Construction would occur along the LA River right-of-way. It would include an area of approximately 3 acres (for Common Elements) or up to 40 acres (for the Multi-use Trails and Access Gateways) and would last about 10 to 20 months, respectively. Ground disturbance would include site clearing and excavation. Excavation would be a maximum depth of 7 feet below ground surface (bgs) to construct pavilions and install footings for bollards, lighting, or fences and generally 2 feet bgs for trails. Interpretive and environmental graphics that could include Native American place names and tradition descriptions, information concerning the natural history of the river alignment, and cultural history of the alignment vicinities and communities are included in the recommended environmental graphic *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B). If implemented, these graphics would be placed at strategic access points to the study area.

An SLF search conducted through the NAHC on March 12, 2020 identified positive results on two USGS quadrangles that intersect Frames 5, 6, and 9 within the study area. Therefore, surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be TCRs have been identified in Frames 5, 6 and 9. TCRs that have not yet been identified could be present within all nine frames, and construction of the Typical Projects could result in the potential to cause a substantial adverse change in the significance of a TCR, if present. In addition to CRHP-eligible TCRs, TCRs can also be determined through consultation between the lead agency and a tribe (TCRs identified under PRC Section 5024.1(c) are strictly determined through consultation between the lead agency and California Native American tribe). If no TCRs are identified through consultation, then nothing further would be required. If, however, a TCR is identified by the lead agency in the study area through the consultation process, and if construction could result in a substantial adverse change in the significance of the TCR, then the impact would be considered significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described in Section 3.4, *Cultural Resources*.

Mitigation Measure CR-1a. Conduct Cultural Resources Assessment for Historical/Built Archaeological, and Tribal Cultural Resources to Determine Presence of Resources.

Mitigation Measure CR-1b. Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources and Implement Findings.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

Mitigation Measure CR-4b: Avoid Significant Archaeological Sites or TCRs through Establishment of Environmentally Sensitive Areas.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

In addition, Apply the following mitigation measures.

Mitigation Measure TCR-1: Conduct Native American Monitoring.

If determined necessary via consultation, in addition to Mitigation Measure CR-4c Native American monitoring requirements, Native American monitoring will be conducted by the tribe that identified the TCR through AB 52 consultation. Native American monitors will be present during construction activities in native sediments and will observe all ground-disturbing activities conducted within 100 feet of the TCR. Should unanticipated discoveries be made during Native American monitoring, then the unanticipated discoveries protocol described in Mitigation Measure CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consulting with the lead agency and Native American representatives (if the find is Native American in origin), developing a mitigation plan, and potentially developing and implementing a data recovery plan. In the event of an unanticipated discovery of human remains, the monitor will follow Section 7050.5 of the Health and Safety Code (Mitigation Measure CR-7), described in Section 3.4.2.2 of the PEIR.

Significance after Required Mitigation

Although implementation of the mitigation measures would help reduce the impacts, the specific locations of Typical Projects and presence of TCRs as well as the Typical Projects' effects on TCRs are not known at this time. Therefore, it is possible that impacts, based on the specific resource, could remain significant. Impacts would be significant and unavoidable.

Operations

The Common Elements and Multi-Use Trails and Access Gateways Typical Projects could include new single-story structures—such as pavilions, cafes, and restrooms—or lower-profile infrastructure—such as multi-use trails, signs, lighting, benches, and other associated recreational facilities—that could interfere with or otherwise adversely affect the setting or viewshed of a nearby TCR, which could indirectly affect the integrity of the resource. Operational elements, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users in new facilities associated with a Typical Project near a potentially significant TCR could directly affect TCRs through unanticipated destruction of in situ TCRs, destruction or removal from looting, or other negative impacts on the integrity of the resource.

These activities could result in the exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded TCRs.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure TCR-2: Avoid TCRs during Project Operations through Establishment of Environmentally Sensitive Areas.

If physical portions of previously identified TCRs are left in place after project construction, then Environmentally Sensitive Areas will be established to protect any remaining physical portions of the TCR from further direct or indirect affects that may result as part of project operations. The establishment of Environmentally Sensitive Areas will be conducted in coordination and consultation with Native American tribes.

Mitigation Measure TCR-3: Temporarily Halt Ground Disturbance for Unanticipated TCR Discoveries during Operations.

If TCRs are discovered inadvertently during project operations, work will be temporarily halted in the area and within 100 feet of the find. The implementing agency will notify the consulting Native American tribe to assess the find and develop the appropriate treatment measures in consultation with the implementing agency and Native American tribes.

Significance after Required Mitigation

Similar to construction-related impacts on TCRs, although implementation of the mitigation measures could help reduce the impacts, the specific locations of projects and presence of TCRs, as well as the projects' effects on TCRs, are not known at this time. Therefore, it is possible that impacts could remain significant. Impacts would be significant and unavoidable.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Each of the KOP categories is analyzed separately where differences in impacts exist; KOP categories with similar impacts are grouped together. Appendix E presents a summary table of potential construction and operations impacts under each KOP category.

KOP Categories 1 through 6

Construction

As with the Typical Projects discussed above, the six KOP categories would be implemented over a period of 25 years, depending on factors such as availability of funding and necessary approvals. The construction activities proposed under all the KOP categories could result in significant impacts on TCRs. Impacts may be direct through proposed ground disturbance, which could include site clearing and excavation that may result in adverse effects on surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be TCRs. Impacts on TCRs could also be indirect and would include potential significant changes to the setting or viewshed of a TCR, which

could include construction of new structures, recreational facilities, and elements that could indirectly affect the integrity of the resource.

The NAHC identified positive results on two USGS quadrangles that intersect the study area. These occur in Frames 5, 6, and 9. Other sensitive areas may be identified through ongoing consultation in any frame. TCRs determined to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1 are resources determined by the lead agency, in its discretion, and supported by substantial evidence. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described in Section 3.4, *Cultural Resources*.

Mitigation Measure CR-1a: Conduct Cultural Resources Assessment for Historical/Built Archaeological, and Tribal Cultural Resources to Determine Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources and Implement Findings.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

Mitigation Measure CR-4b: Avoid Significant Archaeological or TCRs Sites through Establishment of Environmentally Sensitive Areas.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Apply the following mitigation measure, which is described above.

Mitigation Measure TCR-1: Conduct Native American Monitoring.

Significance after Required Mitigation

Although implementation of the mitigation measures could help reduce the impacts, the specific locations of subsequent projects under the six KOP categories, the presence of TCRs, and the subsequent projects' effects on TCRs are not known at this time. Therefore, it is possible that impacts would remain significant. Therefore, impacts would be significant and unavoidable.

Operations

Potential impacts from operation of the design components under the KOP categories would vary depending on the specific design component and its intended function, as well as on the specific location, including in-channel or off-channel. The specific location and design for these components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. As described in Chapter 2*, Project Description,* and under the construction section above, the KOP categories include a variety of construction scenarios that include ground-disturbing activities. The operation of the KOP components could result in significant impacts on TCRs, including increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and potential for looting. These activities could result in the exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded TCRs. Other KOP operations—including off-channel water features and floodplain storage and wetlands—could expose previously undocumented surfaces or buried TCRs through stream or off-channel degradation processes and water erosional processes related to floodplain storage activities.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TCR-2: Avoid TCRs during Project Operations through Establishment of Environmentally Sensitive Areas.

Mitigation Measure TCR-3: Temporarily Halt Ground Disturbance for Unanticipated TCR Discoveries during Operations.

Significance after Required Mitigation

Although implementation of the mitigation measures could help reduce the impacts, the specific locations of subsequent projects under the six KOP categories and presence of TCRs, as well as the subsequent projects' effects on TCRs, are not known at this time. Therefore, it is possible that the impacts would remain significant. Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year horizon period to meet the proposed Project's nine objectives. These would include the Typical Projects that would be implemented in specific spacing along the river, and subsequent projects composed of the KOP multi-benefit design components. These elements together comprise the entirety of the *2020 LA River Master Plan*. As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/ 5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large project (150+ acres/10+ miles in size).

Construction

As for the KOP categories, construction of all 107 projects under the *2020 LA River Master Plan* would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in a substantial adverse change in the significance of the TCR.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described in Section 3.4, *Cultural Resources*.

Mitigation Measure CR-1a: Conduct Cultural Resources Assessment for Historical/Built Archaeological, and Tribal Cultural Resources to Determine Presence of Resources.

Mitigation Measure CR-1b: Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources and Implement Findings.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

Mitigation Measure CR-4b: Avoid Significant Archaeological or TCRs Sites through Establishment of Environmentally Sensitive Areas.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan to Evaluate Potentially Significant Archaeological Discoveries.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

Apply the following mitigation measure, which is described above.

Mitigation Measure TCR-1: Conduct Native American Monitoring.

Significance after Required Mitigation

Although implementation of the mitigation measures would help reduce the impacts, the specific locations of projects and presence of significant TCRs as well as the projects' effects on the resources are not known at this time. Therefore, it is possible that impacts, based on the specific resource, could remain significant. Impacts would be significant and unavoidable.

Operations

As for the KOP categories, potential impacts from operation of the design components all 107 projects under the *2020 LA River Master Plan* could result in increased human activity, landscape use, and channel erosion, which could result in significant impacts on human remains. Operations activities related to the 107 projects could introduce or increase public use activities such as

increased erosion along proposed trail alignments, facilities, and recreational areas. Additionally, introducing recreationists and trail users near new facilities associated with the projects near TCRs could directly affect TCRs through exposure and removal from unanticipated disturbance, increased looting potential due to increased use, or other negative impacts on the integrity of the resource.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure TCR-2: Avoid TCRs during Project Operations through Establishment of Environmentally Sensitive Areas.

Mitigation Measure TCR-3: Temporarily Halt Ground Disturbance for Unanticipated TCR Discoveries during Operations.

Significance after Required Mitigation

Although implementation of the mitigation measures would help reduce the impacts, the specific locations of projects and presence of significant historical resources as well as the projects' effects on the resources are not known at this time. Therefore, it is possible that impacts, based on the specific resource, could remain significant. Impacts would be significant and unavoidable.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on TCRs is the greater Los Angeles region. This area covers the traditional ethnographic territory of the Gabrieleño (and to a lesser extent the portions of the Tataviam and Chumash territories that overlap). A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on TCRs, if, in combination with other projects within the greater Los Angeles region, it would cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is either of the following: listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k); or a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying this criteria, the lead agency will consider the significance of the resource to a California Native American tribe.

Cumulative Condition

TCRs in the region are protected by state and regional laws and projects are required to comply with related federal, state, and local regulations. City, County, and regional goals and policies also aim to preserve and protect tribal cultural resources to the extent practicable. Even with regulations in

place, individual tribal cultural resources could still be affected or degraded (e.g., from demolition, destruction, alteration, structural relocation) as a result of new private or public development or redevelopment and implementation of land use strategies under cumulative plans and projects. Cumulative growth and development within the region have the potential to result in the loss or disturbance of historical and archaeological resources, including TCRs. Although these potential impacts are normally addressed on a project-specific basis through the formal consultation process, some projects are unable to fully avoid or fully mitigate potential impacts. Impacts related to the loss and/or disturbance of known or unknown archaeological sites (including TCRs) within the greater Los Angeles area, such that the significance of such resources would be materially impaired, are considered to be cumulatively significant due to the large number of TCRs within the greater Los Angeles region and the likelihood of yielding these resources. Therefore, a cumulative condition exists for tribal cultural resources.

Contribution of the Project to Cumulative Impacts

TCRs may be found throughout the County, and it is difficult to document TCRs with precise locations. Construction activities associated with trenching and deeper excavations, as opposed to more surficial disturbances, have the potential to uncover or disturb TCRs. The *2020 LA River Master Plan* would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in a substantial adverse change in the significance of the TCR. Although implementation of the mitigation measures (Mitigation Measures CR-1a-b, CR-4a-d, CR-5, TCR-1, TCR-2, and TCR-3) would help reduce the impacts, considering the existing significant cumulative impacts for TCRs in the greater Los Angeles region, it would be reasonable to infer that the Project could result in localized significant impacts on TCRs. Therefore, the Project's contribution to cumulative tribal cultural resources impacts would be considerable.

Section 3.18
Utilities/Service Systems

3.18.1 Introduction

This section describes the geographic and regulatory setting for the existing utility systems that serve the project study area including water supply, wastewater conveyance and treatment, stormwater conveyance, solid waste generation and disposal, and electrical/natural gas service and availability. This section also identifies the impacts on those systems that could occur due to implementation of the *2020 LA River Master Plan* and mitigation measures that would reduce or avoid any significant impacts, when feasible.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.18.2 Geographic Setting

3.18.2.1 Water

Statewide Sources

State Water Project

The State Water Project (SWP) is operated by the California Department of Water Resources and is an integral part of the effort to ensure business and industry, urban and suburban residents, and farmers throughout a majority of California have sufficient water. The SWP was designed to deliver nearly 4.2 million acre-feet (AF) of water per year (AFY). The SWP is the largest State-built, multipurpose, user-financed water project in the United States. Nearly two-thirds of residents in California receive at least part of their water from the SWP, with approximately 70 percent of the SWP's contracted water supply going to urban users and 30 percent to agricultural users. The primary purpose of the SWP is to divert and store water during wet periods in Northern and Central California and distribute it to areas of need in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California. The availability of SWP supplies can be highly variable. A wet water year may be followed by a dry or critically dry year. Ongoing regulatory restrictions, such as those imposed by federal biological opinions on the effects of SWP

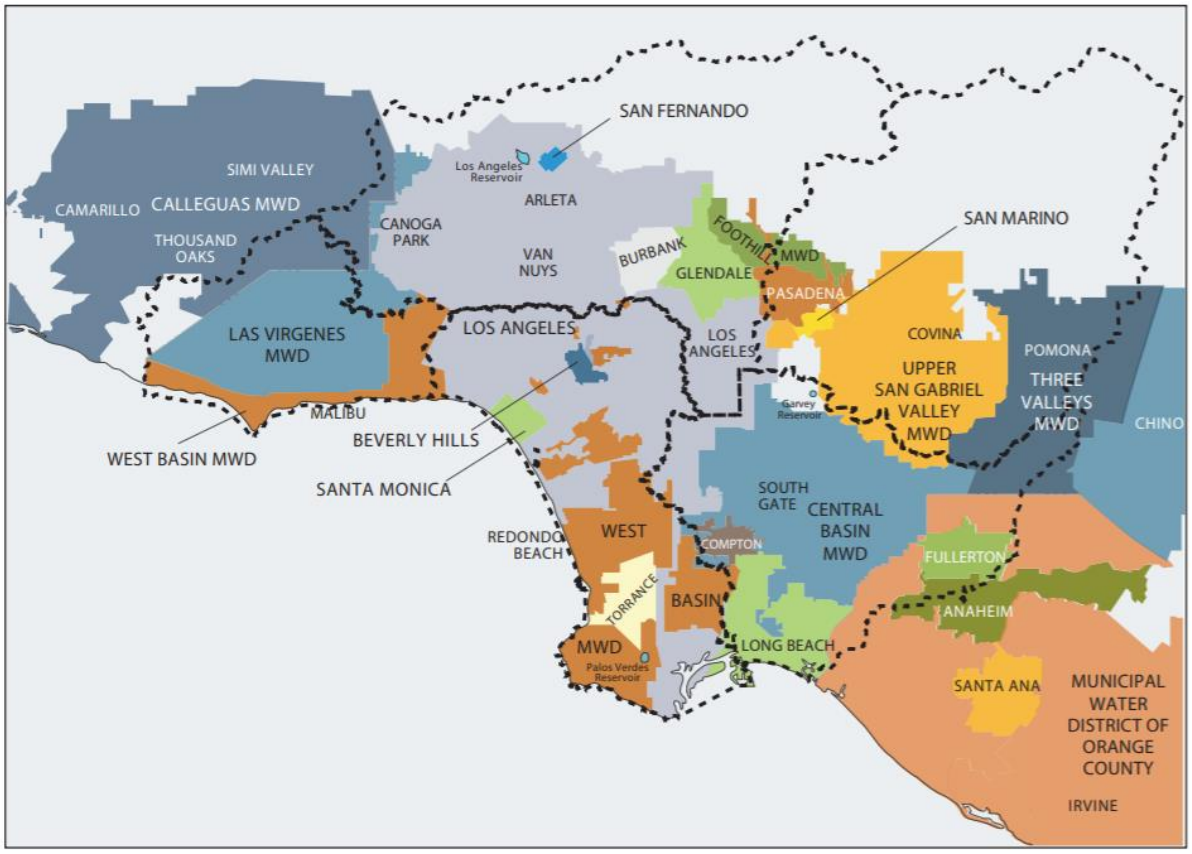
and the federal Central Valley Project operations on certain marine life, also contribute to the challenge of determining the SWP's water delivery reliability.

Colorado River Aqueduct

Stretching 242 miles from the Colorado River on the California-Arizona border to its final holding reservoir near Riverside, California, the Colorado River Aqueduct consists of more than 90 miles of tunnels, nearly 55 miles of cut-and-cover conduit, almost 30 miles of siphons, and five pumping stations. The Colorado River Aqueduct is operated by the Metropolitan Water District of Southern California (MWD) and supplies approximately 1.2 million AFY—more than a billion gallons a day. It is Southern California's primary source of drinking water.

Regional Suppliers

Figure 3.18-1 illustrates the various retail and wholesale water suppliers in the study area, based on subregions identified in the Greater Los Angeles County Integrated Regional Water Management Plan (IRWMP).



Source: GLAC-IRWMP 2014.

Figure 3.18-1. Regional Water Providers

Metropolitan Water District of Southern California

MWD was authorized by the California Legislature in 1928 to advance a regional approach to water supply in Southern California. MWD's initial mission was to construct the 242-mile Colorado River

Aqueduct to its service area on the Southern California coastal plain. MWD's service area had an assessed property valuation of approximately $2 billion at the time. As of 2015, MWD serves a six-county service area with a property valuation of approximately $2 trillion. MWD supplies water from both the Colorado River and Northern California via the SWP while investing in a variety of storage, local supply, and conservation initiatives.

MWD publishes an Integrated Water Resources Plan (IWRP), a long-term strategy for water supply management, approximately every 5 years. The 2015 IWRP includes projected supplies and demands through year 2040. Table 3.18-1 summarizes average targeted supplies and Table 3.18-2 summarizes projected local supplies through 2040 in 5-year increments by project type. Table 3.18-3 summarizes the projected demands for MWD by type of use. Conservation targets outlined in the 2015 IWRP are expected to reduce the demand for potable water over the next 20 years.

Table 3.18-1. 2015 IWRP Update Total Level of Average-Year Supply Targeted (Acre-Feet)

	2020	2025	2030	2035	2040
Retail Demands Before Conservation	5,219,000	5,393,000	5,533,000	5,663,000	5,792,000
Total Conservation Target	1,096,000	1,197,000	1,310,000	1,403,000	1,519,000
Retail Demands After Conservation	4,123,000	4,196,000	4,223,000	4,260,000	4,273,000
Minimum CRA Diversion Target	900,000	900,000	900,000	900,000	900,000
Average Year SWP Target	984,000	984,000	1,213,000	1,213,000	1,213,000
Total Local Supply Target	2,307,000	2,356,000	2,386,000	2,408,000	2,426,000
Total Supply Reliability Target	4,191,000	4,240,000	4,499,000	4,521,000	4,539,000

Source: MWD 2016.
CRA = Colorado River Aqueduct

Table 3.18-2. Projections of Existing and Under-Construction Local Supplies by Project Type (Acre-Feet)

Local Supply	2020	2025	2030	2035	2040
Groundwater Production	1,290,000	1,288,000	1,288,000	1,288,000	1,289,000
Surface Production	110,000	110,000	110,000	110,000	110,000
Los Angeles Aqueduct	261,000	264,000	264,000	266,000	268,000
Seawater Desalination	51,000	51,000	51,000	51,000	51,000
Groundwater Recovery	143,000	157,000	163,000	165,000	167,000
Recycling	436,000	466,000	486,000	499,000	509,000
Other non-MWD imports	13,000	13,000	13,000	13,000	13,000
Total Local Supplies	2,304,000	2,348,000	2,374,000	2,392,000	2,406,000

Source: MWD 2016.

Table 3.18-3. Projected MWD Water Demand by Type of Use (Acre-Feet)

Demand on MWD	Year				
	2020	2025	2030	2035	2040
Consumptive Use	1,689,000	1,750,000	1,791,000	1,840,000	1,879,000
Seawater Barrier	5,000	2,000	2,000	2,000	2,000
Replenishment	166,000	166,000	166,000	166,000	166,000
Total Demand on MWD	1,859,000	1,918,000	1,959,000	2,008,000	2,048,000

Source: MWD 2016.

MWD has a basic entitlement of 550,000 AFY of Colorado River water plus a priority for up to an additional 662,000 AFY. MWD can obtain additional water under this priority when the U.S. Secretary of the Interior determines that one or both of the following conditions exists (MWD 2016):

1. The California SWP anticipates that water supplies available to MWD for the next 20 years will average between 984,000 and 1,213,000 AF.
2. The Colorado River faces current and future imbalances between water supply and demand in the Colorado River Basin due to long-term drought conditions. The long-term imbalance in future supply and demand is projected to be approximately 3.2 million AF by 2060. Between 2000 and 2015 there were only 3 years when the Colorado River flow has been above average (MWD 2016).

Approximately 40 million people rely on the Colorado River Aqueduct and its tributaries for water, with 5.5 million acres of land using Colorado River water for irrigation. Climate change will also affect future supply and demand as increasing temperatures may increase evapotranspiration from vegetation and water loss due to evaporation in reservoirs. This will reduce the supply available from the Colorado River Aqueduct, resulting in gaps between demands and supplies. The Colorado River Aqueduct projections for supply available to MWD total 966,000 AF in year 2025, decreasing incrementally to 953,000 AF in year 2040 (MWD 2016).

Local Suppliers

Various water providers serve the 17 cities and unincorporated County areas along the LA River. Some cities' utility departments operate individual services, such as Long Beach, Downey, Compton, Lynwood, Paramount, South Gate, Huntington Park, Glendale, and Burbank. Other cities utilize independent water providers such as Golden State Water Company (GSWC), California State Water Company, and several smaller providers. The City of Los Angeles is served by the Los Angeles Department of Water and Power (LADWP), which has the largest service area, at 469 square miles, managing the Los Angeles Aqueducts (LAA), local groundwater, and supplemental water purchased from MWD.

Central Basin Metropolitan Water District

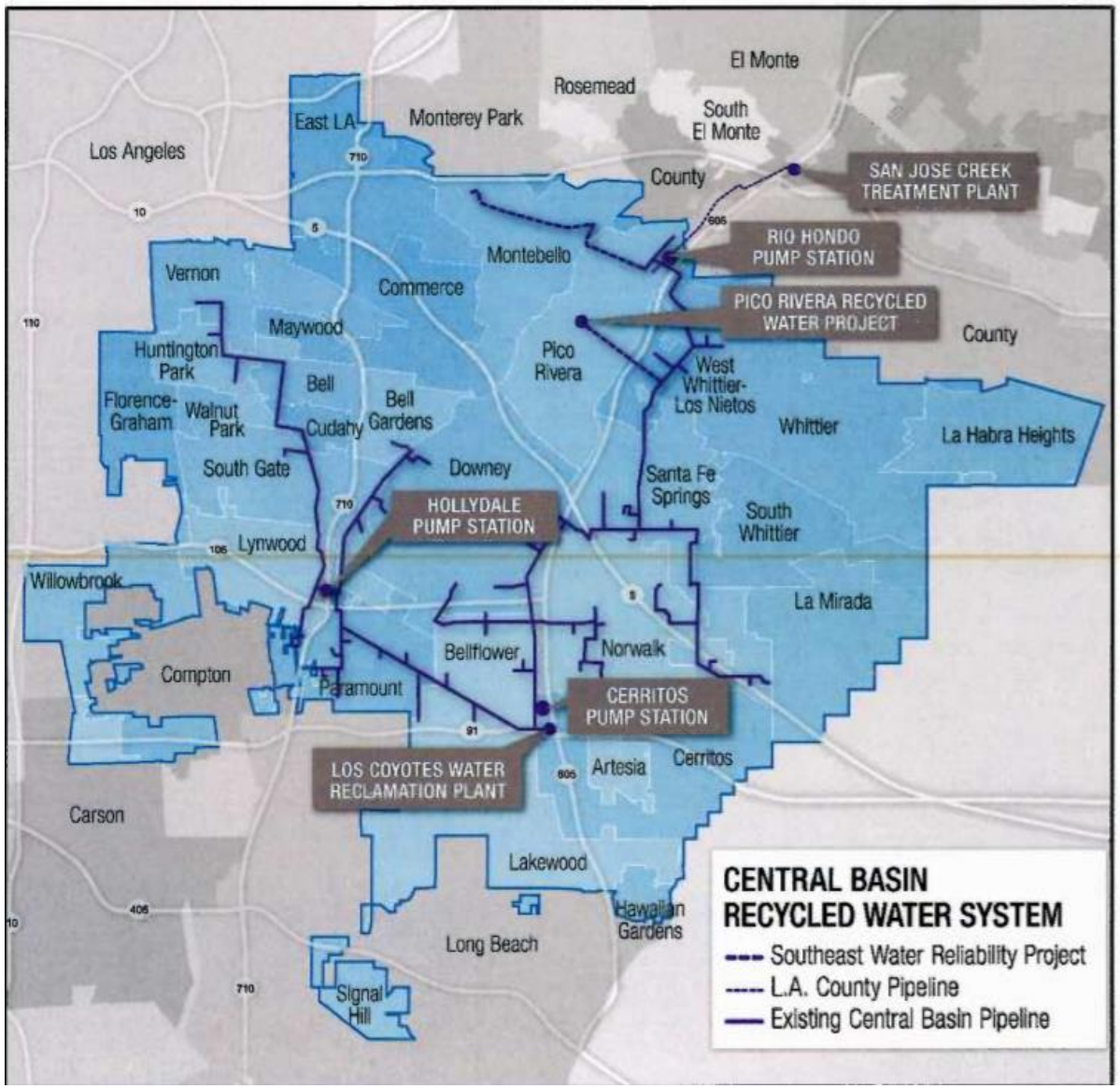
The Central Basin Metropolitan Water District (CBMWD) is one of 26 member agencies of MWD. CBMWD is a wholesale water agency that purchases its potable supplies from MWD and its recycled water from the Los Angeles County Sanitation Districts (LACSD) to distribute within and outside its service area. The CBMWD service area covers approximately 227 square miles and includes 24 cities and several unincorporated areas in southeast Los Angeles County. CBMWD supplies a population of approximately 1.6 million people according to the Southern California Association of Governments

(SCAG); however, due to the undercounting of the area's immigrant population, the population is considered to be closer to 2 million (CBMWD 2016).

Groundwater has for many years been the primary supply of water within the CBMWD service area. The Central Groundwater Basin is predominantly composed of a confined, pressurized aquifer system, with two large, unconfined, merged aquifer forebays, the Montebello Forebay and the Los Angeles Forebay. Twelve aquifers underlie the Central Groundwater Basin. The average retail agency in the CBMWD service area relies on groundwater production for 70 percent of its water supply, while some agencies rely exclusively on groundwater to meet water demands. CBMWD currently supplies approximately 30,344 AFY of imported water from MWD's Colorado River Aqueduct and the SWP to its retail agencies. Colorado River transactions are potentially available to supply additional water up to the Colorado River Aqueduct capacity of 1.25 million AF on an as-needed basis (CBMWD 2016).

Although most of the groundwater supply is extracted from the Central Groundwater Basin, there are a number of water retailers that retain groundwater rights within the Main San Gabriel Groundwater Basin (Main Basin) that extract and use groundwater sources within their Central Groundwater Basin service area. The Main Basin underlies most of the San Gabriel Valley, north of the Central Groundwater Basin. It is bounded by the San Gabriel Mountains to the north, the San Jose Hills to the east, the Puente Hills to the south, and the Raymond fault and a series of other hills to the west. Surface area of the Main Basin is approximately 167 square miles and it has a freshwater storage capacity estimated to be about 8.6 million AF. The total amount of water extracted from the Main Basin and used within the Central Groundwater Basin service area over the last 5 years averages to approximately 31,500 AFY. The total amount of groundwater produced in the Central Groundwater Basin and the Main Basin has remained fairly consistent between 2010 and 2015. This is mainly because both basins are adjudicated, so groundwater extractions in any given year are limited.

In response to increasing demands for water, limitations on imported water supplies, and the threat of drought, CBMWD developed a regional water recycling program with two distribution systems connected by a 70-mile distribution system. Through this network, CBMWD is able to distribute treated recycled water obtained through LACSD, delivering approximately 5,000 AF of recycled water annually to over 300 industrial, commercial, and landscape connections. The recycled water system is illustrated in Figure 3.18-2.



Source: City of Vernon 2010 UWMP.

Figure 3.18-2. Central Basin Recycled Water System

Groundwater production will remain consistent due to the limited amount of extractable pumping rights within the basin, while recycled water and conserved water will meet the rise in demand. MWD projects a decrease in reliance on imported water due to increased local supply and a variety of water conservation strategies. Projected water supplies are summarized in Table 3.18-4. Table 3.18-5 summarizes CBMWD's projected demands for potable and raw water through 2040.

Table 3.18-4. Projected Water Supplies CBMWD (Acre-Feet)

Water Supply	Projected Water Supply (Reasonably Available Volume)				
	2020	2025	2030	2035	2040
Purchased or Imported Water	71,770	71,770	71,770	71,770	71,770
Groundwater Production	182,300	182,300	182,300	182,300	182,300
Recycled Water	8,934	10,178	11,423	12,667	13,911
Groundwater Recharge/Montebello Forebay	44,976	47,993	50,000	50,000	50,000
Total	307,980	312,241	315,492	316,937	317,981

Source: CBMWD 2016

Table 3.18-5. CBMWD Projected Demands for Potable and Raw Water (Acre-Feet)

Use Type	Year				
	2020	2025	2030	2035	2040
Sales to other Agencies	64,354	61,560	60,133	57,957	57,661
Groundwater Production	182,300	182,300	182,300	182,300	182,300
Groundwater Recovery	3,995	4,567	5,139	5,711	5,807
Recycled Water	53,910	58,171	61,423	62,667	63,911
Total	304,559	306,598	308,995	308,635	309,679

Source: CBMWD 2016.

City of Los Angeles Department of Water and Power

As noted, LADWP has the largest service area of all of the providers serving the land uses on both sides of the LA River. Nearly 4 million people reside in the LADWP service area, which is slightly larger than the legal boundary of the City of Los Angeles. LADWP provides water service outside the city's boundary to portions of West Hollywood, Culver City, Universal City, and small parts of the County. As the largest municipal utility in the nation, LADWP delivers safe and reliable water service to over 675,000 active service connections. Primary sources of water for the LADWP service area are the LAA, local groundwater, SWP (supplied by MWD), and Colorado River Aqueduct (supplied by MWD).

During the period from 2006 to 2015, as reported in the 2015 Urban Water Management Plan (UWMP), demands have undergone a drastic reduction from a peak of 670,970 AFY in Fiscal Year (FY) 2006/07 because several periods of drought have precipitated increased conservation. The multi-year drought beginning in 2012 caused diminished supplies from the LAA, leading to heavy reliance on purchased MWD water. This drove conservation efforts that resulted in a 22 percent reduction in demand in 2014/15, as compared to 2006/07. Reliance on MWD reached a peak in FY 13/14 as a result of limitations on the LAA supply (LADWP 2015a).

The LAA system, comprising the LAA and the Second LAA, is a water conveyance system, built and operated by LADWP. LAA deliveries reached a record low of 53,500 AF during FY 2014/15. From FY 2010/11 through 2014/15, LAA deliveries supplied an average of 29 percent of the City of Los Angeles's water needs, which is substantially lower than the long-term average. In the last decade, the City of Los Angeles has been required to reallocate approximately 182,000 AFY of LAA water supply to environmental mitigation and enhancement projects, leaving approximately 43 percent of

the supply available for export to the City of Los Angeles. Complying with environmental requirements, coupled with the drought, has led to increased dependence on imported water from MWD.

As a wholesaler, MWD sells water to 26 member agencies in Southern California. LADWP is exclusively a retailer, selling water to individual residents and businesses. LADWP typically purchases MWD water to make up the deficit between demand and the availability of other city supplies. As a percentage of the city's total water supply, purchases from MWD have historically varied from 4 percent in FY 1983/84 to 75 percent in FY 2013/14, with a 5-year average of 57 percent from FY 2010/11 to 2014/15.

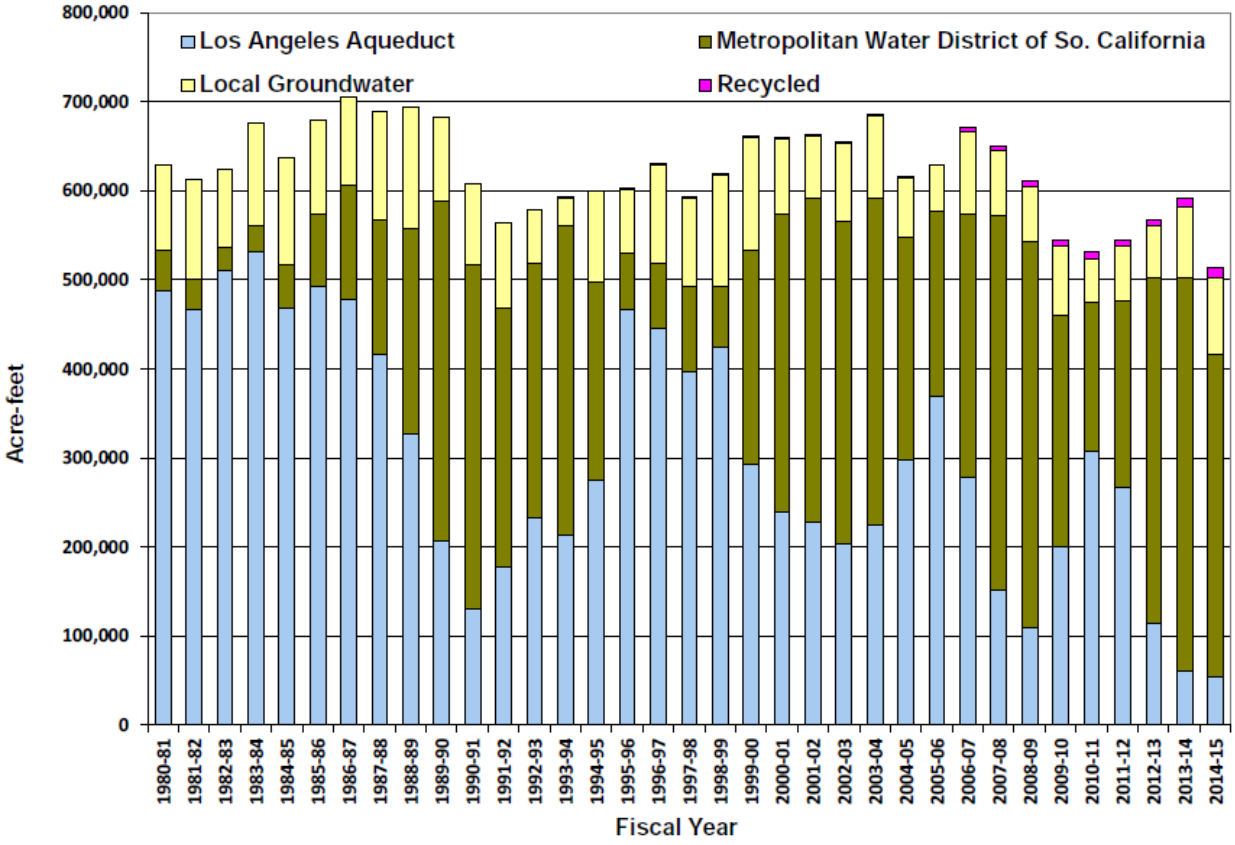
These three sources have historically delivered an adequate and reliable supply to serve the city's needs. Implementation of recycled water projects is expected to fill a larger role in Los Angeles's water supply portfolio. In 1979, LADWP began delivering recycled water to the Los Angeles County Department of Recreation and Parks for irrigation of various areas in Griffith Park. Today, LADWP serves approximately 48 locations in the city with recycled water for irrigation, industrial, and environmental uses. There are approximately 200 customer service accounts. Total recycled water produced for FY 2014/15 was 36,738 AFY. All recycled water used within the city undergoes, at a minimum, tertiary treatment and disinfection. This water is designed to meet the needs of the application and meets or exceeds local and State requirements designed to ensure public safety. Table 3.18-6 summarizes projections for use of recycled water in the LADWP service area through 2040.

Table 3.18-6. Recycled Water Use Projections 2025–2040

Category	Projected Use (AFY)			
	2025	2030	2035	2040
Municipal and Industrial Uses	29,000	39,000	42,200	45,400
Indirect Potable Reuse (Groundwater Replenishment)	30,000	30,000	30,000	30,000
Environmental Use	26,740	26,740	26,740	26,740
Total	85,740	95,740	98,940	102,140

Source: LADWP 2015a.

Section 3.9, *Hydrology and Water Quality*, contains comprehensive information concerning local groundwater sources. Between 2010 and 2015, groundwater has provided approximately 12 percent of the total water supply for Los Angeles, and since 1970 has provided up to 23 percent of supply during extended dry periods. Figure 3.18-3 illustrates the composition of the various sources of water supply between 2006 and 2015.



Source: LAWDP, 2015 UWMP.

Figure 3.18-3. City of Los Angeles Water Supply 1990–2015

The UWMP projects water demand through the year 2040. A summary of the projected net water demand for LADWP's service area through 2040 can be seen in Table 3.18-7.

Table 3.18-7. LADWP Projected Water Demand 2025 to 2040

	Year			
Demand Forecast	**2025**	**2030**	**2035**	**2040**
Total (with Passive Conservation)	644,706 AFY	652,886 AFY	661,848 AFY	675,685 AFY

Source: LADWP 2015a.

With its current water supplies, planned future water conservation, and planned future water supplies, LADWP will be able to reliably provide water to its customers through the 25-year period covered by the 2015 UWMP. LADWP's reliability projections account for water quality issues with source waters and the impacts of climate change on both supplies and demands. To meet targets established in the City of Los Angeles Executive Directive No. 5 (City of Los Angeles 2014a) and the City of Los Angeles Sustainable City pLAn (pLAn) (City of Los Angeles 2019); see Section 3.18.3, *Regulatory Setting*), LADWP will reduce water consumption through conservation, increase recycled water use (including both non-potable and indirect potable reuse), and reduce reliance on imported water from MWD.

City of Long Beach

The Long Beach Water Department (LBWD) provides water service to the entire city through a system of underground pipelines. LBWD provides both potable and reclaimed water. Reclaimed water is wastewater that has been treated to a sufficient degree to be used for specific non-potable uses, such as irrigation. Reclaimed water is conveyed in a separate system to maintain the quality of the potable water. The City of Long Beach has water rights to pump approximately 30,000 AF of groundwater per year out of the Central Groundwater Basin. This amount of groundwater is pumped using groundwater wells located throughout the city and is enough to fulfill around 60 percent of Long Beach's water needs. LBWD obtains its water supply from LBWD-operated wells and imported water from MWD. LBWD satisfies almost 42 percent of its demand by pumping its own wells and about 50 percent by importing water from MWD. The remaining 8 percent of the water supply is tertiary treated reclaimed water from the LACSD Long Beach Water Reclamation Plant (LBWRP) that is used for nondrinking purposes. The LBWRP provides approximately 21 million gallons per day (mgd) of reclaimed water.

City of Compton

The Compton Municipal Water Department provides water service to over 79,000 people through approximately 14,333 service connections, approximately 80 percent of the city. Private water companies provide service to the remaining residents. The system includes eight wells with a total pumping capacity of approximately 10 mgd, one booster pumping station, water treatment facilities, reservoirs with a total capacity of 12 mgd, and more than 156 miles of transmission and distribution water lines. To provide additional supply, Compton Municipal Water Department, as an MWD member agency, has connected to MWD's system with three service connections, and has installed emergency interconnections with adjoining water agencies. A small number of land uses in east Compton are served by Liberty Utilities Company Compton East.

Compton obtains its potable water supply from two sources: directly pumped groundwater and water purchased through MWD. According to the 2010 UWMP (City of Compton 2010), Compton currently has access to 5,780 AF of groundwater that is supplied via seven wells. Water is pumped from these wells, flows into a grid system, and then distributed using a gravity-fed system via 163 miles of 2- to 24-inch-diameter pipes. In addition, MWD supplies approximately 30–60 percent of Compton's water demand. MWD has three active interconnections to Compton. The purchased water from MWD augments the water from the wells, via the distribution system, and flows into four 3-million-gallon welded steel-plate storage tanks, for a total of 12,000 million gallons of storage. Any fluctuations in system pressure or flow deficiencies are taken up by these tanks. The Compton UWMP projects a total demand of 8,061 AF in 2025 and 8,327 AF in 2030. MWD's UWMP includes an additional demand from Compton of 3,177 AF in 2025 and 3,282 AF in 2030. Current projected water supplies for year 2030 total 10,455 AFY (City of Compton 2010).

City of Cudahy

Water supplies for the City of Cudahy are provided by the GSWC (see description below) and Tracts 180 and 349 Mutual Water Company, both of which are non-profit water providers. Neither of the tract water providers is within 1 mile of the LA River and both serve specific residential tracts in the City of Cudahy that are not within the study area.

City of Downey

Downey's water supply sources include groundwater pumped from the local Central Groundwater Basin, supplemental imported water that can be purchased from CBMWD for emergencies in the event that system demands exceed the production capacity of the city's groundwater wells, and recycled water supplies provided by CBMWD. City of Downey Water Services provides water service to an area with a current population of approximately 112,400. Downey's current water service area covers approximately 12.3 square miles encompassing the majority of the city (98 percent). The remaining portions of Downey, which are outside the study area, including the area that lies east of the San Gabriel River, south of Interstate (I-) 5 and north of Cecilia Avenue, are currently served by other water purveyors. The system comprises 60 miles of water mains, 22,500 meter connections, 1,450 fire hydrants, and 3,800 isolation valves. City of Downey's Water Services provides 18,500 AFY of water for domestic, irrigation, and fire protection uses and operates and maintains 20 deep groundwater well sites and three MWD imported water connections. Downey's projected water supplies range from 19,430 AF in 2025 to 20,439 in 2040 (City of Downey 2018).

City of Lynwood

Lynwood is approximately 4.7 square miles in size and its water system serves about 90 percent of the land within city limits (City of Lynwood 2015). The Park Water Company provides water service to the remaining 10 percent in the southeast section of the city. Lynwood's water supply sources consist of imported water from MWD via CBMWD, and groundwater produced from the Central Groundwater Basin. The City of Lynwood's Public Works Department manages the city's infrastructure and natural resources, including the Public Water Utility. The City of Lynwood has five active groundwater wells (Well Nos. 5, 8, 9, 11, and 19) located throughout the city for groundwater production. The wells range in capacity from 550 to 2,000 gallons per minute (gpm) with a total pumping capacity of 5,650 gpm. The City of Lynwood completed equipping of its Well No. 22 (capacity of 2,500 gpm) in 2015.

Lynwood also receives imported water from its connection to CBMWD, with a 12-cubic-foot-per-second connection capacity of 5,376 gpm. Although the City of Lynwood previously used its imported connection to supplement its groundwater supply, the City of Lynwood has recently decided to use imported water only on an as-needed basis. Groundwater has accounted for the majority of Lynwood's water supply, providing about 90 percent of the total water supply. The City of Lynwood distributes its water to approximately 9,000 service customers through a 90-mile network of distribution mains with pipeline sizes ranging from 4 inches to 16 inches.

The City of Lynwood owns rights to extract 5,337 AF of groundwater annually. Due to a lease from another pumper in the region, the City of Lynwood currently maintains an allowable pumping allocation of 6,037 AFY. Although the City of Lynwood does not currently have the capability to construct a wastewater recycling facility within its limits, it currently benefits from the use of recycled water in the CBMWD region, including the use of recycled water at Burke-Ham Park and by the California Department of Transportation along I-105 and I-710 in the city. Projected water demand for the city ranges from 6,639 AF in 2025 to 6,965 AF in 2035.

City of Paramount

Paramount occupies an area of approximately 4.8 square miles (2,800 acres). Paramount has three water sources: groundwater, imported water (surface), and recycled water. The City of Paramount

also has emergency mutual-aid domestic water connections with the City of Long Beach, the City of Downey, and GSWC. Currently, two water utilities serve the community: GSWC and the City of Paramount's Water Division (City of Paramount 2020). The City of Paramount's Water Division services the majority of the population. Two northern portions of the city, above I-105, are serviced by Southern California Water Company. Paramount utilizes both potable and recycled water. Paramount obtains potable water from two sources: directly pumped groundwater and imported water purchased through CBMWD, which in turn receives the water through MWD. In addition to distributing potable water, the City of Paramount also has a recycled water system that provided 338 AF of recycled water in 2015. The City of Paramount provided a total of 6,396 AF of water to a population of approximately 55,302 in 2015.

Paramount's current water system includes three wells; two imported water connections; approximately 130 miles of water transmission and distribution mains; and appurtenant valves, hydrants, and equipment. Currently, the City of Paramount does not have any storage reservoirs, although the groundwater basin acts as ground storage for the city. Paramount was allocated an annual pumping right for the Central Groundwater Basin, which currently stands at 5,883 AFY plus 20 percent carryover rights. Well No. 13, Well No. 14, and Well No. 15 are the City of Paramount's three existing groundwater wells, with a pumping capacity of 10,368,000 gallons per day. Projected total water demands range from 7,562 AF in 2020 to 8,080 in 2035 (no projections available for 2040). The sources of water are expected to remain substantially similar between 2020 and 2035, totaling 7,912 AF in 2020 to 7,938 AF from all sources (City of Paramount 2015).

City of South Gate

The City of South Gate Water Division is responsible for the maintenance and operation of the city's water system and services over 16,500 connections to most of South Gate (City of South Gate 2020). Water production for South Gate is equal to the groundwater withdrawn by city wells plus any imported water purchased from MWD and interconnections with adjacent cities. Currently, South Gate's potable water demand is met by seven active wells and approximately 124 miles of distribution pipeline. The system also includes two ground-level tanks with a capacity of 2.5 million gallons each and two with a capacity of 1.66 million gallons each, as well as the Hawkins Reservoir Pumping Plant, including four booster pumps that can provide 2,800 gpm each (City of South Gate 2015). Since 2015, the City of South Gate has been pursuing an aggressive capital improvement program estimated at $13 million. The facilities under construction include drilling of new Well No. 29 at the intersection of Santa Fe Avenue and Ardmore Avenue, constructing a new 1.8-million-gallon reservoir at Well No. 28 site, and installing approximately 5,100 feet of new 8- to 12-inch ductile water mains in Ardmore Avenue and San Luis Avenue to replace aging cast iron mains.

Cities of Bell and Bell Gardens

GSWC obtains water from CBMWD for the Bell and Bell Gardens water system. Water purchased from CBMWD is delivered to the Bell and Bell Gardens system through MWD's CB-3 connection, which has a design capacity of 3,366 gpm (5,432 AFY). Between 2011 and 2015, purchased water quantities ranged from 8 AF to 155 AF. The Bell and Bell Gardens system is supplied by five active GSWC-owned wells in the Central Subbasin of the Coastal Plain of Los Angeles County Groundwater Basin. A sixth well is currently offline. Existing well capacity is 11,220 AFY.

Demand for water for all land use types was 4,631 AF in 2015. Demands for water, including recycled water, are projected to range from 5,674 AF in 2020 to 5,878 AF in 2040. GSWC's water

supply is projected to increase by approximately 23 percent from 2015 to 2040 to meet projected water demands, which will be met by groundwater, the expected implementation of conjunctive use groundwater storage programs, and imported water. Projected water supplies match the projected water demands described in the 2015 UWMP (GSWC 2015).

For 2015, imported water made up less than 1 percent of the available supply, whereas approximately 97 percent of the supply was from GSWC groundwater pumping and 2 percent was provided by recycled water sources. In future years, the imported water supply may be as great as 20 percent or higher depending on groundwater allocations, the availability to lease additional groundwater rights, and groundwater quality considerations. Therefore, GSWC is actively pursuing the availability of a reliable, cost-effective supply of imported water through the implementation of conjunctive use storage programs in the Central Groundwater Basin. Storage programs could utilize water purchased from CBMWD or water purchased from other suppliers. GSWC's supply is expected to be highly reliable through 2040. This reliability is a result of adjudicated groundwater rights, the availability of leased groundwater, benefits of conjunctive use storage, water supplies available from supplemental suppliers, conservation-derived supply, and availability of recycled water (GSWC 2015).

City of Huntington Park

The City of Huntington Park Water-Sewer Division is responsible for providing potable water to approximately 6,600 service connections. Huntington Park is served by four water companies that obtain their supply of water from two sources: groundwater from local wells and water supplied by MWD. The water companies include Maywood Mutual Water Company, serving the northeastern portion of the city; Walnut Park Mutual Water Company, serving the odd-numbered side of Walnut Street; GSWC, serving the western portion of the city; and Severn Trent Services, the city's main provider of water, operating multiple wells in Huntington Park, including well numbers 12, 14, and 17. Historical data indicate the Main Basin and Central Groundwater Basin have been well managed for the full period of the adjudications, resulting in a stable and reliable water supply. There are no contemplated basin management changes, other than increasing direct use of recycled water and the planned use of recycled water for groundwater replenishment in the Main Basin to reduce the need to import water from other regions. Therefore, the groundwater supplies are deemed reliable (City of Huntington Park 2017). The City of Huntington Park has no UWMP to provide information on projected supplies and demands.

City of Vernon

The City of Vernon is a member agency of CBMWD and purchases imported water as needed. The City of Vernon draws its groundwater supply from the Central Groundwater Basin. This source annually supplies approximately 200,000 AF of potable water to the area south of the Whittier Narrows to the Pacific Ocean and from the Orange County line to the City of Compton. The City of Vernon has an Allowable Pumping Allocation from the Central Groundwater Basin of 7,539 AFY.

Most of the geographical area of Vernon is supplied by the City of Vernon's Water Department. The California Water Service Company (East Los Angeles District, Commerce System) serves some of the northeastern portion of the city, and a small portion of southeastern Vernon is serviced by the Maywood Mutual Water Company No. 3. The City of Vernon has no surface water supply and does not divert stormwater for capture purposes. The City of Vernon estimates an average year supply and demand of 10,860 AFY between years 2020 and 2040 and the estimated sources of supply are

equal to the demand, with no surplus. Most of the supply will come from Central Groundwater Basin rights (7,539 AFY), with contributions from groundwater leases, stored water, replenished water, and imported water. The City of Vernon expects the supply and demand to remain relatively stable even across multiple dry years (City of Vernon 2016).

City of Glendale

Glendale spans over 31 square miles and is home to nearly 200,000 people. Glendale's potable and recycled water service area closely coincides with the city boundary, bordered by the City of Los Angeles to the north and south and the City of Burbank to the west. On the eastern side, Glendale's service area is bounded by Crescenta Valley Water District, La Cañada Irrigation District, Valley Water Company, and the City of Pasadena. A portion of the northern side of the Glendale boundary is served by both the City of Glendale and Crescenta Valley Water District. Only the City of Glendale supplies water to the land uses 1 mile on either side of the LA River.

Currently, the potable water facilities that provide service to meet existing demands within Glendale's service area includes three MWD imported water connections, 14 active wells, 28 water storage reservoirs and tanks, 26 booster pumping stations, six pressure-reducing stations, and approximately 380 miles of pipeline. Additionally, the City of Glendale owns and operates two water treatment plants that remove contaminants from local groundwater.

Imported water from MWD accounts for the majority of Glendale's potable supplies at about 69 percent of the total supplies between 2005 and 2014. The City of Glendale's Tier 1 limit from MWD is approximately 26,222 AFY. In 2015, the City of Glendale purchased approximately 14,726 AF of water from MWD. The City of Glendale's potable water distribution system delivers water from three imported water connections: MWD G-1, MWD G-2, and MWD G-3.

Glendale receives groundwater from 14 groundwater wells that pump water from the Verdugo and San Fernando Basins. Groundwater wells in the Verdugo Basin include the Foothill Well, Glorietta Wells, and Verdugo Wells. Groundwater wells in the San Fernando Basin include the Glendale North Operable Unit Wells and Glendale South Operable Unit Wells. The City of Glendale's well capacity is approximately 7,400 gpm. The total storage capacity of the San Fernando Basin is calculated at 3.67 million AF, while the storage capacity of the Verdugo Basin is approximately 160,000 AF. The City of Glendale has rights to extract 3,867 AFY and has been actively trying to identify possible new water well sites to increase its groundwater production capacity from this basin.

In 2014, approximately 5 percent and 23 percent of Glendale's supply was obtained from the Verdugo Basin and San Fernando Basin, respectively. Despite reduced production in the Verdugo Basin due to ongoing drought conditions, the City of Glendale was able to meet demands as a member agency of MWD due to MWD's investments in dry-year storage facilities and capacity.

The City of Glendale is entitled to 50 percent of the effluent from the Los Angeles – Glendale Water Reclamation Plant (LAGWRP), which is a 20-mgd facility co-owned by the City of Glendale and the City of Los Angeles. Its current level of treatment is Title 22 (tertiary) with nitrogen removal (NDN). Recycled water from LAGWRP is used for landscape irrigation to cemeteries, schools, parks, and high rises, and for dual plumbing in several buildings and facilities. In 2014, the City of Glendale served recycled water to 75 service connections with a combined demand of nearly 1,721 AF or near 1.5 mgd. Glendale's existing recycled water system consists of approximately 22 miles of purple pipe, five storage facilities, and six pump stations. Glendale has a 100-year water supply for all existing and planned developments within its water service area and is capable of building the

necessary distribution and treatment facilities to deliver high-quality water to a growing community (City of Glendale 2018).

Projected water supply from all sources totals 39,540 AF for all 5-year increments from 2020 to 2040.

Projected water demand for Glendale through year 2040 is summarized in Table 3.18-8.

Table 3.18-8. Projected Water Demand (City of Glendale) – Acre-Feet

Sector	2020	2025	2030	2035	2040
Water Service Area Population	199,606	202,574	205,586	208,643	211,745
Demands					
Single-Family Residential	11,555	11,727	11,901	12,078	12,257
Multi-Family Residential	10,991	11,155	11,320	11,489	11,660
Commercial/Institutional	4,227	4,290	4,354	4,419	4,484
Industrial	705	715	726	736	747
Landscape Irrigation	648	658	668	678	688
Other	56	57	58	59	60
Total	**28,182**	**28,601**	**29,027**	**29,458**	**29,896**

Source: City of Glendale 2016.

City of Burbank

The City of Burbank does not own any native groundwater rights and extracts groundwater supplies under terms outlined in the 1979 water rights Judgment for the San Fernando Basin. Burbank Water and Power (BWP) provides potable and recycled water to customers within the city. BWP's potable water system includes approximately 286 miles of pipelines ranging in size from 30 inches to 1.5 inches in diameter, 35 booster pumps, 21 tanks and reservoirs, eight wells, five MWD connections, and over 26,000 service connections. The water distribution system consists of three major pressure zones and eight smaller hillside zones. The three largest pressure zones are denoted Zones 1, 2, and 3. Zone 1 encompasses approximately 90 percent of the total Burbank land area and represents 88 percent of the total city demand.

The potable system's tanks and reservoirs range in capacity from 13,500 gallons to 25 million gallons. The combined storage capability of all the reservoirs is approximately 60 million gallons. The storage capacity of Zone 1 is approximately 50 million gallons, 83 percent of the total system storage.

The annual potable water sales for 2011 through 2015 averaged 5,650 million gallons or 17,339 AF. Over the same 5 years, the average water demand was 15.9 mgd. Annual maximum day demands averaged 21.9 mgd. The pump station at the Burbank Water Reclamation Plant (BWRP) distributes reclaimed water to users around Burbank. Of the 330 million gallons of reclaimed water distributed in 2019, 50 percent was used for the cooling tower at the BWP steam power plant, 30 percent was used at Debell golf course, 10 percent was used at the City of Burbank Landfill, and 10 percent went to other uses.

Future water demands are summarized in Table 3.18-9. Table 3.18-10 summarizes the total MWD demand for the period from 2020 to 2040.

Table 3.18-9. Projected Water Demands (City of Burbank) – Acre-Feet

	Year				
Water Use Sector	**2020**	**2025**	**2030**	**2035**	**2040**
Single-Family Residential	8,481	8,061	7,817	7,543	7,412
Multi-Family Residential	5,011	4,924	4,8905	4,629	4,640
Commercial/Industrial/Institutional/ Governmental	4,930	4,938	4,939	4,884	4,818
Total	18,422	17,923	17,561	17,056	16,870

Source: BWP 2015.

Table 3.18-10. Projected MWD Demands (City of Burbank) – Acre-Feet

	Year				
Wholesaler	**2020**	**2025**	**2030**	**2035**	**2040**
MWD Treated Potable	7,894	7,383	7,011	6,493	6,303
MWD Untreated Groundwater Replenishment	6,300	4,700	4,800	4,900	4,900
Total	14,194	12,083	11,811	11,393	11,203

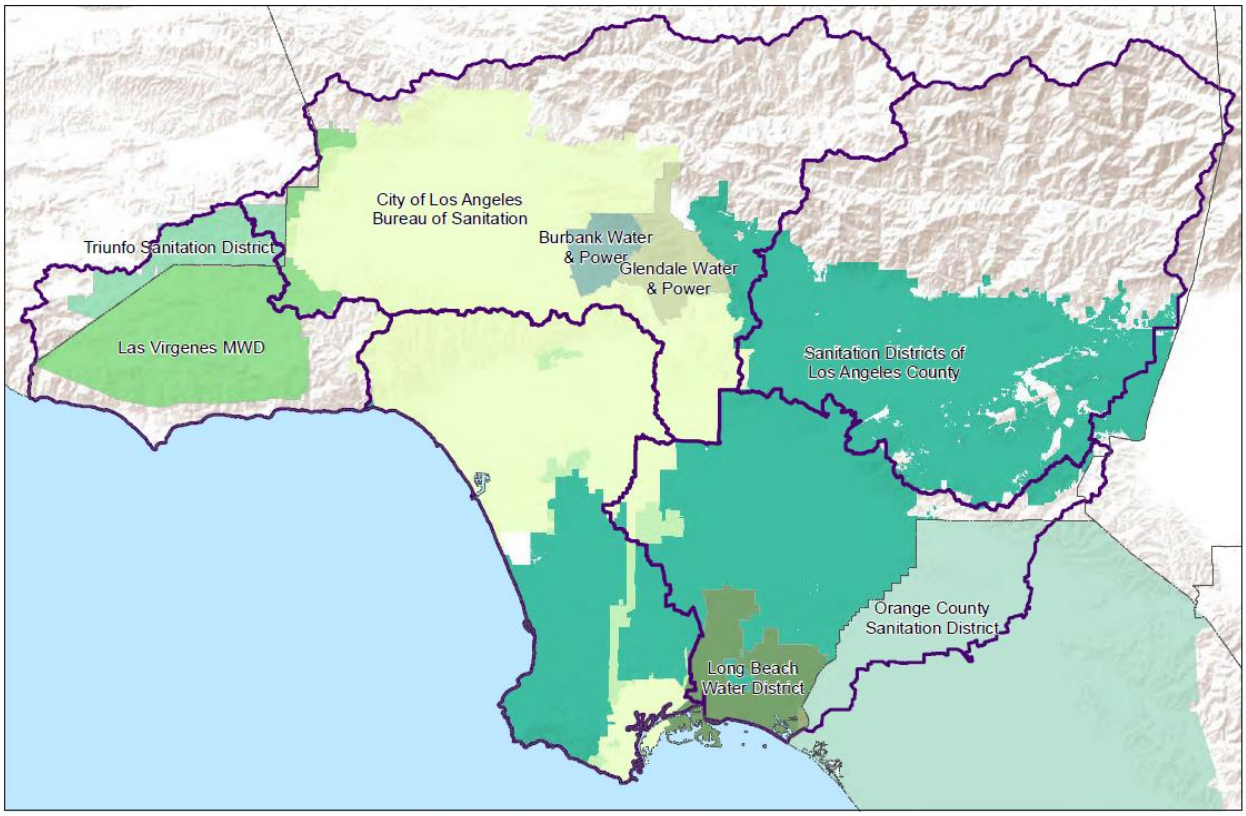
Source: BWP 2015.

3.18.2.2 Sewers and Wastewater Treatment

The Los Angeles County Sanitary Sewer Network covers approximately 824 square miles and encompasses 78 cities and unincorporated territory within the County. There are approximately 9,500 miles of tributary sewers that are owned and operated by the cities and County. The tributary sewers discharge into the LACSD, City of Los Angeles, and Las Virgenes Municipal Water Districts collection system for treatment. Most sewers are designed so that gravity alone carries wastewater to the treatment plants. Low-lying areas such as some beach communities or valley locations need pump stations to push wastewater uphill through pipes that are under pressure (force main sewers) so that the sewage can reach a gravity sewer.

The proposed project area is served by five different sanitation districts: City of Los Angeles Bureau of Sanitation (LASAN), BWP, Glendale Water and Power (GWP), LACSD, and LBWD. Figure 3.18-4 illustrates the boundaries of these districts.

Public Works maintains four wastewater treatment plants, none of which is in the proposed project area.



Source: LASAN 2019

Figure 3.18-4. Southern California Sanitation Districts

County of Los Angeles Sanitation Districts

LACSD is a public agency focused on converting waste into resources like recycled water, energy and recycled materials (LACSD 2020). The agency consists of 24 independent special districts serving about 5.6 million people in the County. The agency operates and maintains the regional wastewater collection system, which includes approximately 1,400 miles of sewers, 49 pumping plants, and 11 wastewater treatment plants that transport and treat about half the wastewater in the County. Collectively, the independent sanitation districts treat about 400 mgd. LACSD operates and maintains the treatment facilities and the larger, regional collection systems. Cities and unincorporated County areas within each district are responsible for their smaller collection systems. LACSD also owns and operates a regional wastewater biosolids composting facility and co-owns a second similar facility.

Los Angeles Bureau of Sanitation

LASAN operates more than 6,700 miles of public sewers that convey about 400 mgd of flow from residences and businesses to the City of Los Angeles's four wastewater treatment and water reclamation plants. Together, they have a combined capacity of 580 mgd of recycled water (LASAN 2020a). LASAN maintains four collection systems: Hyperion System, Terminal Island System, Donald C. Tillman, and Los Angeles-Glendale. The collection systems owned and operated by the City of Los Angeles convey wastewater via approximately 6,439 miles of gravity mains, 33 miles of force mains, and 46 pumping plants. Currently, an average wastewater flow rate of approximately 272 mgd is

generated in the system. The collection systems also convey the flows of 29 satellite agencies to plants for treatment. Table 3.18-11 summarizes the collection systems in the city.

Table 3.18-11. Summary of City of Los Angeles Wastewater Collection System

Collection System	Gravity Mains (miles)	Force Mains (miles)	Wastewater Conveyed (mgd)	Treatment Facility
Hyperion	6,043	20	260	Hyperion
Terminal Island	295	12	12	Terminal Island
Regional	101	1	0.26	LACSD's Joint Water Pollution Control Plant
Unified System	6,439	33	272	

Source: LASAN 2020a.

There are 29 contributing jurisdictions (eight cities and 21 agencies) that discharge wastewater into the City of Los Angeles's Publicly Owned Treatment Works. LASAN has sewage disposal contracts with all contributing jurisdictions, including the Cities of Burbank and Glendale,

Through hydraulic condition assessment, population forecast, and modeling, the City of Los Angeles identifies the current capacity needs, predicts future requirements, and develops capital improvement projects to address them. When the peak flow in a sewer reaches a predetermined level, it triggers a planning study that is initiated in time to ensure that additional capacity is provided to meet future demands before the sewer d/D (ratio of flow depth to pipe diameter) reaches 0.75 in conformance with the City of Los Angeles's Sewer Design Manual criteria.

The City of Los Angeles has few capacity enhancement measures in the capital planning process as the result of past efforts and reduced flows. All of the projects identified from the 2008 planning effort are complete. Efforts are still underway to relieve flows on the North Outfall Sewer. The San Fernando Relief Sewer is in the conceptual planning stage and moving toward the design phase. Some previously borderline capacity issues are moving toward becoming capacity constraints due to increased development. Per the 2019 Sewer System Management Plan (SSMP), since 2013/2014 the City of Los Angeles has received 500 to 600 new capacity requests for wastewater collection, conveyance, treatment, disposal, reclamation, and reuse projects due to new construction. This is up from approximately 100 capacity requests (LASAN 2020b).

In addition to wastewater collection systems, LASAN operates the Donald C. Tillman Water Reclamation Plant in Van Nuys. Its facilities were designed to treat 40 million gallons of wastewater per day and serve the area between Chatsworth and Van Nuys in the San Fernando Valley. LAGWRP serves East San Fernando Valley communities that are both within and outside of the Los Angeles city limits. The plant's highly treated wastewater meets and exceeds the water quality standards for recycled water for irrigation and industrial processes. This water reuse conserves over 1 billion gallons of potable water per year.

Burbank Water and Power

The City of Burbank Public Works Department owns and operates the city's sanitary sewer system and the BWRP (BWP 2019). Wastewater flows to the BWRP, which currently treats 8.5 mgd with a design capacity of 12.5 mgd. The BWRP is a tertiary wastewater treatment plant that currently treats 9 mgd. The BWRP was built in 1966 to meet the wastewater and sewer needs of the growing

residential population and expanding commercial industries in Burbank. Before the BWRP was built, the City of Burbank sent all of its wastewater to the City of Los Angeles for treatment and disposal.

Originally built to treat 6 mgd, the BWRP was upgraded by the City of Burbank to the current 9 mgd in 1971. The plant was again upgraded in 2000 to ensure that it meets new stringent regulations raising the quality of the cleaned wastewater it discharges after the treatment process. The plant was upgraded again in 2002 to remove ammonia from the wastewater. Nonrecycled water is discharged into the Burbank Western Channel, flowing to the LA River and eventually the Pacific Ocean.

A Pretreatment Program requires that all users in Burbank that generate wastewater other than domestic sewage obtain an Industrial Waste Discharge Permit or other control mechanism (BMC Title 8, Chapter 1, Section 503).

Glendale Water and Power

The City of Glendale Public Works Department provides sewer collection and treatment services in the City of Glendale (City of Glendale 2016). Sewage from the City of Glendale and other jurisdictions is treated by the City of Los Angeles Hyperion System, which includes the LAGWRP, outside the Glendale city limits in Los Angeles, and the Hyperion Treatment Plant, in Playa del Rey. The City of Glendale and the City of Los Angeles jointly own and share operating capacity of the LAGWRP. The City of Glendale entered into an amalgamated treatment and disposal agreement with the City of Los Angeles, which eliminates entitlements and reduces limitations on the amount of sewage discharged into the Hyperion system. Any Glendale sewage not treated at the LAGWRP is treated at the Hyperion Treatment Plant.

Long Beach Water Department

LBWD has been responsible for managing the city's sewer system since 1988 (City of Long Beach 2016). The City of Long Beach owns, operates, and maintains the sanitary sewer system that carries water from toilets, showers, sinks, and dish and clothes washers away from homes and businesses. LBWD operates and maintains over 700 miles of sanitary sewer lines, safely collecting and delivering over 40 mgd to the LACSD for treatment.

The LBWRP is on the east side of Long Beach. The plant is owned and operated by LACSD. The LBWRP provides primary, secondary, and tertiary treatment for up to 25 mgd. The plant serves a population of approximately 250,000 people.

Almost 6 mgd of the recycled water is used at over 60 sites. Reuses include landscape irrigation of schools, golf courses, parks, and greenbelts by the City of Long Beach; the re-pressurization of oil-bearing strata off the coast of Long Beach; and the replenishment of the Central Groundwater Basin supply from water processed at the Leo J. Vander Lans Advanced Water Treatment Facility. The remainder is discharged to Coyote Creek. The advanced water treatment facility uses microfiltration, reverse osmosis, and ultraviolet disinfection to produce near distilled quality water, which is blended with imported water and pumped into the Alamitos Seawater Barrier to protect the groundwater basin from seawater intrusion.

Other Jurisdictions

Other jurisdictions in the study area have various wastewater collection systems. Table 3.18-12 summarizes these systems.

Table 3.18-12. Other Jurisdictions' Wastewater Treatment

City	Frame	Description
Compton	2, 3	Served by LACSD No. 2 and maintained by Public Works
Carson	2	The City of Carson owns the local sanitary sewers within Carson. Public Works' Consolidated Sewer Maintenance District maintains these sewer lines. The Consolidated Sewer Maintenance District collects user fees for operation and maintenance of existing local sewer lines. The trunk lines and treatment plant within the city are owned and operated by LACSD. Wastewater generated within Carson is treated at the Joint Water Pollution Control Plant.
Cudahy	2	The sewer system is managed by the City of Cudahy's Public Works Department. The local sewage is discharged into a larger system (County of Los Angeles Consolidated Sewer Maintenance District) managed by LACSD, which provides both primary and secondary treatment of all Cudahy sewage flows while Cudahy Public Works maintains all City of Cudahy-owned collection systems. LACSD serves 78 cities and unincorporated territory within Los Angeles County and provides sewage treatment at ten water reclamation plants and one ocean discharge facility (the Joint Water Pollution Control Plant).
Downey	3	City of Downey Public Works Department, Utilities Division, operates and maintains 193 miles of sanitary sewers, two sewer lift stations, and 4,250 manholes.
Lynwood	3	City of Lynwood Department of Public Works
Paramount	3	LACSD
South Gate	3	South Gate's sanitary sewer collection system is managed by the South Gate Public Works Department. The collection system consists of about 119.4 miles of gravity sewer lines, no pump/lift stations, and about 100 sewer siphons within the system. Approximately 99 percent of local wastewater flows discharge into LACSD facilities for transportation, treatment, and disposal. The remaining 1 percent of total sewage generated within the city passes into the Paramount system and is then discharged into LACSD facilities.
Bell	4	The physical sewer collection infrastructure is owned by the City of Bell and contains 37 miles of gravity sewer main, 23 miles of laterals, and over 8,600 lateral connections.
Bell Gardens	4	Public Works (sewer maintenance)
Commerce	4	City of Commerce Department of Public Works - Public Works/Engineering Services Division
Huntington Park	4	Huntington Park Water Sewer Division maintains the city's sewer system and provides support to mainline sewer back-ups.
Maywood	4	City of Maywood Engineering Division
Vernon	4	The City of Vernon owns its own sewage collection system, which discharges into the system managed by LACSD. The majority of Vernon is within District 23, but also contains territory in Districts 1 and 2. These districts, along with more than a dozen others, are signatories to the Joint Outfall System, which

City	Frame	Description
		provides for the operation and maintenance of an interconnected system of wastewater collection, treatment, reuse, and disposal facilities across a large portion of the urban region.

3.18.2.3 Stormwater

Stormwater in the study area is managed by the Los Angeles County Flood Control District (LACFCD). The district encompasses more than 2,700 square miles and approximately 2.1 million land parcels within six major watersheds. It includes drainage infrastructure within 86 incorporated cities as well as unincorporated County areas. This includes 14 major dams and reservoirs, 483 miles of open channel, 27 spreading grounds, 3,330 miles of underground storm drains, 47 pump plants, 172 debris basins, 27 sediment placement sites, three seawater intrusion barriers, and an estimated 82,000 catch basins. Public Works estimates that roughly 25 billion gallons of stormwater—or about 77,000 AF—drains annually into the ocean from the LA River watershed.

Historically, urban development and storm drain system design have consisted of streets, driveways, sidewalks, and structures constructed out of impervious materials that directly convey runoff to curb and gutter systems, the storm drain system, and downstream receiving waters. Until recently, conventional storm drainage and flood management systems have been designed to convey stormwater away from developed areas as quickly as possible without thoroughly addressing stormwater quality and/or groundwater discharge. As of January 2009, the County has promulgated standards to address these issues. Current County Low-Impact Development (LID) standards for stormwater management require limiting storm runoff from redeveloped sites to the pre-development condition. The LID manual establishes best management practices for infiltration, evapotranspiration, storage and reuse, and high-efficiency bio-filtration/retention systems to be incorporated into development sites. To the extent it is technically feasible, a developed site is required to capture, infiltrate, or reuse the difference in volume generated during a 0.75-inch storm event on the developed site versus that generated by the same event on the site in an undeveloped condition. In addition, a developed site may be required to prevent pollutants from leaving the site for a water quality design storm event unless it has been treated through an on-site, high removal efficiency biofiltration/biotreatment system.

3.18.2.4 Solid Waste

Regional Administration

In the 1950s, LACSD was given responsibility for solid waste management (excluding trash pickup). The agency's solid waste management system currently provides about one-fourth of the countywide solid waste disposal needs through the operation of two sanitary landfills, three materials recovery/transfer facilities, and a refuse-to-energy facility. LACSD also has two facilities that convert landfill gas into renewable energy. LACSD's solid waste system includes one recycling center. The agency also maintains four closed landfills. This system accommodates about one-fourth of the County's solid waste management needs.

Local Jurisdiction Solid Waste Administration

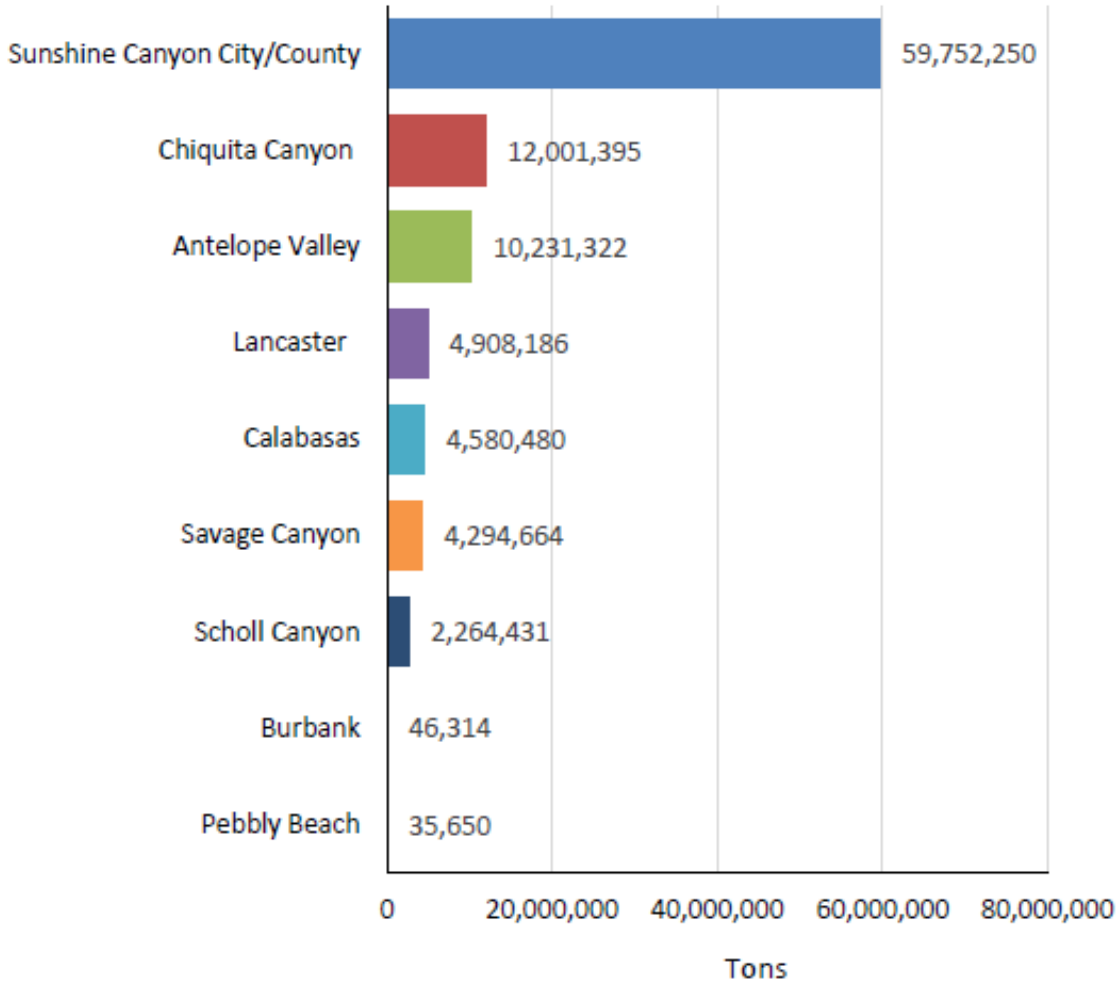
Table 3.18-13 summarizes the miscellaneous entities that handle solid waste collection in the cities along the LA River.

Table 3.18-13. Local Solid Waste Collection Services

City	Frame	Entity
Los Angeles	1, 5, 6, 7, 8, 9	LASAN
Long Beach	1, 2	City of Long Beach Public Works Environmental Services Bureau
Compton	2, 3	Waste Resources
Carson	2	Republic Services
Cudahy	2	Republic Services
Downey	3	CalMet Services
Lynwood	3	City of Lynwood Department of Public Works
Paramount	3	CalMet Services
South Gate	3	Consolidated Disposal Service
Bell	4	Consolidated Disposal Service
Bell Gardens	4	Consolidated Disposal Service
Commerce	4	Athens Services (residential), AAA Rubbish, CalMet Services, Universal Waste, Haul-A-Way, Waste Management, United Pacific Waste, Republic Services (commercial)
Huntington Park	4	CR&R Environmental Services
Maywood	4	Universal Waste Systems
Vernon	4	City of Vernon Public Utilities Department
Glendale	6	City of Glendale Integrated Waste Management Division
Burbank	7	City of Burbank Department of Public Works - Solid Waste

Landfills

Solid waste generated by facilities in the study area is collected by franchise waste haulers for eventual diversion or disposal. Remaining disposal capacity at these landfills as of 2018 is illustrated on Figure 3.18-5.



Source: Public Works 2019.

Figure 3.18-5. Available Disposal Capacity (2018)

Landfills are categorized as one of three classes:

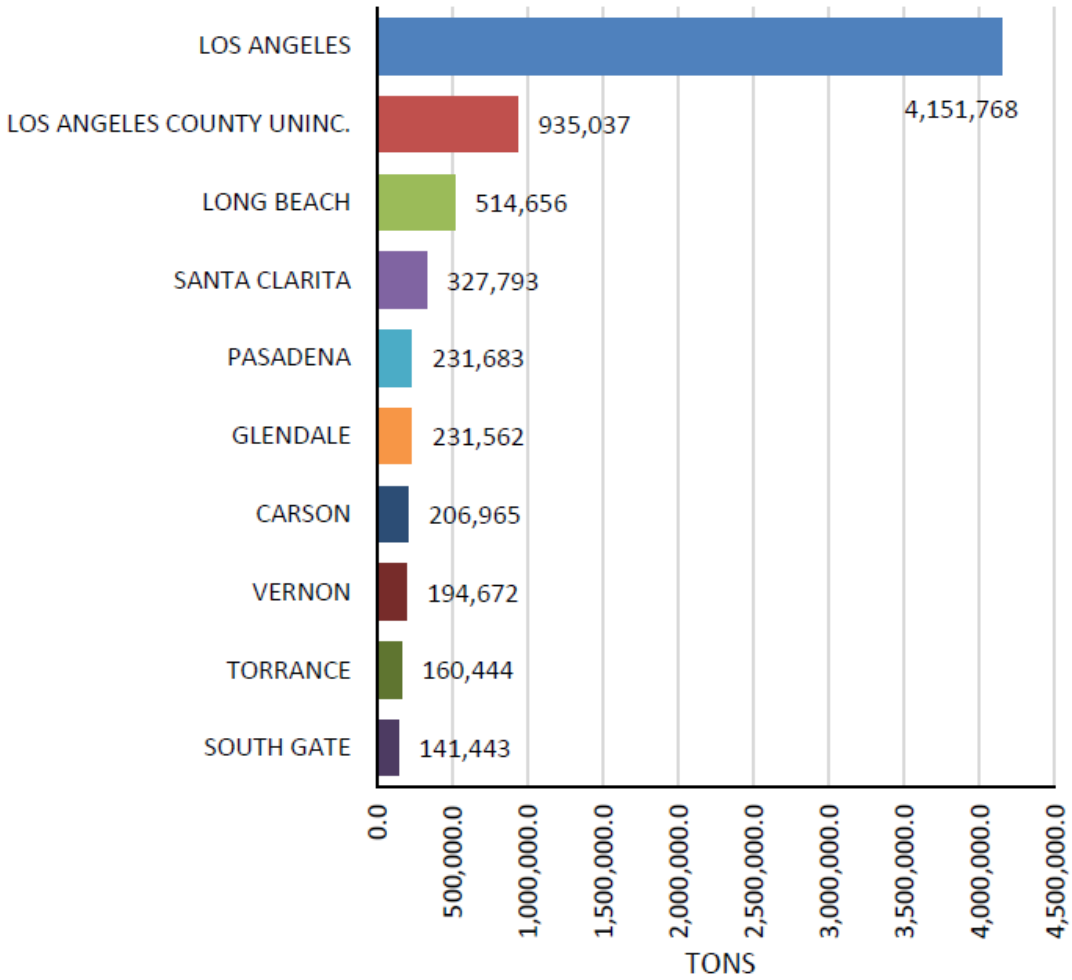
- Class I landfills accept hazardous and non-hazardous wastes.
- Class II landfills accept non-hazardous and "designated" wastes, as defined by the California Department of Resources Recycling and Recovery (CalRecycle).
- Class III landfills accept municipal and other non-hazardous, household waste.

Unclassified landfills are defined as facilities that accept inert materials only, such as soil, concrete, asphalt, and other construction and demolition (C&D) debris. Non-hazardous municipal solid waste is disposed in Class III landfills.

Hazardous waste is disposed of at designated Class I facilities. The State of California currently operates three designated Class I landfills: the Buttonwillow Hazardous Waste Facility in Kern County, the Kettleman Hills Hazardous Waste Facility in Kings County, and the Imperial (Westmorland) Hazardous Waste Facility in Imperial County. The Buttonwillow facility is 320 acres and operates a permitted drum handling and storage area that can store up to 1,500 drums (Clean

Harbors 2020a). Their current constructed landfill capacity is 950,000 cubic yards whereas the permitted landfill capacity is 10 million cubic yards (Clean Harbors 2020a). The Imperial facility is 640 acres, with a drum capacity of 1,000 drums (50,000 gallons) and a bulk storage capacity of 195 cubic yards (Clean Harbors 2020b). The Kettleman Hills facility is a 1,600-acre property that is permitted to receive a maximum of 2,000 tons per day (TPD) of municipal solid waste, but typically receives an average of about 1,350 TPD (Waste Management 2014).

In 2018, the total amount of solid waste (including an import amount of 166,711 tons) disposed of at in-county Class III landfills, transformation facilities, and out-of-county landfills was approximately 10.7 million tons. In addition, the amount of inert waste disposed at the permitted inert waste landfill totaled 358,254 tons (Los Angeles County 2019). For the purpose of long-term disposal capacity planning, a countywide diversion rate of 65 percent was assumed for 2018. Based on a total disposal of 10.5 million tons (excluding inert waste and imports) and the 65-percent diversion rate, the County generated approximately 29.95 million tons or an average of 96,000 TPD. In addition to waste generated within the County, Class III landfills and transformation facilities in the County also received 175,737 tons, or 563 TPD, of waste from jurisdictions outside the County in 2018. Figure 3.18-6 illustrates the top ten producers of solid waste in Los Angeles County.



Source: Public Works 2019

Figure 3.18-6. Top 10 Producers of Solid Waste (2018)

When waste is received at Class III landfills and transformation facilities, some of it is used on site, such as for Alternative Daily Cover, and some is sent off site for recycling or processing. The remaining waste is landfilled or transformed into energy. If transformed, the residual ash is turned into ashcrete and used as road base for winter deck operating areas and other beneficial uses.

Public Works conducted a survey requesting landfill operators in the County to provide updates of their estimated remaining disposal capacities. Based on the results of the survey and considering permit restrictions, the total remaining permitted Class III landfill capacity in the County is estimated at 163.39 million tons.

Within Los Angeles County, there are 42 permitted large volume transfer/processing and direct transfer facilities, which can receive 100 TPD or more, and numerous facilities of smaller volume (Public Works 2019). A transfer station/processing facility refers to a facility that receives, handles, separates, converts, or otherwise processes solid waste. There are three types of facilities that are recognized as transfer/processing facilities in this report: transfer stations, material recovery facilities, and C&D and inert debris processing facilities. Transfer stations typically transfer solid waste directly from one container to another or from one vehicle to another for transport, or temporarily store solid waste prior to final disposal at permitted landfills or transformation facilities. Material recovery facilities refer to intermediate processing facilities designed to remove recyclables and other valuable materials from the waste stream. A C&D and inert debris processing facility refers to a site that receives any combination of C&D debris, and Type A6 inert debris per operating day for the purposes of storage, handling, transferring, or processing.

In addition to the 42 facilities discussed above, there are 13 large volume transfer/processing facilities in the County that fall under the umbrella of clean material recovery facilities. A clean material recovery facility is one that separates materials from commingled recyclables, typically collected from residential or commercial curbside programs. As local waste disposal capacity options diminish in the County, transfer and processing facility operators are expected to export waste to out-of-county landfills via truck or rail transport.

The County has 22 operational composting/chipping and grinding facilities that are permitted to receive 6 TPD or more, and numerous composting/chipping and grinding facilities of smaller volume. A composting facility refers to a facility that processes organic materials such as green waste, manure, food waste, and other organics. The organics are transformed through controlled biological decomposition and sold as an end product, usually in the form of home or farm soil amendments. A chipping and grinding facility refers to a facility that separates, grades, and resizes woody green waste or used lumber to be sent to a composting facility, used at a landfill for Alternative Daily Cover, or sent to miscellaneous end markets such as feedstock at biomass to energy plants. Currently there are two anaerobic digestion facilities operating within the County. An anaerobic digestion facility refers to a facility that biologically decomposes organic matter with little or no oxygen in a fully enclosed structure (in-vessel digestion) to produce biogas, liquid fertilizer, and compost.

Based on the 2018 Annual Report, a shortfall in disposal capacity is not expected to occur in this scenario during the planning period (2018–2033) (Public Works 2019).

3.18.2.5 Natural Gas

Southern California Gas Company (SoCalGas), Pacific Region, is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange, and storage services, as well as procurement services to most retail core customers. As the nation's largest natural gas distribution utility, SoCalGas is responsible for providing safe and reliable energy to its 20.9 million consumers over a 20,000-square-mile service area throughout Central and Southern California (SoCalGas 2020). SoCalGas is a gas-only utility. As a public utility, SoCalGas is under the jurisdiction of federal and State regulatory agencies. SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada including supply basins in New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains, Western Canada, and local California areas.

According to SoCalGas, there are no current deficiencies in the natural gas supply systems that serve the County. SoCalGas regularly assesses and upgrades its systems to meet current and future needs to accommodate future expansion in residential, commercial, and industrial uses.

SoCalGas' total natural gas consumption in 2018 was approximately 515,607,894 million British thermal units (BTUs)[1] (CEC 2020). According to the *2019 California Gas Report Supplement*, SoCalGas projects total gas demand to decline at an annual rate of 0.74 percent from 2018 to 2035 (California Gas and Electric Utilities 2019). The decline in throughput demand is due to modest economic growth, California Public Utilities Commission (CPUC)-mandated energy efficiency standards and programs, tighter building code standards (Title 24), renewable electricity goals, the decline in commercial and industrial demand, and conservation savings linked to Advanced Metering Infrastructure. Table 3.18-14 summarizes the projected annual gas requirements in Southern California through year 2035.

Table 3.18-14. Southern California Projected Annual Gas Requirements through Year 2035

Year	MMcf/day	Million BTUs/day
2020	2,566	2,566,000
2025	2,422	2,422,000
2030	2,310	2,310,000
2035	2,313	2,313,000

Source: California Gas and Electric Utilities 2018.
Note: Assumes average temperature and normal hydrological year.
MMcf = million cubic feet

The 2016 report also predicts that the total available capacity for these same years will remain constant at 3,875 million cubic feet per day (California Gas and Electric Utilities 2016).

Traditional Southwestern U.S. sources of natural gas will continue to supply most of Southern California's natural gas demand. This gas is primarily delivered via the El Paso Natural Gas and Transwestern pipelines. The San Juan Basin's gas supplies peaked in 1999 and have been declining at an annual rate of roughly 3 percent. In recent years, this rate of decline has accelerated. The Permian Basin's share of supply into Southern California has increased in recent years, although

[1] A BTU is a standard unit of energy measure, which is the quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit at or near the temperature at which water has its greatest density (39.2 degrees Fahrenheit). A therm is a unit of heat equivalent to 100,000 BTUs.

increasing demand in Mexico for natural gas supplies may reduce the volume of Permian Basin supply available to Southern California in the future. Rocky Mountain supply supplements traditional Southwestern U.S. gas sources for Southern California. This gas is delivered to Southern California primarily on the Kern River Gas Transmission Company's pipeline, although there is also access to Rockies gas through pipelines interconnected to the San Juan Basin. Many pipelines that supply other markets connect to the Rocky Mountain region, which allows these supplies to be redirected from lower- to higher-value markets as conditions change.

3.18.2.6 Electricity

Electricity throughout the proposed project study area is provided almost exclusively by LADWP or Southern California Edison (SCE). The Cities of Burbank, Glendale and Vernon have independent water and power plants and facilities. SCE would be the retail seller of electricity to the Cities of Long Beach, Carson, Compton, Cudahy, Downey, Lynwood, Paramount, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, and Maywood and unincorporated County areas. LADWP provides electricity to the City of Los Angeles.

LADWP

LADWP provides power and electrical services to the City of Los Angeles. LADWP serves approximately 1.5 million power customers, as of FY 2018:

- Residential: 1,385,000 customers
- Commercial and industrial: 124,000 customers
- Other: 7,000 customers

LADWP is responsible for the maintenance of 10,000 miles of overhead distribution lines and underground distribution cables and 15,452 transmission towers (LADWP 2020). It also maintains 160 distributing stations, 21 receiving stations, and over 50,000 substructures (LADWP 2020). In 2017, LADWP provided 30 percent of its power from renewal sources, 31 percent from natural gas, 10 percent from nuclear, 4 percent from large hydroelectric, 18 percent from coal, and 7 percent from other sources. About 70 percent of the electricity in the City of Los Angeles is consumed by business and industry, with the remaining 30 percent of residents averaging about 5,900 kilowatt-hours (5.9 megawatt-hours [MWh]) of usage per year (LADWP 2020).

LADWP's service territory covers 465 square miles in Los Angeles and much of the Eastern Sierras in Owens Valley, with annual sales exceeding 23 million MWh. LADWP is the third largest California electric utility in terms of consumption, behind Pacific Gas and Electric and SCE. Projected future demand growth for LADWP is approximately 1.3 percent per year.

LADWP has over 7,880 megawatts (MW) of power generation capacity as of 2017. The planning horizon extends from 2037 through 2050, in order to better align with statewide greenhouse gas (GHG) emissions goals and with Los Angeles's 100 percent clean energy initiative (please refer to Section 3.7, *Greenhouse Gases*, for further details). The 2017 Power Strategic Long-Term Resource Plan (LADWP 2017) serves as a comprehensive 20-year roadmap that guides LADWP's Power System in its efforts to supply reliable electricity in an environmentally responsible and cost-effective manner.

LADWP continues its commitment to energy efficiency through numerous programs and services to customers, encouraging the adoption of energy-saving practices and installation of energy-efficient equipment. Since 2000, LADWP energy efficiency programs have resulted in 2,464 gigawatt-hours (GWh) of energy savings, or about 11 percent of energy sales. In June 2017, an updated 2016/2017 Energy Efficiency Potential Study was finalized, indicating that a 15 percent energy efficiency target from 2017 through 2027 was achievable. Keeping the same pace through 2030 would allow LADWP to double its energy efficiency portfolio by 2030.

LADWP offers its customers an opportunity to participate in the Green Power Program. "Green Power" is produced from renewable resources such as wind energy, geothermal, or other renewable resources, rather than conventional generating plants. In 2016, 13,541 LADWP customers participated in the program, receiving approximately 48,873 MWh of renewable energy. Since program inception in 1999 to the end of 2016, 1,184,269 MWh of renewable energy was procured, making it one of the largest voluntary green pricing programs in the nation.

By 2030, LADWP expects to host 800 to 1,200 MW of new solar photovoltaic (PV) generation on its distribution network in addition to large-scale solar PV and wind energy resources on its bulk transmission network. Both distribution and transmission scale renewable developments are necessary to meet the State-mandated 50 percent Renewables Portfolio Standard (RPS) goals (Senate Bill [SB] 350). As more renewable energy is integrated into the system, the variability in energy production will greatly increase. The electricity consumption within LADWP's service territory is forecasted to decrease 1.2 percent over the next 5 years as energy efficiency and customer-installed solar PV expansion offset growth from economic activity. The growth in annual peak demand over the next 10 years is predicted to be about 0.4 percent—approximately 30 MW per year—with less growth over the next few years due to energy efficiency and solar PV programs.

LADWP's Load Forecast incorporates updates to reflect the latest load forecast, fuel price, and projected renewable price forecasts, and other numerous modeling assumptions. The most recent Power Integrated Resource Plan from 2012 makes projections out to FY 2039/40. A summary of the projected net energy demand for LADWP's service area through 2040 is shown in Table 3.18-15.

Table 3.18-15. Projected Energy Demand (LADWP)

Fiscal Year	Base Case Peak Demand (MW)	Growth Rate Base Year 2010-11	One-in-Ten Peak Demand (MW)[1]
2021–22	5,889	0.5%	6,423
2026–27	6,129	0.7%	6,640
2036–37	6,716	0.8%	7,288
2040–41	6,998	0.8%	7,600

Source: LADWP 2017.

[1] The one-in-ten case is the given outdoor temperature where 90 percent of the time the actual peak day temperature is expected to be below it and 10 percent of the time the actual temperature will be above it.

Under Assembly Bill (AB) 2021, publicly owned utilities such as LADWP must identify, develop, and implement programs for all potentially achievable, cost-effective energy efficiency savings and establish annual targets. The AB 2021 targets adopted represent a total goal of 3,596 GWh in energy use reduction compared to the baseline forecast over the 10-year period from FY 2013–14 through FY 2022–23, which will result in total cumulative annual energy savings across the 10-year target

period of 13.7 percent. This exceeds the minimum AB 2021-required cumulative energy savings goal of 10 percent by 37 percent.

Southern California Edison

As one of the nation's largest electric utilities, SCE provides electricity to approximately 15 million people in a 50,000-square-mile service area that includes portions of 15 counties and hundreds of cities and communities within Central, Coastal, and Southern California (SCE 2019). In 2019, SCE's power system experienced a peak demand of 22,009 MW, and the annual electricity sale to customers was approximately 84,654,000 MWh (SCE 2019). Within the proposed project area, SCE is the retail seller of electricity to the Cities of Long Beach, Carson, Compton, Cudahy, Downey, Lynwood, Paramount, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, and Maywood, and unincorporated County areas.

Under California's RPS program, all electricity retail sellers in the State must meet established renewable procurement targets in their retail electricity supply. The use of renewable energy sources by electricity retail sellers include wind, solar PV, solar thermal, hydroelectricity, geothermal, and bioenergy. The RPS program was initially established in 2002 by SB 1078, which required that 20 percent of electricity retail sales must be served by renewable resources by 2017. The program was subsequently accelerated in 2015 with SB 350, which mandated a 50 percent RPS by 2030 and included interim annual RPS targets with 3-year compliance periods that also required 65 percent of RPS procurement to be derived from long-term contracts of 10 or more years. In 2018, SB 100 (de León, 2018) was signed into law, which increased the RPS to: (1) 50 percent of retail sales by 2026 (moved up by 4 years from SB 350), (2) 60 percent of retail sales by 2030, and (3) 100 percent of retail sales by 2045 (carbon-free goal for 2045). Therefore, SCE would be required to meet the renewable procurement targets under the RPS program. SCE's energy resource mix used for electricity generation as of 2018 is shown in Table 3.18-16. As shown, renewable sources currently make up 36 percent of SCE's power mix, which is greater than the statewide power mix.

Table 3.18-16. SCE Energy Resources for Electricity Generation in 2018

Energy Resource	2018 SCE Power Mix	2018 California Power Mix[1] (for comparison)
Eligible Renewable	36%	31%
Biomass and Biowaste	*1%*	*2%*
Geothermal	*8%*	*5%*
Eligible Hydroelectric	*1%*	*2%*
Solar	*13%*	*11%*
Wind	*13%*	*11%*
Coal	0%	3%
Large Hydroelectric	4%	11%
Natural Gas	17%	35%
Nuclear	6%	9%
Other	0%	<1%
Unspecified sources of power[2]	37%	11%
Total	100%	100%

Source: SCE 2019.
[1] Percentages are estimated annually by CEC.

[2] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

Burbank Water and Power

BWP is a vertically integrated, publicly owned municipal utility. Being vertically integrated means that BWP generates, transmits, and distributes power to Burbank customers. BWP is owned and operated by the City of Burbank and is governed by its board and the Burbank City Council. A large portion of Burbank's electric infrastructure was constructed from the 1940s through the 1960s to serve the typical loads of that era, with 4-kilovolt (kV) service. The infrastructure has been expanded and updated over the years. Commercial developers supported and assisted in funding the expansion of the BWP system, beginning the transition from a 4 kV system to the more reliable 12 kV service and from large air-insulated electric substations to smaller, more modern, gas-insulated substations. Updating the distribution lines from 4 kV to 12 kV allowed BWP to deliver three times as much electricity, reducing power losses in the system and improving reliability (BWP 2019).

With the investment in more reliable 12 kV substation capacity, including the San Jose, Golden State, Keystone, Hollywood Way, Burbank, and Ontario Substations, BWP has been steadily transferring customers from the 4 kV service to the more reliable and efficient 12 kV service.

The 12 kV substations are primarily served from the 34.5 kV systems. Future substations will be served from the 69 kV system where possible, allowing BWP to realize additional efficiency and reliability. While BWP has made significant progress in the last 20 years, several 4 kV substations and associated distribution systems remain.

BWP's distribution system consists of the following:

- Service area of approximately 17 square miles
- Approximately 34 miles of 69 kV subtransmission
- Approximately 45 miles of 34.5 kV subtransmission
- 13 distribution substations, two customer substations, and four switching stations
- Approximately 203 miles of 4 kV distribution
- Approximately 130 miles of 12 kV distribution
- Approximately 10,600 poles
- Approximately 5,800 distribution transformers
- Approximately 52,500 customer electric meters

The most recent Integrated Resources Plan (IRP) approved by the City of Burbank (BWP 2019) indicates that residential and extra-large commercial uses consume approximately one-quarter of the city's energy resources at 25.4 percent and 25.1 percent, respectively, followed by large commercial (20.2 percent), medium commercial (18.9 percent,) and small commercial (7.3 percent). Table 3.18-17 describes the various conventional sources available to the city and their generating capacity.

Table 3.18-17. Conventional Sources of Electricity – BWP

Facility	Type	Capacity	Annual Energy Received (2017)
Magnolia Power Plant	Combined Cycle Natural Gas	310 MW, 95 MW for BWP	400,000 MWh
Lake One	Combustion Turbine	45 MW	50,000 MWh
Olive 1 and 2	Steam Turbine	89 MW	0 MWh (dry lay-up)
Hoover Dam	Hydroelectric	1951 MW, 20,125 MW for BWP	26,000 MWh
Intermountain Power Project[1]	Two-Unit Coal-Fired Thermal Plant	1900 MW, 74 MW for BWP	576,000 MWh
Palo Verde	Nuclear Generating Station	4,010 MW, 9.5 MW for BWP	70,000 MWh

Source: BWP 2019.
[1] To be discontinued in 2025.

In 2007, Burbank became the first city to commit to a 33 percent renewable power supply portfolio standard. Since then, BWP has undertaken several initiatives to bring renewable resources into its power supply portfolio. By 2015, 34 percent of Burbank's power supply came from renewable resources, 5 years ahead of schedule. Today, renewable resources represent about 32 percent of total supplies. Table 3.18-18 summarizes Burbank's renewable power sources.

Table 3.18-18. Burbank Water and Power Renewable Power Sources

Project	Location	Technology	Annual Energy
Burbank Solar Demonstration	Burbank, CA	Fixed Tile – Solar PV	9 MWh
Copper Mountain Solar 3	Boulder City, NV	Fixed Tilt – Solar PV	91,000 MWh
Pebble Springs Wind Project	Gilliam County, OR	Wind	29,000 MWh
Milford Wind Project	Beaver and Millar Counties, UT	Wind	26,500 MWh
Pleasant Valley	Unita County, WY	Wind	14,500 MWh
Burbank Micro-Hydro	Burbank, CA	Conduit Hydro	700 MWh
Chiquita Canyon Landfill	Valencia, CA	Landfill Gas	10,500 MWh
Don A. Campbell	Mineral County, NV	Geothermal	19,000 MWh
Desert Harvest	Riverside County, CA	Single Axis – Solar PV	43,000 MWh
Renewable Exchange	Various	Various	56,000 MWh

Source: BWP 2019.

BWP forecasts little to no peak demand or energy growth over the next 20 years (BWP 2019). This forecast is consistent with the California Energy Commission's (CEC) forecast for the same period and reflects some (but not all) development under consideration in Burbank. Table 3.18-19 summarizes energy demand forecasts through 2038.

Table 3.18-19. Energy Demand Forecasts – Burbank Water and Power

	2020	2025	2030	2035	2038
Energy (GWh)	1,131	1,140	1,153	1,180	1,211
Peak (MW)	306	310	310	309	307

Source: BWP 2019.

Glendale Water and Power

GWP serves nearly 89,000 electrical customers providing service to virtually all homes, businesses, and institutions within its limits. GWP's annual retail electrical load obligation is approximately 1.45 million MWh. GWP relies on a combination of both local and remote generation (owned and leased), coupled with spot market purchases from a variety of suppliers throughout the Western Electricity Coordination Council, including the California Independent System Operator. GWP's 2017 Power Content Label report as required by CEC shows that of 37 percent of GWP's retail energy sales were renewable energy and about 56 percent were carbon-free resources in 2017. Table 3.18-20 illustrates the details of GWP's electric power service.

Table 3.18-20. GWP Electric Power Service Statistics

Population	**205,536**
Square miles	31
Number of Distribution Miles	529
Number of Subtransmission Miles	58
Number of Poles	14,788
Number of Substations	14
Number of Meters	88,849
Power Sales (MWh)	1,452,834
Highest Peak Load	346 MW on 9/1/2017

Source: GWP 2019.

GWP's portfolio consists of local thermal generation (Magnolia and Grayson power plants), remote thermal generation (the Inter-mountain Power Project in Delta, Utah), remote hydro (Hoover Dam and Tieton small hydro), remote nuclear (Palo Verde power plant in Arizona), local landfill gas (Scholl), geothermal in Southern California, and wind projects in Northern California, Oregon, and Wyoming. Together these assets constitute 417 MW of capacity. GWP's largest resource is the City of Glendale-owned Grayson, which consists of several generating units at a single site within Glendale. Although Grayson is GWP's largest source of capacity, the bulk of the utility's energy requirements are met by firm power supply purchase contracts and short-term or spot purchases. Grayson Units 1–8 are long past their intended life cycles and will be retiring in 2021. This 173-MW reduction in local generation capacity will leave GWP with insufficient resources to reliably meet the energy needs of Glendale, thus the need to procure new power resources. GWP initially proposed building 262 MW of combined cycle and combustion turbine gas-powered resources at Grayson Unit 4 (the Original Siemens Repower Plant). Based on stakeholder input, the Glendale City Council requested GWP to explore more local and clean resource options. In May 2018, GWP issued a Clean Energy Request for Proposals to find clean-energy resources to reduce the GHG impacts of the repower. The resources submitted in the Clean Energy Request for Proposals enabled GWP to create the 2019 IRP, resulting in a cleaner and more affordable resource portfolio than the one proposed in 2015.

Table 3.18-21. Energy Demand Forecast 2020-2038 (GWP)

GWh	2020	2025	2030	2035	2038
Net Energy for Load	1,184	1,305	1,464	1,627	1,728

Source: GWP 2019.

City of Vernon

Within the City of Vernon, Vernon Public Utilities (VPU) serves about 2,000 mainly commercial and industrial customers with electric sales of approximately 1,128 GWh annually and peak loads of approximately 184 MW in the summer and 174 MW in the winter. Large and small commercial and industrial load makes up 99 percent of VPU's demand and energy sales. The VPU electric system has an annual average load factor of over 70 percent due to its predominantly industrial customer mix (VPU 2018). VPU's total electricity consumption in 2018 was 1,025,571 MWh (CEC 2020).

3.18.3 Regulatory Setting

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of utilities in this PEIR.

3.18.3.1 Federal

Water

Clean Water Act

The Clean Water Act is relevant to stormwater and wastewater discharges and water quality–related to the proposed Project. Passed in 1972, the Clean Water Act is a federal regulation with the objective to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. Its National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Wastewater treatment is subject to NPDES permit requirements, as administered by the federal Environmental Protection Agency (U.S. EPA).

Safe Drinking Water Act

The Safe Drinking Water Act was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The act applies to every public water system in the United States.

The Safe Drinking Water Act authorizes U.S. EPA to set national health-based standards for drinking water to protect against both naturally occurring and manmade contaminants that may be found in drinking water. U.S. EPA, states, and water systems work together to make sure that these standards are met.

Originally, the act focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

3.18.3.2 State

Water

California Water Plan

The California Water Plan is prepared by the California Department of Water Resources, most recently updated in 2018. The plan provides a framework for water managers, legislators, tribes, agencies, businesses, academia, stakeholders, and the public to consider options and make decisions regarding California's water future. The California Water Plan, which is updated every 5 years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses.

The California Water Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the State's water needs. The California Water Plan provides resource management strategies and recommendations to strengthen integrated regional water management. The resource management strategies help regions meet future demands and sustain the environment, resources, and economy, involve communities in decision-making, and meet various goals. A resource management strategy is a project, program, or policy that helps local agencies and governments manage their water and related resources. These strategies can reduce water demand, improve operational efficiency, increase water supply, improve water quality, practice resource stewardship, and improve flood management. Additionally, the California Water Plan includes a finance plan that identifies critical priorities for State investment in integrated water management activities.

California Water Code

The California Water Code contains provisions that control almost every consideration of water and its use. Division 2 of the California Water Code provides that the State Water Resources Control Board (SWRCB) consider and act upon all applications for permits to appropriate waters. Division 6 of the California Water Code controls conservation, development, and utilization of the State water resources, while Division 7 addresses water quality protection and management.

Senate Bill 610

SB 610 (Water Code Sections 10910 and 10912) took effect on January 1, 2002. SB 610 seeks to promote more collaborative planning between local water suppliers and cities and counties. It requires that water supply assessments occur early in the land use planning process for all large-

scale development projects.[2] The required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. It also requires an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries.

Senate Bill 221

Enacted in 2001, SB 221, which has been codified in the California Water Code beginning with Section 10910, requires that the legislative body of a city or county empowered to approve, disapprove, or conditionally approve a subdivision map must condition such approval upon proof of sufficient water supply. The term "sufficient water supply" is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision. The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses including, but not limited to, agricultural and industrial uses. SB 221 requirements do not apply to the general plans of cities and counties, but rather to specific development projects.

California Urban Water Management Act

The California Urban Water Management Planning Act requires urban water suppliers to prepare and adopt an UWMP every 5 years. The main goal of the UWMP is to forecast future water demands and water supplies under average and dry-year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation best management practices, and provide a single and multi-dry year management strategy.

Sustainable Groundwater Management Act of 2014

On September 16, 2014, the Governor signed three bills—AB 1739 and SB 1168 and 1319, collectively referred to as the Sustainable Groundwater Management Act of 2014—to create a framework for sustainable, local groundwater management. The legislation allows local agencies to tailor sustainable groundwater plans to their regional economic and environmental needs. The bills establish a definition of sustainable groundwater management and require local agencies to adopt management plans for the State's most important groundwater basins. The legislation prioritizes groundwater basins that are currently over-drafted and sets a timeline for implementation:

[2] In accordance with the 2014 CEQA Statute and Guidelines Section 15155, a project is considered to be a "water-demand project" if one of the following definitions applies:

(a) A residential development of more than 500 dwelling units.
(b) A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
(c) A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
(d) A hotel or motel, or both, having more than 500 rooms.
(e) An industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
(f) A mixed-use project that includes one or more of the projects specified in subdivisions (a)(1)(A), (a)(1)(B), (a)(1)(C), (a)(1)(D), (a)(1)(E), and (a)(1)(G) of this section.
(g) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

- By 2017, local groundwater management agencies must be identified.
- By 2020, overdrafted groundwater basins must have sustainability plans.
- By 2022, other high- and medium-priority basins not currently in overdraft must have sustainability plans.
- By 2040, all high- and medium-priority groundwater basins must achieve sustainability. Additionally, the legislation provides measurable objectives and milestones to reach sustainability and a state role of limited intervention when local agencies fail to adopt sustainable management plans. Local water agencies and the County will work together to ensure compliance with this legislation.

Health and Safety Code Section 17921.3

Health and Safety Code Section 17921.3 requires low-flush toilets and urinals in the majority of buildings.

Solid Waste

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires each city and county in California and regional solid waste management agencies to enact plans and implement programs to divert 25 percent of their waste streams by 1995 and 50 percent by 2000.

Assembly Bill 75

AB 75 (Public Resources Code 42920–42927) required all State agencies and large State facilities to divert at least 25 percent of all solid waste from landfills by January 1, 2002, and 50 percent by January 1, 2004. The law also required and now allows each State agency and large facility to submit an annual report to CalRecycle summarizing its yearly progress in implementing waste diversion programs.

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327) was enacted on October 11, 1991, and added Chapter 18 to Part 3 of Division 30 of the Public Resources Code. It required each jurisdiction to adopt an ordinance by September 1, 1994, requiring any "development project" for which an application for a building permit is submitted to provide an adequate storage area for collection and removal of recyclable materials.

Assembly Bill 1826

AB 1826, commencing April 1, 2016, requires a business that generates a specified amount of organic waste per week to arrange for recycling services for that organic waste in a specified manner. The bill decreases the amount of organic waste under which a business would be subject to those requirements from 8 cubic yards or more to 4 cubic yards or more on January 1, 2017. The bill also requires a business that generates 4 cubic yards or more of commercial solid waste per week, on and after January 1, 2019, to arrange for organic waste recycling services and, if the department

makes a specified determination, would decrease that amount to 2 cubic yards on or after January 1, 2020.

This bill further requires each jurisdiction, on and after January 1, 2016, to implement an organic waste recycling program to divert organic waste from the businesses subject to this act, except as specified with regard to rural jurisdictions, thereby imposing a State-mandated local program by imposing new duties on local governmental agencies. The bill requires each jurisdiction to report to CalRecycle on its progress in implementing the organic waste recycling program, and the department would be required to review whether a jurisdiction is in compliance with this act.

Senate Bill 1383

SB 1383, enacted in 2016, establishes specified targets for reducing organic waste in landfills. This bill requires the California Air Resources Board, in consultation with the Department of Food and Agriculture, to adopt regulations to reduce methane emissions from livestock manure management operations and dairy manure management operations, as specified. The bill requires the State board to take certain actions prior to adopting those regulations. This bill requires the regulations to take effect on or after January 1, 2024, if the California Air Resources Board, in consultation with the department, makes certain determinations.

Energy (Electricity and Natural Gas)

Senate Bill 350

SB 350, signed into law on October 7, 2015, requires utilities to procure eligible renewable energy resources of 50 percent by 2030, including the following interim targets:

- Achieve 40 percent renewables by 2024.
- Achieve 45 percent renewables by 2027.
- Achieve 50 percent renewables by 2030 and maintain this level in all subsequent years.

California Code of Regulations, Title 24, Part 6

Title 24, Part 6 of the California Code of Regulations (also known as the California Energy Code) establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems. Local governmental agencies may adopt and enforce energy standards for newly constructed buildings, additions, alterations, and repairs to existing buildings provided CEC finds that the standards will require buildings to be designed to consume no more energy than permitted by Title 24, Part 6. Section 91.1300 of the City of Los Angeles Municipal Code incorporates these State requirements.

2010 California Green Building Standards Code (CALGreen)

CALGreen is a statewide mandatory green building code all cities in California were required to adopt by January 1, 2011. CALGreen requires new standards in material reuse, locally sourced materials, water/energy efficiency, and indoor air quality. To meet CALGreen requirements, the Los Angeles County Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31), which is designed to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a

reduced negative impact, or positive environmental impact, and encouraging sustainable construction practices in the following categories:

1. Planning and design
2. Energy efficiency
3. Water efficiency and conservation
4. Material conservation and resource efficiency
5. Environmental air quality

Senate Bill 1078

In 2002, SB 1078 (Public Utilities Code Chapter 2.3, Section 387, 390.1, and 399.25) implemented an RPS, which established a goal that 20 percent of the energy sold to customers be generated by renewable resources by 2017. The goal was accelerated in 2006 under SB 107 and expanded in 2011 under SB 2, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 (LADWP 2015b).

Assembly Bill 2021

AB 2021, passed in 2006, requires CEC, on or before June 1, 2007, and every 3 years thereafter and in consultation with CPUC, to identify all potentially achievable cost-effective electricity and natural gas efficiency savings and establish 10-year statewide energy efficiency savings targets. The bill further requires all locally owned electric and natural gas utilities to meet energy-efficiency savings targets.

California Public Utilities Commission

CPUC regulates privately owned electric, telecommunications, natural gas, water, and transportation companies, as well as household goods movers and rail safety. CPUC's Energy Division sets electric rates, protects consumers, and promotes energy efficiency, electric system reliability, and utility financial integrity. CPUC regulates local natural gas distribution facilities and services, natural gas procurement, intrastate pipelines, and intrastate production and gathering. It works to provide opportunities for competition when, in the interest of consumers, it takes the lead in environmental review of natural gas–related projects, recognizes the growing interaction of electric and gas markets, and monitors gas energy efficiency and other public purpose programs.

3.18.3.3 Regional

Water

Integrated Regional Water Management Plans

IRWMPs define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMPs generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. They address the challenges for delivering a stable and clean supply of water for the public, addressing stormwater and urban runoff water quality, providing flood protection, meeting water

infrastructure needs, maximizing the use of reclaimed water, enhancing water conservation, and promoting environmental stewardship. During the planning process, all stakeholders, including water distributors and purveyors, regional waterworks and sanitation districts, local public works departments, environmental organizations, non-profits, and other vested interests, work together to develop common goals, objectives, and strategies. Because water-related issues are addressed on a regional, watershed basis, these plans are instrumental in building consensus among the various stakeholders in the development and prioritization of an action plan that is complementary and leverages interjurisdictional cooperation, resources, and available funding. There are four IRWMP regions in Los Angeles County:

- Antelope Valley
- Upper Santa Clara River
- Greater Los Angeles County
- Los Angeles Gateway Region

The Greater Los Angeles County IRWMP reflects the Greater Los Angeles County Region's collaborative efforts to ensure a sustainable water supply through the more efficient use of water, the protection and improvement of water quality, and environmental stewardship. The plan integrates water supply, water quality, flood management, and open space strategies to maximize the utilization of local water resources. The region includes approximately 10 million residents, portions of four counties, and 84 cities. To make governance and stakeholder involvement manageable, the region is organized into subregions: Lower San Gabriel River and LA River, North Santa Monica Bay, South Bay, Upper LA River, and Upper San Gabriel and Rio Hondo Rivers (Leadership Committee of Greater Los Angeles County Integrated Regional Water Management Region 2014).

Metropolitan Water District of Southern California Integrated Water Resources Plan

MWD imports supplies from both the Colorado River and Northern California via the SWP while investing in a variety of storage, local supply, and conservation initiatives. The 2015 IWRP Update was adopted by MWD's board of directors in January 2016. The 2015 IRP Update reliability targets identify developments in imported and local water supply and in water conservation that, if successful, would provide a future without water shortages and mandatory restrictions under planned conditions. For imported supplies, MWD looks to make investments in additional partnerships and initiatives to maximize Colorado River Aqueduct deliveries in dry years. On the SWP, MWD is looking to make ecologically sound infrastructure investments so that the water system can capture sufficient supplies to help meet average year demands and to refill MWD's storage network in above-average and wet years. Lowering regional residential per-capita demand by 20 percent by the year 2020 (compared to a baseline established in 2009 state legislation), reducing water use from outdoor landscapes, and advancing additional local supplies are among the planned actions to keep supplies and demands in balance.

Los Angeles County Integrated Waste Management Plan

The California Integrated Waste Management Act (AB 939) mandates jurisdictions to meet a diversion goal of 50 percent by 2000 and thereafter. In addition, each county is required to prepare

and administer a Countywide Integrated Waste Management Plan. This plan is composed of the counties' and the cities' solid waste reduction planning documents, an Integrated Waste Management Summary Plan, and a Countywide Siting Element. In order to assess a jurisdiction's compliance with AB 939, the Disposal Reporting System was established to measure the amount of disposal from each jurisdiction and determine if it has met the goals.

Los Angeles County General Plan

The Conservation and Natural Resources Element of the *Los Angeles County General Plan* serves to augment the protection, conservation, and preservation of natural resource and open space areas in the County. This element addresses Open Space Resources, Biological Resources, Local Water Resources, Agricultural Resources, Mineral and Energy Resources, Scenic Resources, and Historical, Cultural and Paleontological Resources (Los Angeles County 2015). The primary goals for the Local Water Resources component are to protect and use local surface water, groundwater, and watershed resources. This is proposed to be done through a combination of goals and policies in the Conservation and Natural Resources Element. These include, but are not limited to, minimizing water pollution; actively engaging with stakeholders in the formulation and implementation of surface water preservation and restoration plans, river master plans, restoration projects, and other natural resource conservation aims; requiring compliance by all County departments with adopted Municipal Separate Storm Sewer System, General Construction, and point source NPDES permits; actively supporting the design of new and retrofit of existing infrastructure to accommodate watershed protection goals; protecting natural groundwater recharge areas and regional spreading grounds; preventing stormwater infiltration where inappropriate and unsafe; and promoting the development of multi-use regional facilities for stormwater quality improvement, groundwater recharge, detention/attenuation, flood management, retaining non-stormwater runoff, and other compatible uses (Los Angeles County 2015).

Table 3.18-22 summarizes the goals, objectives, or policies that are relevant to utilities and service systems.

Table 3.18-22. Los Angeles County General Plan Goals, Objectives, and Policies

Element	Goal, Objective, or Policy
Conservation and Natural Resources Element	• **Policy C/NR 5.5:** Manage the placement and use of septic systems in order to protect nearby surface water bodies. • **Policy C/NR 5.6:** Minimize point and non-point source water pollution. • **Policy C/NR 5.7:** Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other tributary street and greenway interface points with channelized waterways. • **Policy C/NR 6.1:** Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development. • **Policy C/NR 6.2:** Protect natural groundwater recharge areas and regional spreading grounds. • **Policy C/NR 6.3:** Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at regional, neighborhood, infrastructure, and parcel-level scales.

Element	Goal, Objective, or Policy
	• **Policy C/NR 6.4:** Manage the placement and use of septic systems in order to protect high groundwater. • **Policy C/NR 6.5:** Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils. • **Policy C/NR 7.1:** Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design. • **Policy C/NR 7.2:** Support the preservation, restoration and strategic acquisition of available land for open space to preserve watershed uplands, natural streams, drainage paths, wetlands, and rivers, which are necessary for the healthy function of watersheds. • **Policy C/NR 7.3:** Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans, ecosystem restoration projects, and other related natural resource conservation aims, and support the implementation of existing efforts, including Watershed Management Programs and Enhanced Watershed Management Programs. • **Policy C/NR 7.4:** Promote the development of multi-use regional facilities for stormwater quality improvement, groundwater recharge, detention/attenuation, flood management, retaining non-stormwater runoff, and other compatible uses. • **Policy C/NR 12.1:** Encourage the production and use of renewable energy resources. • **Policy C/NR 12.2:** Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands. • **Policy C/NR12.3:** Encourage distributed systems that use existing infrastructure and reduce environmental impacts.
Public Services and Facilities Element	• **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities. • **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms. • **Policy PS/F 1.3:** Ensure coordinated service provision through collaboration between County departments and service providers. • **Policy PS/F 2.1:** Support water conservation measures. • **Policy PS/F 2.2:** Support educational outreach efforts that discourage wasteful water consumption. • **Policy PS/F 3.1:** Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting. • **Policy PS/F 3.2:** Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses. • **Policy PS/F 4.4:** Evaluate the potential for treating stormwater runoff in wastewater management systems or through other similar systems and methods.

Element	Goal, Objective, or Policy
	• **Policy PS/F 5.5:** Reduce the County's waste stream by minimizing waste generation and enhancing diversion. • **Policy PS/F 5.6:** Encourage the use and procurement of recyclable and biodegradable materials. • **Policy PS/F 5.7:** Encourage the recycling of construction and demolition debris generated by public and private projects.

Source: Los Angeles County 2015.

3.18.3.4 Local

Water

City of Los Angeles Executive Directive No. 5

City of Los Angeles Executive Directive No. 5 commits to reducing per-capita use, reducing LADWP's purchase of imported potable water by 50 percent by 2024, and creating an integrated water strategy to increase local water supplies and improve water security in the context of climate change and seismic vulnerability.

City of Los Angeles Water Integrated Resources Plan

Prepared jointly by LASAN and LADWP, the City of Los Angeles adopted its Water IRP in 2006. It contains an implementable facilities plan through the year 2020 that integrates water supply, water conservation, water recycling, runoff management, and wastewater facilities planning using a regional watershed approach. The adopted IRP contains recommendations that would be achieved through a series of projects and policy directions to staff. The *One Water LA 2040 Plan* (see below) extended the planning horizon of the IWRP from 2020 to 2040.

City of Los Angeles Emergency Water Conservation Plan (Ordinance No. 181288)

The City of Los Angeles adopted Ordinance No. 181288 (amendment to Chapter XII, Article I of the Los Angeles Municipal Code) to clarify prohibited uses and modify certain water conservation requirements of the City of Los Angeles Emergency Water Conservation Plan. The purpose of the ordinance is to minimize the effect of a water shortage on the customers of the City of Los Angeles and to adopt provisions that will significantly reduce water consumption over an extended period of time.

The revised Water Conservation Ordinance contains five water conservation "phases," which correspond to severity of water shortage, with each increase in phase requiring more stringent conservation measures. Water conservation phases define outdoor watering restrictions, as appropriate, including sprinkler use restrictions and other prohibited water uses.

One Water LA 2040 Plan

The *One Water LA 2040 Plan* (City of Los Angeles 2018a) takes a holistic and collaborative approach to consider all of the City of Los Angeles's water resources—including surface water, groundwater, potable water, wastewater, recycled water, dry-weather runoff, and stormwater—as "One Water." Also, the *One Water LA 2040 Plan* identifies multi-departmental and multi-agency integration

opportunities to manage water in a more efficient, cost-effective, and sustainable manner. The *One Water LA 2040 Plan* represents the City of Los Angeles's continued and improved commitment to proactively manage all its water resources and implement innovative solutions, driven by the pLAn. The *One Water LA 2040 Plan* will help guide strategic decisions for integrated water projects, programs, and policies within the City of Los Angeles.

Los Angeles Department of Water and Power Urban Water Management Plan

In June 2016, LADWP, which is the water supplier to the project site, approved the 2015 UWMP for the Los Angeles metropolitan area. The 2015 UWMP builds upon the goals and progress made in the 2010 UWMP and continues to serve as the City of Los Angeles' master plan for reliable water supply and resources management. The 2015 UWMP is based on a 25-year planning horizon through 2040. Updates to the 2015 UWMP are consistent with the City of Los Angeles's goals and policy objectives for reliable water supply, such as the Mayor's Executive Directive No. 5 and the pLAn. The development of additional local supplies to reduce the City of Los Angeles's future dependence on purchased imported supplies is based on recommendations from prior program-level planning initiatives. These include the Recycled Water Master Documents, Groundwater System Improvement Study, Stormwater Capture Master Plan, and Conservation Potential Study. These documents are used to develop an IRWMP. The IRWMP projects water demand and supplies through 2040.

Energy

City of Los Angeles Sustainable City pLAn (Green New Deal)

On April 8, 2015, the pLAn was released establishing short-term and long-term targets for the city over the next 20 years in 14 categories to strengthen and promote sustainability of the environment, economy, and equity in Los Angeles. This plan charts a course for Los Angeles's emission-reduction targets, which calls for cutting GHG emissions to 50 percent below 1990 levels by 2025 and 73 percent below 1990 levels by 2035, and becoming carbon neutral by 2050. By following the 2019 Green New Deal Pathway, the City of Los Angeles cuts an additional 30 percent in GHG emissions above and beyond the 2015 pLAn and ensures that it stays within its carbon budget between now and 2050. The plan commits to LADWP supplying 55 percent renewable energy by 2025, 80 percent by 2036, and 100 percent by 2045. Further commitments are to increase cumulative energy by way of local solar, energy storage capacity, and demand-response programs.

Targets for water conservation in Los Angeles include sourcing 70 percent of the City of Los Angeles's water locally and capturing 150,000 AFY of stormwater by 2035, recycling 100 percent of all wastewater by 2035, and reducing potable water use per capita by 2035 and maintaining this level through 2050.

The pLAn also includes targets for increasing the use of electric and zero-emission vehicles to 100 percent by 2050, electrification of 100 percent of Los Angeles County Metropolitan Transportation Authority and Los Angeles Department of Transportation buses by 2030, and reducing port-related GHG emissions by 80 percent by 2050. The plan sets a target for 90 percent diversion of solid waste from landfills by 2025 as well as measures to reduce the urban heat-island effect.

LADWP Power Integrated Resources Plan

LADWP is responsible for the construction, operation, maintenance, and management of electric works and property for the benefit of the city and its habitats. The goal of the Power IRP is to identify a portfolio of generation resources and power system assets that meets the city's future energy needs at the lowest cost and risk consistent with LADWP's environmental priorities and reliability standards (LADWP 2015b). The 2015 Power IRP provides a 20-year framework to ensure that current and future energy needs of the city can be met over the next 20 years.

The Power IRP provides objectives and recommendations to reliably supply LADWP customers with power and to meet SB 1078's 33 percent renewable energy goal by 2020.

2018 Resilient Los Angeles Strategy

Los Angeles was selected as an inaugural member of the 100 Resilient Cities Network in 2013. This global network, pioneered by the Rockefeller Foundation, helps member cities around the world become more resilient to the physical, social, and economic challenges of the 21st century. *Resilient Los Angeles* (City of Los Angeles 2018b) is a plan that includes strategies to help Los Angeles fortify its infrastructure, protect the economy, and make the city safer. *Resilient Los Angeles* also includes the goal of strengthening the bonds of community in the City of Los Angeles's neighborhoods and reinforcing universal values like inclusion and respect.

Wastewater

City of Los Angeles Sewer Allocation (Ordinance No. 166060)

City Ordinance No. 166,060 (Sewer Allocation) limits the annual increase in wastewater flows discharged into the Hyperion Treatment Plant to 5 mgd. The Public Works Bureau of Engineering Special Order No. SO06-0691 changed the design peak dry-weather flow for sanitary sewers from three-quarter depth to one-half the sewer diameter to implement the City of Los Angeles–adopted goal of no overflows or diversions from the wastewater collection system.

City of Los Angeles Sewer System Management Plan

On May 2, 2006, SWRCB adopted the Statewide General Waste Discharge Requirements for publicly owned sanitary sewer systems. Under the Waste Discharge Requirements, the owners of such systems must implement a written SSMP and make it available to the public.

Los Angeles has one of the largest sewer systems in the world, including more than 6,600 miles of sewers serving a population of more than 4 million in its three sanitary sewer systems. To comply with the Waste Discharge Requirements, an SSMP was prepared for each of the city's three sanitary sewer systems. The SSMP is a well-integrated plan with each element designed to complement and support the others. Each year the sewer system management performance goals are set through the annual strategic planning process, the deliverables required to meet goals are defined and prioritized, the lead and support offices and resources are assigned, and progress is measured and reported on to ensure meeting or exceeding goals. Operations and maintenance program elements are tracked on a monthly basis through the City of Los Angeles's operational performance management system. Overall sewer system management performance is evaluated and reported to management monthly, quarterly, and annually following the end of each fiscal year. Any SSMP

updates necessary to enhance sewer system management performance are identified and become a part of the following year's Five-Year Strategic Planning process.

Solid Waste

City of Los Angeles Industrial Waste Control Ordinance

The Industrial Waste Management Division of LASAN was established to protect the local receiving waters by regulating industrial wastewater discharge to the city's sewer system and by administering and enforcing the Industrial Waste Control Ordinance (Los Angeles Municipal Code Section 64.30) as well as federal U.S. EPA pretreatment regulations.

Industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the city's sewage collection and treatment system are required to first obtain an industrial wastewater permit. Permits are issued when a determination has been made by the Board of Public Works for the City of Los Angeles that the wastewater to be discharged will not violate any provisions of the ordinance, the board's Rules and Regulations, the water quality objectives for receiving waters established by the Los Angeles Regional Water Quality Control Board, or applicable federal or State statutes, rules, or regulations.

All Utilities

City of Los Angeles General Plan

The *City of Los Angeles General Plan* is a comprehensive, long-term declaration of purposes, policies, and programs for the development of the City of Los Angeles. It sets forth goals, objectives, and programs to provide a guideline for day-to-day land use policies and meet the existing and future needs and desires of the community while integrating a range of state-mandated elements, including transportation, noise, safety, housing, and conservation. Table 3.18-23 lists goals, objectives, or policies relevant to utilities and service systems.

Table 3.18-23. City of Los Angeles General Plan Goals, Objectives, and Policies in Frames 1 and 5 through 9

Element	Goals, Policies, or Objectives
General Plan Framework	**Objective 3.3** Accommodate projected population and employment growth within the City and each community plan area and plan for the provision of adequate supporting transportation and utility infrastructure and public services. • **Policy 3.3.2** Monitor population, development, and infrastructure and service capacities within the City and each community plan area, or other pertinent service area. The results of this monitoring effort will be annually reported to the City Council and shall be used in part as a basis to: o Determine the need and establish programs for infrastructure and public service investments to accommodate development in areas in which economic development is desired and for which growth is focused by the General Plan Framework Element. o d. Consider regulating the type, location, and/or timing of development, when all of the preceding steps have been

Element	Goals, Policies, or Objectives
	completed, additional infrastructure and services have been provided, and there remains inadequate public infrastructure or service to support land use development. **Objective 9.2** Maintain the wastewater collection and treatment system, upgrade it to mitigate current deficiencies, and improve it to keep pace with growth as measured by the City's monitoring and forecasting efforts. • **Policy 9.2.1** Collect and treat wastewater as required by law and Federal, State, and regional regulatory agencies. • **Policy 9.2.2** Maintain wastewater treatment capacity commensurate with population and industrial needs. • **Policy 9.2.3** Provide for additional wastewater treatment capacity in the Hyperion Service Area (HSA), as it becomes necessary. • **Policy 9.2.4** Continue to implement programs to upgrade the wastewater collection system to mitigate existing deficiencies and accommodate the needs of growth and development. • **Policy 9.2.5** Review other means of expanding the wastewater system's capacity. **Objective 9.5** Ensure that all properties are protected from flood hazards in accordance with applicable standards and that existing drainage systems are adequately maintained. • **Policy 9.5.1** Develop a stormwater management system that has adequate capacity to protect its citizens and property from flooding which results from a 10-year storm (or a 50-year storm in sump areas). **Objective 9.9** Manage and expand the City's water resources, storage facilities, and water lines to accommodate projected population increases and new or expanded industries and businesses. • **Policy 9.9.1** Pursue all economically efficient water conservation measures at the local and statewide level. • **Policy 9.9.7** Incorporate water conservation practices in the design of new projects so as not to impede the City's ability to supply water to its other users or overdraft its groundwater basins. **Objective 9.10** Ensure that water supply, storage, and delivery systems are adequate to support planned development. • **Policy 9.10.1** Evaluate the water system's capability to meet water demand resulting from the Framework Element's land use patterns. **Objective 9.12** Support integrated solid waste management efforts. • **Policy 9.12.2** Establish citywide diversion objectives. **Objective 9.26** Monitor and forecast the electricity power needs of Los Angeles' residents, industries, and businesses. • **Policy 9.26.1** The Los Angeles Department of Water and Power (LADWP) shall continue to monitor and forecast its customers' peak load on its system and identify which parts of the system should be upgraded to accommodate expected growth. **Objective 9.27** Continue to ensure that all electric power customers will receive a dependable supply of electricity at competitive rates. • **Policy 9.27.1** The LADWP shall continue to generate or purchase electric power to serve its customers.

Element	Goals, Policies, or Objectives
	Objective 9.28 Provide adequate power supply transmission and distribution facilities to accommodate existing uses and projected growth. • **Policy 9.28.1** The LADWP shall continue to plan its power supply capability far enough in advance to ensure that it has available capacity to meet customer demand before it is needed. • **Policy 9.28.2** The LADWP shall continue to ensure that the City's transmission and distribution system is able to accommodate future peak electric demand for its customers. • **Policy 9.28.3** The LADWP shall continue to advise the Planning and Building and Safety Departments of any construction project that would overload a part of the distribution system during a period of peak demand. **Objective 9.29** Provide electricity in a manner that demonstrates a commitment to environmental principals, ensures maximum customer value, and is consistent with industry standards. • **Policy 9.29.3** Promote conservation and energy efficiency to the maximum extent that is cost effective and practical, including potential retrofitting when considering significant expansion of existing structures.
Community Plans (Land Use Element)	
Boyle Heights (Frame 5)	The Boyle Heights Community Plan does not contain specific policies or objectives specifically relevant to utilities.
Canoga Park-Winnetka-Woodland Hills-West Hills (Frame 9)	• **Policy 1-5.2** Ensure the availability of adequate sewers, drainage facilities, fire protection services and facilities and other public utilities to support development within hillside areas.
Central City (Frame 5)	The Central City Community Plan does not contain specific policies or objectives specifically relevant to utilities.
Central City North (Frame 5)	The Central City North Community Plan does not contain specific policies or objectives specifically relevant to utilities.
Encino-Tarzana (Frames 8 and 9)	• **Policy 1-5.2** Ensure the availability of adequate sewers, drainage facilities, fire protection services and facilities and other public utilities to support development within hillside areas.
Hollywood (Frames 6 and 7)	• **Policy** 3. In hillside residential areas to: o b. Provide a standard of land use intensity and population density which will be compatible with street capacity, public service facilities and utilities, and topography and in coordination with development in the remainder of the City. • **Policy 5.** To provide a basis for the location and programming of public services and utilities and to coordinate the phasing of public facilities with private development. To encourage open space and parks in both local neighborhoods and in high density areas. Standards and Criteria The intensity of residential land use in this Plan and the density of the population which can be accommodated thereon, shall be limited in accordance with the following criteria:

Element	Goals, Policies, or Objectives
	○ The adequacy of the existing and assured circulation and public transportation systems within the area; ○ The availability of sewers, drainage facilities, fire protection services and facilities, and other public utilities;
North Hollywood-Valley Village (Frames 7 and 8)	The North Hollywood-Valley Village Community Plan does not contain specific policies or objectives specifically relevant to utilities.
Northeast Los Angeles (Frames 5 and 6)	• **Policy 1-5.2** Ensure the availability of paved streets, adequate sewers, drainage facilities, fire protection services and facilities, and other emergency services and public utilities to support development in hillside areas.
Reseda – West Van Nuys (Frame 9)	The Reseda-West Van Nuys Community Plan does not contain specific policies or objectives specifically relevant to utilities.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass (Frames 7 and 8)	• **Policy 1-5.2** Ensure the availability of adequate sewers, drainage facilities, fire protection services and facilities and other public utilities to support development within hillside areas.
Silver Lake-Echo Park-Elysian Valley (Frame 6)	• **Policy 1-6.2** Ensure the availability of adequate sewers, drainage facilities, fire protection services and facilities and other public utilities to support development within hillside areas.
Van Nuys-North Sherman Oaks (Frame 8)	The Van Nuys-North Sherman Oaks Community Plan does not contain specific policies or objectives specifically relevant to utilities.

Source: City of Los Angeles 1995, 1996, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 2000, 2003, 2004, 2014b.

Other Jurisdictions

Table 3.18-24 summarizes policies and objectives relevant to the proposed Project. The table is organized by the jurisdictions from south to north, as represented in Frames 1 through 9.

Table 3.18-24. Other General Plan Policies and Objectives

Jurisdiction	Policies and Objectives
City of Long Beach (Frames 1, 2)	**Conservation Element** *Water Resource Management Goals* 1. To assure adequate quantity and quality of water to meet the present and future domestic, agricultural and industrial needs of the City. 2. To enforce existing ordinances and develop new ordinances and promote continuing research directed toward achieving the required stringent water quality standards which regulate wastewater effluent discharge to ocean waters, bays and estuaries, fresh waters and groundwater. 5. To maintain, upgrade, and improve wastewater systems and facilities serving Long Beach. 6. To develop a comprehensive City-wide water supply and management program which utilizes water from all sources including groundwater. **Land Use Element** • **LU Policy 17-1:** Coordinate land use development and infrastructure investment. • **LU Policy 17-2:** Maintain adequate and sustainable infrastructure systems to protect the health and safety of all Long Beach residents, businesses, institutions and regional-serving facilities.

Jurisdiction	Policies and Objectives
	• **LU Policy 17-3:** Prioritize improvements in underserved neighborhoods to remedy deficiencies in infrastructure, public facilities and services. • **LU Policy 20-9:** Recycle or beneficially reuse a majority and growing proportion of the City's wastewater supply. • **LU Policy 20-10:** Seek to supply a majority and growing proportion of the City's water for both domestic and non-potable demand through use of reclaimed and recharged groundwater sources by 2030. • **LU Policy 20-11**: Coordinate with other agencies to reduce stormwater runoff by capturing runoff for groundwater recharge, irrigation and recycling purposes. • **LU Policy 21-6:** Promote green infrastructure systems to preserve natural resources and to clean and filter out toxins from water bodies. **Mobility Element** • **MOP Policy 5-1:** Incorporate "green infrastructure" design and similar low impact development principles for stormwater management and landscaping in streets. • **MOG Policy 16-4:** Implement innovative and environmentally responsible solutions for local and regional infrastructure needs. • **MOR Policy 18-1:** Encourage residents and businesses to install solar and wind power systems. • **MOR Policy 19-2:** Ensure that development is appropriate and in scale with current and planned infrastructure capabilities. • **MOR Policy 19-3:** Promote water-efficient fixtures and appliances to reduce water demand. • **MOR Policy 19-4:** Expand the use of water recycling and graywater systems to treat and recycle wastewater and to further reduce water demand related to irrigation of landscaped areas. • **MOR Policy 19-5:** Implement low-impact development techniques to reduce and improve the quality of stormwater runoff. **Urban Design Element** • **Policy UD 1-2:** Focus development and supporting infrastructure improvements within targeted Areas of Change identified within the Land Use Element. • **Policy UD 5-5:** Accommodate space for the use of rooftop solar panels and other forms of renewable energy on buildings, underutilized sites, utility plants, and parking facilities through a simplified permitting process, wherever feasible. • **Policy UD 5-6:** Encourage the establishment of electric vehicle charge points and other alternative fuel accommodations at new public and private projects and suitable locations throughout the City. • **Policy UD 5-7:** Collect and filter "first flush" stormwater with innovative parkways, naturalized drainage swales, green drainage systems, bioswales, and planter boxes in order to minimize run-off. • **Policy UD 6-1:** Prioritize improvements to remedying infrastructure, public facilities, and service deficiencies to underserved neighborhoods and business hubs.

Jurisdiction	Policies and Objectives
	• **Policy UD 6-3:** Maintain adequate and sustainable infrastructure systems to protect and enhance the health and safety of all Long Beach residents, businesses, institutions, and regional serving facilities. • **Policy UD 6-4:** Promote sustainability through the use of new technologies and green infrastructure to upgrade city infrastructure systems and equipment. Prioritize areas to retrofit with green infrastructure, Low Impact Development, and Best Stormwater Management Practices. • **Policy UD 6-5:** Ensure buildings meet the City's requirements for sustainability and green development, both for construction and operation. • **Policy UD 31-7:** Ensure landscaping for new projects complies with Title 23, Chapter 2.7 of the California Code of Regulations, Model for Water Efficient Landscape Ordinance • **Policy UD 31-8:** Incorporate water conservation methods, such as regular adjustment of irrigation controllers, irrigation scheduling based on plant water needs, preventing overspray, water-efficient landscape designs using low water-use plants, efficient irrigation systems, minimize turf areas, soil improvement and mulch, watering during early or late hours, and water budgeting using Water Use Classification of Landscape Species (WUCOLS) to reduce the amount of water used in a landscape. • **Policy UD 39-7:** Consider providing bioswales, pervious strips, flow-through planters, and pervious pavement to help infiltrate stormwater runoff before it enters the sewer system.
City of Carson (Frame 2)	**Land Use Element** • **LU-13.3** Continue and, when possible, accelerate the undergrounding of utility lines throughout the City. • **LU-15.7** Provide for the efficient use of water through the use of natural drainage, drought-tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures. **Transportation and Infrastructure Element** • **TI-8.1** Continue to maintain, improve and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community. • **TI-8.2** As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of use, as well as existing uses. • **TI-10.3** Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs. • **TI-10.4** Ensure that construction of new civic facilities have state of the art technologies. **Housing Element** • **Policy 2.5:** Continue to improve streets, drainage, sidewalks, alleys, street trees, parks and other public amenities and infrastructure. **Safety Element** • **SAF-2.1** Continue to maintain and improve levels of storm drainage service.

Jurisdiction	Policies and Objectives
	• **SAF-2.2** Continue to work with the appropriate local, State and Federal agencies (i.e., Los Angeles County Department of Public Works, Caltrans, Federal Emergency Management Agency, etc.) to reduce the potential for flood damage in the City of Carson. • **SAF-2.3** Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with Los Angeles County Department of Public Works and other cities in the South Bay region to ensure that facilities are adequate to accommodate storm waters. • **SAF-2.4** As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses. • **SAF-2.5** Periodically review and recommend appropriate changes to the Los Angeles County Department of Public Works for the Storm Drainage Master Plan for Los Angeles County. **Open Space and Conservation Element** • **OSC-1.5** Utilize electric transmission and other utility corridors for greenbelt and recreational uses where appropriate. • **OSC-2.3** Conserve the water supply available to the City and promote water conservation in the management of public properties. • **OSC-3.2** Support the development of alternative sources of energy such as roof-mounted solar panels, fuel cells or new technology. • **OSC-3.3** Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments. • **OSC-3.4** Support energy conservation via alternative forms of transportation. • **OSC-4.1** Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and state regulations. • **OSC-4.3** Facilitate physical collection of recyclable waste.
City of Compton (Frames 2 and 3)	**Conservation, Open Space, and Recreation Element** • **Conservation, Open Space, and Recreation Policy 1.1.** The City of Compton will protect groundwater resources from depletion and contamination. • **Conservation, Open Space, and Recreation Policy 1.2.** The City of Compton will conserve imported water by educating residents and businesses about water conservation techniques. • **Conservation, Open Space, and Recreation Policy 1.3.** The City of Compton will utilize drought-resistant landscaping where feasible. **Public Safety Element** • **Public Safety Policy 2.1.** The City of Compton will work with the Los Angeles County Department of Public Works to identify and construct needed local and regional storm drain improvements to prevent flooding problems in Compton.

Jurisdiction	Policies and Objectives
	• **Public Safety Policy 2.2.** The City of Compton will require local drainage-related improvements as part of new development approvals. **Urban Design Element** • **Urban Design Policy 3.2.** The City of Compton will identify and prioritize public infrastructure revitalization and beautification projects and will implement them according to these priorities.
City of Cudahy (Frame 3)	**Circulation Element** • **Policy CE-5.1:** Work with the owning/operating sewer, water, and storm drain agencies to ensure adequate maintenance and regulatory compliance. • **Policy CE-5.2:** Comply with County DWP's requirement for project specific hydraulic analysis on the existing storm drain system for all new developments and redevelopments through a formal plan check process. • **Policy CE-5.3:** Ensure new projects comply with the Los Angeles County MS4 permit. • **Policy CE-5.4:** Encourage use of onsite Best Management Practices (BMPs) or biofiltration to treat storm water for project sites where infiltration is infeasible. • **Policy CE-5.5:** Comply with LA County Fire Department requirements for projects that propose increases in land use density. **Open Space and Conservation** • **Policy OSCE-1.1:** Support the creation of a recycled water system and actively promote its use. • **Policy OSCE-1.2:** Promote water conservation in all land uses and in City practices. • **Policy OSCE-1.3:** Promote sustainable landscaping practices that help conserve energy and reduce water consumption. • **Policy OSCE-1.4:** Fulfill the Cal Green Building Code's voluntary tiers in constructing public buildings, when feasible. • **Policy OSCE-1.7:** Integrate stormwater treatment best practices—including bioswales, pervious pavement—wherever possible, especially in landscaping and parking lot design. • **Policy OSCE-1.8:** Incorporate Low Impact Development (LID) approaches into the design and upgrades of public infrastructure. • **Policy OSCE-1.10:** Reduce the visual impact of aboveground and overhead utilities, including electric lines, by working with SCE to maximize opportunities to place utilities underground, and requiring the placement of utilities underground for new development. • **Policy OSCE-1.11:** Strengthen requirements for underground utilities in older sections of the city as part of redevelopment projects to address public safety issues and to improve the aesthetic quality of streets and neighborhoods. • **Policy OSCE-1.12:** Take a leading role in waste reduction by promoting recycling and composting, purchasing postconsumer recycled products for City facilities, using recycled materials in City operations, and reducing the overall amount of solid waste produced.

Jurisdiction	Policies and Objectives
	• **Policy OSCE-1.13:** Encourage recycling, composting, and source reduction by residential and nonresidential sources in Cudahy. • **Policy OSCE-1.14:** Meet or exceed State mandates regarding the diversion of waste from landfills. • **Policy OSCE-4.1:** Coordinate with the owning/operating sewer, water, and storm drain agencies to ensure adequate maintenance and regulatory compliance. • **Policy OSCE-4.3:** Encourage use of onsite Best Management Practices (BMPs) or biofiltration to treat storm water for project sites where infiltration is infeasible. • **Policy ED-1.11:** Improve infrastructure and public facilities in targeted areas where necessary to support economic development. **Safety Element** • **Policy SE-4.3:** Prioritize improvements to Cudahy's storm water management systems (storm drain improvements, reduction of impervious surfaces, etc.) to better serve areas prone to intermittent flooding. • **Policy SE-4.4:** Require improvements to be made to utility transmission and distribution systems including electrical, gas, water, wastewater, and storm drainage, thus accommodating new growth and ensuring that maintenance is performed on these systems in a manner that provides safety, reliability, and environmental compatibility. **Air Quality Element** • **Policy AQE-4.1:** Adopt a citywide benchmark goal to divert 75% of annual waste away from landfills by 2025; track annual progress. • **Policy AQE-4.2**: Develop a minimum 50% diversion rate requirement for construction and demolition projects. • **Policy AQE-4.3** Increase composting, recycling, and efforts to reduce waste generation, focusing especially on large commercial and industrial waste producers, but also accommodating the needs of residents in multi-unit housing.
City of Downey (Frame 3)	• **Policy 2.7.1.** Provide adequate utility and communications infrastructure. • **Policy 4.1.1** Promote conservation of water resources. • **Policy 4.1.2.** Maintain the water supply system to meet water demands. • **Policy 4.6.1** Promote the conservation of energy by residents and businesses to conserve energy. • **Policy 4.6.2.** Reduce energy consumption by City operations. • **Policy 4.7.1.** Reduce the amount of solid waste generated within the City.
City of Lynwood (Frame 3)	• **DW-1.1 Domestic Water Supply:** The City shall provide an adequate supply of domestic water needed to meet current City demand and future developments • **DW-1.3 Water Conservation:** The City shall require that water conservation measures be implemented into all construction projects • **DW-1.4 Reclaimed Water:** The City shall encourage the use of reclaimed water.

Jurisdiction	Policies and Objectives
	• **WCT-1.1 Adequate Service Capacity:** The City shall work to ensure that an adequate wastewater collection and treatment system is available to service current demand and future developments. • **WCT-1.2 Treatment Plant Operations:** The City shall work with the County of Los Angeles and to maintain and operate their wastewater facilities in a manner that does not jeopardize the public's health, safety, or welfare. • **WCT-1.4 Reclaimed Water:** The City shall work with the County of Los Angeles to pursue opportunities for the use of reclaimed wastewater. • **SD-1.1 Adequate Facilities:** The City shall provide storm drain facilities with sufficient capacity to protect the public and property from stormwater damage. • **SD-1.3 Facilities Management:** The City shall manage flood control facilities in accordance with local state and federal guidelines. • **ELC-1.1 Adequate Service Capacity:** Ensure adequate low-cost electricity is available to service current demand and future developments. • **ELC-1.2 Safe Facilities:** Ensure that electrical facilities are safe and nonintrusive to the community. • **GAS 1.1 Adequate Service Capacity:** The City shall work with Southern California Gas Company SCG to ensure that adequate low-cost gas service is available to meet existing demand and service future projects • **SW-1.1 Adequate Services:** The City shall work with Western Waste to ensure low-cost refuse disposal is available for residential industrial and commercial properties.
City of Paramount (Frame 3)	• **Resource Management Element Policy 14.** The City of Paramount will negotiate agreements with the Southern California Edison Company, the Los Angeles Department of Water and Power, the Port of Los Angeles, the Union Pacific Railroad, the MTA, and the Los Angeles County Flood Control District for the establishment of trails, recreational use, and appropriate landscaping within their respective rights-of-way. • **Economic Development Element Policy 14.** The City of Paramount will continue to improve the infrastructure in those areas that are deficient in infrastructure. • **Public Facilities Element Policy 2.** The City of Paramount will provide water storage and delivery capacity to meet normal usage and fire requirements. • **Public Facilities Element Policy 4.** The City of Paramount will protect, conserve, and enhance water resources through implementation of the Water Master Plan. • **Public Facilities Element Policy 5.** The City of Paramount will maintain economical and responsive solid waste collection and disposal services for its residents. • **Public Facilities Element Policy 6.** The City of Paramount will require solid waste collection, disposal, and recycling techniques to be undertaken in such a manner so as to reduce noise and other adverse effects.

Jurisdiction	Policies and Objectives
	• **Public Facilities Element Policy 7.** The City of Paramount will continue to implement its recycling and waste reduction programs as a means to comply with the AB 939 requirements. • **Public Facilities Element Policy 8.** The City of Paramount will provide adequate sewage service to ensure that waste disposal practices are in accordance with policies and procedures of the Sanitation Districts of Los Angeles County.
City of South Gate (Frame 3)	**Community Design Element** **Objective CD 2.6**: Ensure that existing and future development is adequately serviced by infrastructure and public services. • **P.1** The approval of new development projects will be expedited for projects that best meet General Plan goals and design guidelines, and that provide supporting infrastructure and public services that contribute to an overall improvement to the quality of life in the City. • **P.2** New development should pay its fair share of required improvements to public facilities and services. • **P.3** Infrastructure should be in place or planned prior to approval of new development projects that requires such infrastructure. **Green City Element** **Objective GC 6.1**: Increase the use of green techniques in new buildings, new building sites and building remodels and retrofits. • **P.4** The City should emphasize design for water conservation in its green building efforts. • **P.5** New buildings should meet or exceed California Title 24 energy efficiency requirements. • **P.6** When feasible or required by law, new development should utilize Low Impact Design (LID) features, including infiltration of stormwater, but LID should not interfere with the City's goals of infill development and appropriate densities as defined in the Community Design Element. **Public Facilities Element** **Objective PF 4.1**: Reduce the volume of solid waste generated in South Gate through recycling and resource conservation. • **P.1** The City will meet or exceed the State's goal of diverting 50 percent of all solid waste from landfills by 2010 and adjust the percentage of diversion as mandated by the State. **Objective PF 5.1**: Ensure that a reliable water supply can be provided within the City's service area, while remaining sensitive to the climate. • **P.1** The City will maintain water storage, distribution and treatment infrastructure in good working condition in order to supply domestic water to all users with adequate quantities, flow and pressure. • **P.2** The City will promote water conservation by implementing the recommendations of the Urban Water Management Plan. • **P.3** The City will support the efforts of the Central Basin Municipal Water District to expand the use of recycled water in the City. • **P.4** Water distribution infrastructure will be replaced as needed to improve water delivery and fire flow as well as to maintain healthy and safe drinking water for all residents and businesses. To the extent feasible, the

Jurisdiction	Policies and Objectives
	replacement should be concurrent with major infrastructure or development projects within the City. **Objective PF 5.2**: Promote water conservation and increase the use of reclaimed and recycled water. • **P.1** The City will seek to build an integrated, extensive system of reclaimed and recycled water. • **P.2** As existing water distribution infrastructure is replaced, the City should consider adding recycled water distribution systems to minimize construction costs. • **P.3** Recycled and reclaimed water should be used in City-owned parks, plazas, landscaped medians and other public spaces and in privately-owned open spaces, where feasible. • **P.4** The City should encourage potential customers for reclaimed or recycled water by providing and/or publicizing incentives for using reclaimed or recycled water instead of potable water, where appropriate. • **P.5** The City will consider requiring new non-residential and multi-family projects with 25 or more units to be built in such a way that they are able to use reclaimed water whenever it becomes available in the future. • **P.6** The City will promote water conservation in its own operations and through public education, incentive programs, and standards for new and retrofitted development. The City will work with other agencies such as the Central Basin Municipal Water District, the Water Replenishment District, the Metropolitan Water District and Golden State Water Company to promote water conservation. • **P.7** New development projects should seek opportunities for rainwater capture and reuse. • **P.8** The City will promote water conservation through site design, use of efficient systems, xeriscape and other techniques. • **P.9** New City facilities should use xeriscape, native plant species, low flow plumbing and other water conserving techniques, to the greatest extent feasible. **Objective PF 5.3**: Promote coordination between land use planning and water facilities and service. • **P.1** The City will be responsible for replacing new distribution water lines, as necessary, to meet future needs. Individual development projects will be responsible for the construction of all necessary on-site water improvements and connecting to the water mains. • **P.2** The City will collect water impact fees for new development. • **P.3** The availability of sufficient, reliable water will be taken into account when considering the approval of new development. • **P.4** The City will manage energy use for all water facilities and upgrade water system pumps, motors and other devices to improve energy efficiency to reduce costs. **Objective PF 6.1**: Provide high-quality wastewater services to residents and ensure enforcement of wastewater regulations. • **P.1** The City will maintain wastewater infrastructure in good condition.

Jurisdiction	Policies and Objectives
	• **P.2** The approval of new development will be conditional on the availability of adequate, long-term capacity of wastewater treatment, conveyance and disposal sufficient to service the proposed project. • **P.3** The City will follow current environmental best practices in the treatment of wastewater. • **P.4** The City will continue to work with the Los Angeles County Sanitation District to ensure the use of Best Management Practices in the City. **Objective PF 6.2**: Require steps to ensure sufficient wastewater capacity for new development. • **P.1** Prior to issuance of a wastewater permit for any future development project the City will require that project applicants pay applicable connection and or user fees to the County sanitation Districts of Los Angeles County. • **P.2** Prior to issuance of a building permit for any future development project the City will require that project applicants prepare and submit for review an engineering study to determine the adequacy of the sewer systems to accommodate the proposed project. • **P.3** Prior to issuance of a building permit for any future development project the City will require that project applicants provide evidence that the County Sanitation District of Los Angeles County has sufficient wastewater transmission and treatment plant capacity to accept sewage flows from buildings for which building permits are requested. **Objective PF 7.1**: Maintain stormwater collection infrastructure in good condition. • **P.1** Stormwater infrastructure will be maintained in good condition. • **P.3** The City's stormwater infrastructure will comply with the National Pollutant Discharge Elimination System (NPDES) Act and all other legal and environmental requirements. **Objective PF 7.2**: Encourage coordination between land use planning, site design and stormwater control. • **P.1** The City will comply with the Best Management Practices contained in the Los Angeles County Standard Urban Stormwater Mitigation Plan (SUSMP). • **P.2** The City will seek to reduce the amount of stormwater that leaves the City and will seek to improve the quality of stormwater that does leave the City. • **P.3** Where feasible, new development projects should handle all stormwater on site. Exceptions may be made where the design of such on-site stormwater facilities will have a negative impact on the urban quality of the development.
City of Bell Gardens (Frame 4)	No relevant policies.
City of Bell (Frame 4)	**Land Use and Sustainability Element** • **Land Use and Sustainability Element Policy 8.** The City of Bell shall continue to promote recycling as a means of reducing solid waste. The City shall continue to inform and educate residents and businesses regarding the best practices to follow in waste recycling and reduction.

Jurisdiction	Policies and Objectives
	• **Land Use and Sustainability Element Policy 9.** The City of Bell shall require ongoing and future land uses to employ sustainable practices to conserve water, waste, energy, and other resources. As part of this policy, new development must conform to current low-impact development requirements and Leadership in Energy and Environmental Design protocols. • **Land Use and Sustainability Element Policy 16.** The City of Bell shall continue to support the ongoing improvements to the local roadway system while protecting local neighborhoods and businesses. The City shall be proactive in ensuring that adequate public services continue to be provided and will include periodic surveys of street lighting, roadway conditions, and other utilities. • **Land Use and Sustainability Element Policy 31.** The City of Bell shall promote energy efficiency and renewable energy strategies in the review of new developments. Examples include, but are not limited to, solar panels, natural lighting, vehicle charging stations, etc. • **Land Use and Sustainability Element Policy 32.** The City of Bell shall collaborate with utility providers to identify new strategies to promote energy and water conservation. The City of Bell shall sponsor periodic meetings with the utility and service providers. **Resource Management Element** • **Resource Management Element Policy 23.** The City of Bell shall support Assembly Bill 1826 to increase diversion of solid waste for municipalities, including a policy to increase the diversion of food waste and other organic waste products. • **Resource Management Element Policy 24.** The City of Bell shall support the use of reclaimed and recycled water to reduce water consumption. The City of Bell shall support the development of new landscaping requirements that are more water conservation friendly and discourage large turf areas that will require increased water consumption.
City of Maywood (Frame 4)	**Conservation Element** • **3.2** Promote a water conservation program so the city may reduce its share of regional water consumption. • **3.4** Encourage water conservation in residential, commercial, and industrial developments through the use of water saving irrigation systems.
City of Huntington Park (Frame 4)	**Land Use & Community Development Element** • **Policy 21.** The City of Huntington Park shall require that new development(s) pay their "Fair Share" for the provision of the necessary infrastructure and other support services that will be required to serve the development. • **Policy 29.** The City of Huntington Park shall work closely with local water purveyors in determining future area needs to identify and implement water conservation programs. • **Policy 30.** The City of Huntington Park shall ensure that adequate water and sewer service is available as new development occurs.

Jurisdiction	Policies and Objectives
	• **Policy 32.** The City of Huntington Park shall strive to correct identified storm drain deficiencies and develop a long-range program for replacing aging drainage system components. • **Policy 33.** The City of Huntington Park shall work closely with the County of Los Angeles and other responsible agencies so as to reduce solid waste generated in the City. **Resource Management Element** • **Policy 7.** The City of Huntington Park shall comply with Statewide measures that are designed to promote a reduction in water use.
City of Commerce (Frame 4)	**Resource Management Element** • **Resource Management Policy 1.1.** The city of Commerce will do its part in the conservation and protection of air, water, energy, and land in the Southern California region. • **Resource Management Policy 1.5.** The city of Commerce will encourage the development of appropriate federal, state, county, and local water conservation measures in order to assure future supplies for residents. • **Safety Policy 1.3.** The city of Commerce will ensure that the public and private water distribution and supply facilities have adequate capacity to meet both the domestic supply needs of the community and the required fire flow. • **Safety Policy 3.1.** The city of Commerce will continue to cooperate with the efforts of other agencies and special districts involved in monitoring the city's water and sewer systems. • **Safety Policy 3.2.** The city of Commerce will contribute toward the maintenance of a wastewater treatment system sufficient to protect the health and safety of all residents and businesses. • **Safety Policy 3.3.** The city of Commerce will continue to request local water purveyors to provide the city with periodic reports concerning water quality.
City of Vernon (Frame 4)	**Resources Element** • **Policy R-1.1:** Encourage water conservation and the use of recycled water in new developments and by all industries. • **Policy R-1.2:** Support the use of energy-saving designs and equipment in all new development and reconstruction projects. • **Policy R-1.3:** Seek and pursue the most practicable and cost-effective means of implementing National Pollutant Discharge Elimination Systems requirements. **Circulation and Infrastructure Element** • **Policy CI-3.1:** Periodically evaluate the entire water supply and distribution systems to determine their continued adequacy and to attempt to eliminate deficiencies or enhance service. • **Policy CI-3.2:** Require all new developments and expansions of existing facilities bear the cost of providing adequate water service to meet the increased demand which they generate.

Jurisdiction	Policies and Objectives
	• **Policy CI-3.3:** Implement the programs and policies contain in the City's Urban Water Management Plan, including particularly those related to reliability planning and conservation and reuse. • **Policy CI-4.1:** Periodically evaluate the sewage disposal system to determine its adequacy to meet changes in demand and changes in types of waste. • **Policy CI-4.2:** Ensure that all new developments bear the cost of expanding the sewage disposal system to handle any increase in load that they generate. • **Policy CI-4.3:** Investigate and implement means of financing maintenance and improvements to the sewer system. • **Policy CI-5.1:** Periodically evaluate the size and condition of the storm drainage system to determine its ability to handle expected storm runoff. • **Policy CI-5.2:** Evaluate the impact of all new developments and expansion of existing facilities on storm runoff, and require that the cost of upgrading existing drainage facilities to handle the additional runoff is paid for by the development which generates the need to improve a facility. • **Policy CI-5.3:** Monitor the use and storage of hazardous materials to prevent accidental discharge into the storm drainage system. • **Policy CI-5.4:** Allow new development projects to creatively implement NPDES standards and requirements. • **Policy CI-6.1:** Expand, operate, and maintain an electrical utility system in an effort to provide an adequate level of service to businesses and other uses in the City. • **Policy CI-6.2:** Improve the electrical utility system in an effort to allow the City to meet any changes in demand over time. • **Policy CI-6.3:** Cooperate and/or participate with other agencies or parties in the expansion or development of power generation. • **Policy CI-6.4:** Evaluate the impact of all new development on the electrical energy system and require that the cost of upgrading existing facilities is paid by the development, which necessitates the upgrade. • **Policy CI-6.5:** Expand the City's capability to generate and provide natural gas to enhance the power/energy supply system. • **Policy CI-7.1:** Work with communication and technology service providers to provide for state-of-the-art internet, phone, and wireless communications equipment and services.
City of Glendale (Frame 6)	**Open Space and Conservation Element** **Goal 12**: Continue to conserve water resources and provide for the protection and improvement of water Quality. **Objective 3**: Continue water conservation programs through public awareness efforts and encourage use of drought tolerant landscaping. **Community Facilities Element** • Utilities Policies: o Maintain the high standard of utility services. o Monitor future needs for the increase in utility services.

Jurisdiction	Policies and Objectives
	○ Utilize all relevant, technological advancements to provide for the improved quality and quantity of energy at the lowest possible cost within the constraints of environmental considerations.
City of Burbank (Frame 7)	**Open Space and Conservation Element** • **Policy 9.1** Meet the goal of a 20% reduction in municipal water use by 2020. • **Policy 9.2** Provide public information regarding the importance of water conservation and avoiding wasteful water habits. • **Policy 9.3** Offer incentives for water conservation and explore other water conservation programs. • **Policy 9.4** Pursue infrastructure improvements that would expand communitywide use of recycled water.

Sources: City of Long Beach 2002; City of Carson 2004; City of Compton 1991; City of Cudahy 2018; City of Downey 2010; City of Bell 2018; City of Bell Gardens 1995; City of Huntington Park 2017; City of Lynwood 2003; City of Maywood 2008; City of Paramount 2007; City of South Gate 2009; City of Glendale 1975, 1993; City of Burbank 2013.

3.18.4 Impact Analysis

3.18.4.1 Methods

For Typical Projects (Common Elements and Multi-Use Trails and Access Gateways), analysis of potential impacts related to utilities and service systems was based on a detailed review of the project description, a virtual field study of the project study area via Google Earth, and review of the relevant planning, policy and research documents that guide utility-intensive resource planning for the project area. To the extent feasible, utility impacts are analyzed by providing overall consumption estimates (over the lifetime of the Project) for water supply, wastewater/sewer capacity (annual basis), stormwater capacity (annual basis), electricity, natural gas, telecommunications, and solid waste generation/capacity, then relating them to the relevant plans, policies, and agencies and the overall availability/supply for each respective resource area, as appropriate. Furthermore, because the continuous construction and operations activities from the Project would occur simultaneously and be ongoing over the planning period at various times and at various locations, the Project's potential impacts on utilities are also assessed by including aggregate estimates that consider the demand/consumption associated with both construction and operation. This approach provides overall consumption estimates (for the lifetime of the Project) for utilities.

Impacts associated with Typical Projects (i.e., the Common Elements and Multi-Use Trails and Access Gateways), the six kit of parts (KOP) categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.18.4.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.18(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

3.18(b) Have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.

3.18(c) Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

3.18(d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

3.18(e) Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.18.4.3 Impacts and Mitigation Measures

Impacts with regard to water, wastewater, solid waste, electricity/natural gas, and stormwater drainage would vary depending on both the specific location and size of subsequent projects under the *2020 LA River Master Plan*. Different utility providers would be involved depending on a subsequent project's location and utility providers. Required utility relocation or construction/ expansion and connections would vary by subsequent project location and size, and each subsequent project would, therefore, need a site-specific analysis to determine whether relocations are required and where. Accordingly, considering the non-site-specific and non-project-specific analysis being conducted in this PEIR, to be meaningful and informative in the absence of detailed design or location information, the impact analysis on utilities/service systems from the two Typical Projects, the six KOP categories, and the overall *2020 LA River Master Plan* is presented at a program level across the entire study area and is not frame specific.

Impact 3.18(a): Would the proposed Project require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Typical Projects

Common Elements

Construction

As discussed in Chapter 2, *Project Description*, of this PEIR, the analysis of the Common Elements Typical Project assumes the most extensive footprint of a Tier III pavilion.

Typically, construction activities would not involve the use of natural gas. Additionally, electric construction tools that would be used during project-related construction would be powered by diesel-operated generators at a site rather than by electricity from the power grid (except in rare circumstances). Natural gas would not be supplied to support the proposed Project's construction activities; therefore, there would be no demand generated by construction. Construction of the Common Elements Typical Project could involve localized installation of water, electric, natural gas, and sewer infrastructure such as mains and distribution pipes, as well as relocation of existing utilities on certain sites. These activities would likely include trenching/excavation and repaving/ resurfacing and would not be expected to result in significant environmental impacts. Given the relatively small size of the Common Elements Typical Project (no more than 3 acres), it would not be anticipated that major utility upgrades or relocation for natural gas or electricity would be required.

Construction of the Common Elements Typical Project would require the use of water during construction for dust control as well as cement mixing. Truck wheel-washing may also be required to minimize dust from construction traffic. A typical water truck would require 5,000 gallons per day, for a total of approximately 1 million gallons over the 10-month construction period. Water supply targets for MWD range from 1.4 billion gallons in 2020 to 1.5 billion gallons in 2040. It would not be anticipated that demand for water during construction of the Common Elements Typical Project would necessitate the construction or expansion of water supply or treatment infrastructure.

In addition to direct demand for water, new water connections such as mains, distribution pipes, pump stations, or other water infrastructure could need to be constructed to connect to the existing water supply and distribution system. Construction of this infrastructure would not be expected to result in significant impacts on the environment given compliance with the Clean Water Act and NPDES permit requirements during construction. Construction requiring ground disturbance could encounter buried utilities including water supply infrastructure. As part of the project design, applicable jurisdictions would be required to identify the potential for underground utilities and determine whether they would need to be relocated to accommodate the Common Elements Typical Project. As standard construction practices require, applicable jurisdictions would conduct an underground utility search prior to excavation and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers.

Minor alterations of the existing drainage patterns on the project site may occur as a result of the construction of new facilities and improvements. However, construction activities would not substantially alter the overall topography and drainage patterns. Additionally, the proposed Project would be required to obtain and comply with the Construction General Permit from SWRCB. This permit and associated NPDES requirements include development and implementation of a Stormwater Pollution Prevention Plan, with associated monitoring and reporting. Stormwater best management practices are required to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Therefore, no new off-site drainage facilities would be required as a result of construction activities.

It is anticipated that portable chemical toilets would be utilized on the construction sites and no wastewater generation would occur. There could be some small runoff of wash water into the storm drain system if staging areas are outside of the river channel, but this would be in relatively small amounts accommodated by the existing storm drain system. Only minor expansion of utility services to connect the site to the utility providers in the form of new power connections would be expected. Environmental impacts would be localized and minor.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

A Common Elements Typical Project, once constructed and operational, could attract up to 500 users on a daily basis, resulting in additional demand for utilities and generation of wastewater and solid waste. Components of the Common Elements Typical Project would require water for landscaping, restrooms, and café uses; electricity for lighting and appliances; and natural gas for appliances. Wastewater would be generated from the café use and restrooms, and some landscape runoff would enter the storm drain system per guidelines recommended in the *2020 LA River Master Plan*. All components of the Common Elements Typical Project would generate some solid waste in the form of refuse and domestic trash; green waste from maintenance operations would be sent to local composting facilities.

Demand for utilities varies depending on climate zone and intensity of use. Projects in Frames 6 through 9, where temperatures are generally higher than on the coastal side of the Santa Monica Mountains, would likely require greater amounts of electricity for cooling and water for landscaping. Conversely, projects in Frames 1 and 2 would be expected to demand less electricity due to the cooling effect of coastal breezes. However, because of its relatively small size and number of visitors, a Common Elements Typical Project, regardless of where it is located along the LA River, would not be expected to demand substantial amounts of water, electricity, or natural gas such that expansion of water supply and distribution, water treatment, electrical substations, or natural gas facilities is required to accommodate the Common Elements Typical Project. Similarly, the Common Elements Typical Project would not be anticipated to generate substantial volumes of wastewater or solid

waste such that treatment and landfill capacity would be materially affected. With regard to storm drain runoff, all projects greater than 1 acre in size would be required to comply with NPDES requirements through a Construction General Permit to minimize surface water runoff to pre-project conditions or better, such that the storm drain system would not be substantially affected (please see Section 3.9, *Hydrology and Water Quality*, for a comprehensive discussion of the NPDES permit requirements).

The Common Elements Typical Project is anticipated to consume approximately 2,075 million BTU of natural gas and 318 MWh of electricity during operation (refer to Section 3.5, *Energy*), a very small amount compared to the overall demand in the applicable service areas. A Common Elements Typical Project, regardless of where it is located along the LA River, would not be expected to demand substantial amounts of electricity or natural gas. All project-related buildings would be required to conform to California Title 24 standards for energy efficiency. Furthermore, the Common Elements Typical Project would be required to comply with the CALGreen Code and Title 24 for new building structures. As introduced in Section 3.18.2 above, Title 24, Part 6 of the California Code of Regulations establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality. The current 2019 California Building Energy Efficiency Standards became effective on January 1, 2020 and improve upon the previous 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. CALGreen is a statewide mandatory green building code that applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects by all cities in California.

In addition, during subsequent project development, the *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, Project Description, and included in Appendix B) include recommendations for identification of existing utilities and review of applicable codes, which may include, but are not limited to, Public Works and/or American Public Works Association Standard Plans, LACFCD Code, Municipal Codes (including the County Code in unincorporated County areas), U.S. Army Corps of Engineers Policy, LID Ordinance and Manual, Los Angeles County Department of Recreation and Parks Guidelines, United States Green Building Council's Leadership in Energy and Environmental Design, United States Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes.

With regard to electricity consumption, recommended Design Guidelines applicable to the Common Elements Typical Project under the *2020 LA River Master Plan* that would help minimize additional demand for electricity include:

- Renewable energy sources (solar, wind, water, and renewable natural gas)
- Optimized building orientation for solar exposure, diffused daylight, and passive ventilation
- High thermal performance
- Energy-efficient appliances
- Locally sourced, recycled, and recyclable materials with low embodied energy
- High-albedo roof and paving materials to mitigate heat gain

- Green roof and pervious paving
- Fixtures and controls capable of dimming lighting when occupancy loads are low (example: dimmable driver and occupancy sensor)
- Use of solar-powered light fixtures along the river wherever possible
- Use of fixtures made with recycled content where possible
- Fixtures with light-emitting diode cartridges that are easily replaced
- Regular monitoring of building systems and optimized usage

For water conservation, the following Design Guidelines are recommended:

- Adherence to County LID Standards
- On-site water retention, detention, and filtration
- Capture of 100 percent of on-site rainfall for the 85 percent rain event
- Greywater and rainwater reuse
- Low-flow water fixtures

Plantings would be chosen to flourish with little maintenance and water demand after established. Plants should require minimal maintenance and water following establishment when chosen carefully to be adapted to actual site conditions low-flow water fixtures to reduce the demand for water as well as minimize or avoid runoff. Therefore, operation of the Common Elements Typical Project would not result in or require construction or substantial expansion of utility infrastructure that could, in turn, result in significant environmental effects.

As noted in Section 3.18.3.3, each provider of utility services, whether a private supplier or municipality, prepares master plans for resources such as water, wastewater, solid waste, and energy. These are generally 20-year plans that define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMPs generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. UWMPs are master plans for reliable water supply and resources management. Each of these plans considers planned growth in the applicable service areas to ensure adequate utility service will be provided that accommodates that future growth. Growth projections that may be used are on a local jurisdictional level or regional level, such as SCAG's SoCal Connect (previously known as the Regional Transportation Plan/Sustainable Communities Strategy). Planned land uses along the LA River include recreational and ecological uses; therefore, the applicable resource plans have considered future growth and planned land uses in outlining strategies for ensuring adequate supply to accommodate demand through at least 2035. These plans are generally updated every 5 years.

The Common Elements Typical Project would comply with local, regional, and state ordinances regarding water conservation, electricity conservation, drought-tolerant landscaping, and recycling. It is assumed that a majority of users of the Common Elements Typical Project would be residents of nearby communities, with a percentage of outside visitors that utilize the facilities. The Common Elements Typical Project, as uses consistent with existing land use designations and zoning, would have been included in the overall growth projections for the applicable jurisdiction and thus the

applicable resource plans. Therefore, it is not anticipated that operation of the Common Elements Typical Project would result in the need for expanded or new infrastructure for provision of utility services such that a significant environmental impact would occur.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Construction of Multi-Use Trails and Access Gateways Typical Project would have similar construction impacts as identified for the Common Elements Typical Project, although on a somewhat larger scale. As noted, all Typical Projects, including the Multi-Use Trails and Access Gateways Typical Project, would follow the requirements of NPDES permit requirements for stormwater discharge and best management practices for energy use as outlined above.

Additional utility relocation and new connections may be required for these Typical Projects. These activities would require localized trenching. However, compliance with the existing ordinances related to water conservation and NPDES permit requirements would ensure that any environmental impacts would be localized and not substantial. New or expanded infrastructure as a result of construction of the Multi-Use Trails and Access Gateways Typical Project would not be required.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

A Multi-Use Trails and Access Gateways Typical Project, once constructed and operational, could attract up to 1,000 users, resulting in additional demand for utilities and generation of wastewater and solid waste. Similar to the Common Elements Typical Project, Design Guidelines could be implemented to help minimize environmental effects on utility consumption and waste generation. A Multi-Use Trails and Access Gateways Typical Project would attract up to 1,000 visitors per day for recreational use. Recreational uses such as trails do not generally require substantial

infrastructure resources and would not be likely to substantially increase water, electricity, or natural gas demand, or generate substantial amounts of solid waste and wastewater. It is not anticipated that operation of a Multi-Use Trails and Access Gateways Typical Project would require substantial expansion of existing infrastructure to accommodate the uses proposed, nor would the Typical Project likely require the construction of new utility infrastructure to accommodate these uses.

All of the Design Guidelines recommended above under the Common Elements Typical Project could be implemented for the Multi-Use Trails and Access Gateways Typical Project. Additional Design Guidelines that would pertain to a Multi-Use Trails and Access Gateways Typical Project include:

- Use solar-powered call boxes along the river wherever possible.
- Maintain call boxes and lighting, deter graffiti and theft where possible, and inspect and repair for continued functionality and other damages.
- Where located in a Federal Emergency Management Agency (FEMA) 100-year floodplain, elevate call boxes and lighting above the FEMA Base Flood (100-year flood) Elevation to maintain functionality.

Lighting along the multi-use trails would be energy efficient and all landscaping would be irrigated with reclaimed water wherever feasible; drought-tolerant landscaping would reduce the demand for water for irrigation.

Similar to the Common Elements Typical Project, the Multi-Use Trails and Access Gateways Typical Project would be accounted for as planned land uses in the various resource management plans prepared by the various jurisdictions and utility providers along the LA River.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 6

Construction for KOP Categories 1 through 6 are discussed together, as the impacts would be similar. However, operations for KOP Categories 1 through 5 are discussed together, as the impacts would be similar, and operations for KOP Category 6 are discussed independently due to differences in impacts.

Construction

Construction activities for KOP Categories 1 through 6 would be similar to those discussed for the Common Elements and Multi-Use Trails and Access Gateways Typical Projects above. Construction equipment and activities would be similar, mainly differentiated by the size of the site. Larger projects such as bridges would likely involve the use of larger cranes and other equipment. Utility relocations would vary depending on the location and size of the individual project. Construction would demand water and potentially electricity but would not require natural gas. Construction equipment would be generally diesel powered, and contractors would be required to comply with local, regional, and State construction waste recycling ordinances. It is anticipated that portable chemical toilets would be utilized, so there would be no generation of wastewater. Runoff would be minimized by compliance with NPDES requirements.

Most of the KOP components would require additional utility connections, utility relocations, and expansion of existing infrastructure, depending on location and size of the subsequent projects under the KOP categories. The extent of trenching or repaving to accommodate utility relocation or the extent of aboveground utility relocations is unknown for the subsequent projects under the KOP categories. However, it is not anticipated that these activities would be extensive or result in substantial environmental effects. Construction of subsequent projects under the KOP categories would not result in significant impacts associated with relocation of utilities.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Categories 1 through 5

Operations

It is not anticipated that components of KOP Categories 1 through 5 would result in a significant use of electricity, natural gas, or water, or generate substantial amounts of solid waste and wastewater such that new infrastructure would be required, similar to that noted for the Common Elements Typical Project.

Channel modification projects from KOP Category 2 could involve recreational use in the form of amphitheaters, are not anticipated to have associated restroom facilities other than those already built under the Common Elements Typical Project, and would not be anticipated to include utilities other than electricity for lighting and possibly sound. The amount of electricity demanded for an amphitheater use would not be expected to be substantial enough to result in the need to expand existing electricity infrastructure or require construction of new infrastructure. Channel modifications such as terraced bank, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps would not

be anticipated to result in demand for utilities during operation or insufficiencies that would result in the expansion of existing or construction of new infrastructure.

Inclusion of crossings and platforms under KOP Category 3 is a recreational use that would not include utility fixtures other than path or interior lighting; no restroom facilities would be included in this KOP category. It is not expected that crossings and platform operation would result in a substantial demand for water, electricity, or natural gas, and these KOP categories are not anticipated to generate substantial amounts of wastewater. Channel diversions would not, other than a nominal demand for electricity for pumps, require water or natural gas, nor would these elements generate wastewater or solid waste.

Floodplain reclamation under KOP Category 5 could include recreation fields and other recreational uses. These uses would require the use of electricity, natural gas, and water, and could generate wastewater and solid waste. However, it is not anticipated that these demands would result in the need for expansion of existing infrastructure or the construction of new infrastructure such that an environmental impact could occur. Similar to the Typical Projects, floodplain reclamation projects would be accounted for as planned land uses in the various resource management plans prepared by the various jurisdictions and utility providers along the LA River. However, there could be localized deficiencies identified on a site-specific basis.

As noted, there are numerous resource master plans that are applicable to the study area that consider planned growth and zoning to ensure adequate provision of utility services into the future. Similar to the Typical Projects, growth that could result in increased demand for utilities has been accounted for in the various resource management plans of the service providers and municipalities along the LA River. However, there could be potentially significant impacts with regard to sufficient supply/capacity for one or more utilities for operation of KOP Category 1 through KOP Category 5.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

If a subsequent project requires relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the implementing agency will implement the following mitigation measure:

Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.

During design, the implementing agency will prepare a utilities plan that:

- Identifies the location of existing utilities and connections and new/expanded infrastructure that will be required to connect to existing services
- Quantifies demand and generation factors for construction of the new/expanded infrastructure on a project-specific basis and determine whether supply/capacity can meet demand
- Identifies project modifications that will minimize any significant environmental impact on utilities

As part of the utilities plan, the implementing agency will prepare a utilities report that compares the expected operational demand and generation for the various utility resources against existing supply and infrastructure to determine whether sufficient capacity exists to accommodate the Project; if any insufficiency is identified, the implementing agency will modify the Project to avoid the impact in consultation with the affected utility provider(s). Modifications to the Project could include the following site-specific conservation features above those required by the applicable codes and ordinances:

- On-site wastewater treatment
- On-site recycled water infrastructure
- On-site solid waste recycling
- Solar panels
- Use of alternative energy such as biofuels

Significance after Required Mitigation

Impacts would be significant and unavoidable.

KOP Category 6

Operations

Operational impacts on utilities for projects under KOP Category 6 would vary depending on the type of project. A housing or wastewater treatment facility project, for example, would demand greater amounts of water, electricity, and natural gas than spreading grounds or dry wells, which would not be expected to demand these utilities. These projects would be evaluated on a subsequent-project-specific and location-specific basis to determine the level of impact, if any, on utilities. Because the extent of these projects is unknown, there could be localized insufficiencies of utility services that could require expansion of existing infrastructure or construction of new infrastructure and an environmental impact could occur.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

The specific location or size of subsequent projects under the *2020 LA River Master Plan* is not currently known. As discussed above, construction of subsequent projects under the KOP categories 1 through 6 would not result in significant impacts associated with relocation of utilities. Considering the overall *2020 LA River Master Plan* includes 107 projects that would range in size from up to 3 acres/1 mile to more than 150 acres/10 miles in size, and that most of them (85) would be of smaller size (3 acres/1 mile), it is reasonable to assume that for larger projects, insufficiencies in utilities could occur that would require the expansion or construction of new facilities, which could, in turn, result in significant environmental impacts. Each subsequent project would require evaluation to determine whether insufficiencies in utilities exist. Implementation of mitigation would reduce the level of impact, but not necessarily to a less-than-significant level. Therefore, the impact would be significant and unavoidable during operations.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.18(b): Would the proposed Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

Construction of both Typical Projects would require the use of water during construction for various purposes such as dust control and cement mixing and other construction activities. Truck wheel-washing may also be required to minimize dust from construction traffic. However, the incremental increase in water use as a result of construction activities would be temporary and not substantial; therefore, existing water supplies would be sufficient to meet this demand. Although construction of Typical Projects could extend over a period of years, water use demand during construction would be relatively small, with a typical water truck for dust control averaging 5,000 gallons per day for a total of approximately 1 million gallons over the 10-month construction period for the 3-acre or 1-mile-long Common Elements Typical Project. Considering that the Multi-Use Trails and Access Gateways Typical Project would have a 20-month construction schedule and be 5 miles long, it can be assumed that it would require between approximately 2 million and 5 million gallons over the

20-month construction period. Water supply targets for MWD range from 1.4 billion gallons in 2020 to 1.5 billion gallons in 2040. It is not anticipated that demand for water during construction of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would exceed supply. Environmental effects would be localized and minor compared to the overall water demand for the region.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

As noted in Section 3.18.2, *Geographic Setting*, various water providers serve the cities and unincorporated County areas along the LA River. Some cities' utility departments operate individual services, such as Long Beach, Downey, Compton, Lynwood, Paramount, South Gate, Huntington Park, Glendale, and Burbank. Other cities utilize independent water providers such as GSWC, California State Water Company, and several smaller providers. The City of Los Angeles is served by LADWP, which has the largest service area at 469 square miles, managing the LAA, local groundwater, and supplemental water purchased from MWD (see Table 3.18-25). A Common Elements Typical Project would be served by the water agencies in whose jurisdiction it is located.

A typical restaurant/café would demand approximately 3,920 gallons per day (see Table 3.18-25). On-site restrooms would also demand water. The estimates that follow are based on a "worst-case" scenario where all 500 visitors to a Common Elements Typical Project would use the restroom every day (although just once), including sinks, toilets, and showers. Restroom use would require approximately 6,100 gallons per day for toilet use, 5,500 gallons per day for showers, and 55 gallons per day for sink use (see demand factors in Table 3.18-25). This is highly conservative, as not all 500 visitors would utilize the shower facilities at a given site. Therefore, it is estimated that a Common Elements Typical Project would demand approximately 15,520 gallons per day. This estimate is extremely conservative in that it does not take into account the use of low-flow plumbing fixtures, which could reduce demand by up to 50 percent. Table 3.18-25 provides these calculations in tabular format.

Table 3.18-25. Common Elements Typical Project Water Demand (Operation)

Use	Demand Factor	Demand per day (gallons)
Restaurant	35 gallons per seat	3,920
Restroom toilets/urinals	3.0/1.6 gallons per flush (three toilets and two urinals)	6,100
Restroom showers	2.2 gpm (assumes 5 minutes per use)	5,500
Total		**15,520**

Source: Pacific Institute 2013.

MWD, LADWP, CBMWD, and the Cities of Burbank, Glendale, Compton, Lynwood, Vernon, Downey, and South Gate all have water management or resource plans that address water supply and demand using growth projections from SCAG. These plans contain water conservation strategies and policies to reduce water demand and prioritize future supply that will be needed to accommodate growth.

The Cities of Cudahy, Downey, Huntington Park, Lynwood, Paramount, South Gate, and Vernon purchase recycled water from CBMWD. GSWC also purchases recycled water from CBMWD (CBMWD 2016). Recycled water is used for irrigation of schools, parks, and other public spaces. There is the potential for both Typical Projects to utilize recycled water where available for landscape irrigation.

Demand for water varies depending on climate zone and intensity of use. Typical Projects in Frames 6 through 9, where temperatures are generally higher than on the coastal side of the Santa Monica Mountains, would likely require greater amounts of water for landscaping. Conversely, projects in Frames 1 and 2 would be expected to demand less water due to the cooling effect of coastal breezes. However, all Typical Projects, regardless of where they are located along the LA River, would not be expected to demand substantial amounts of water such that demand would exceed supply. Water conservation measures in effect in the 18 different jurisdictions through which the LA River passes would minimize any localized demands for water.

During specific project development, the Design Guidelines include recommendations to identify existing utilities and review applicable codes, which may include, but are not limited to, Public Works and/or American Public Works Association Standard Plans, LACFCD Code, Municipal Codes (including the County Code for projects in unincorporated County areas), U.S. Army Corps of Engineers Policy, LID Ordinance and Manual, Los Angeles County Department of Recreation and Parks Guidelines, United States Green Building Council's Leadership in Energy and Environmental Design, United States Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes. In addition, all projects would comply with the policies in the applicable water/resource management plans regarding water conservation.

The majority of water used for irrigation would likely be recycled water. Conservation efforts throughout the watershed have resulted in a reduction of the amount of wastewater going to the treatment plants. This has, in turn, resulted in a decrease in the amount of recycled water available to potential users. Decreased wastewater flows in LACSD's service areas have affected effluent production at the water reclamation plants, resulting in less recycled water being available for reuse in recent years (LACSD 2018). Cities in the study area that utilize LACSD recycled water include Bell Gardens, Compton, Cudahy, Downey, Huntington Park, Long Beach, Lynwood, Paramount, South Gate, and Vernon.

A number of recycled water distribution projects throughout LACSD's service area are in various stages of assessment or development to make use of up to an estimated 52,600 AFY of the remaining recycled water currently produced but not yet beneficially reused, with the possibility of another 16,600 AFY of effluent from the Joint Water Pollution Control Plant receiving additional treatment prior to reuse (LACSD 2018). There are several other potential reuse projects that are much more conceptual, including the LBWD master plan and CBMWD expansion projects, the latter of which has several projects in its Capital Improvements Plan for the near term. The Cities of Bell Gardens, Lynwood, and South Gate are collaborating with CBMWD to expand CBMWD's existing system into their cities to supply an estimated 236 AFY of recycled water to irrigate a number of urban irrigation

sites. Several large-scale water recycling projects involving groundwater replenishment continue to be investigated, including the MWD Regional Recycled Water Advanced Purification Center at the Joint Water Pollution Control Plant, the CBMWD Distribution System Storage Project, and the Downey/Cerritos Advanced Treatment Plant For Recharge (LACSD 2018). These ongoing efforts and projects are anticipated to increase the availability and reliability of recycled water for the foreseeable future.

Conservation efforts, including water-sensing turf, water-efficient nozzles, water-sensing other, drip sprinklers, and efficient nozzles, could reduce landscape water use up to 50 percent (Pacific Institute 2013).

The following recommended Design Guidelines would be implemented as applicable and feasible:

- County LID Standards
- On-site water retention, detention, and filtration
- Capture of 100 percent of on-site rainfall for the 85 percent rain event
- Greywater and rainwater reuse
- Low-flow water fixtures

The estimated 15,520 gallons per day (without water conservation or low-flow plumbing fixtures) compares to the approximately 1.5 billion gallons per day of water demand estimated by MWD in 2020 and 0.2 billion gallon per day in 2040. Drought-tolerant landscaping and low-flow water fixtures would reduce the demand for water as well as minimize or avoid runoff. While the Multi-Use Trails and Access Gateways Typical Project would generate up to 1,000 visitors per day, the additional visitors (compared to the 500 for the Common Elements Typical Project) would be using the trails themselves, which would not demand water other than for landscape irrigation and an occasional water fountain and restroom use. Therefore, the Multi-Use Trails and Access Gateways Typical Project would not be expected to demand a substantial amount of water over and above what was calculated for the Common Elements Typical Project. Conservatively estimating a 20 percent increase in demand due to the trails component, and assuming no water-conservation measures or low-flow plumbing fixtures are utilized, this would yield a water demand of approximately 18,624 gallons per day. Compared to the 0.2–1.5 billion gallons per day of water demand estimated by MWD through 2040, this is a nominal amount that would not be expected to significantly affect water supply. Therefore, operation of the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would not result in an insufficiency in water supply.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 6

Construction

Construction activities for KOP Categories 1 through 6 would be similar to those discussed for the Multi-Use Trails and Access Gateways Typical Project above. Construction equipment and activities would be similar, mainly differentiated by size of the site. Larger projects such as bridges would likely involve the use of larger cranes and other equipment. Construction would demand water but it is not possible to quantify the specific water infrastructure that would be required for subsequent projects under the KOP categories due to their unknown location, size, and extent. Construction equipment would be generally diesel powered, and contractors would be required to comply with local, regional, and State construction water conservation ordinances. All projects would comply with general plan policies, applicable State or local regulations, and strategies and policies contained in urban water/resource management plans as identified for the Common Elements Typical Project.

Subsequent projects under the KOP categories include a variety of construction activities ranging from trail modifications to development of facilities, habitat corridors, bridges, platforms, crossings, channel diversions, floodplain reclamation, off-channel land development, and channel access ramps anywhere in the study area. Despite the potential size and location of projects under KOP Categories 1 through 6, it is not anticipated that construction would demand water in excess of supply, especially in light of the overall considerable regional water demand.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Categories 1 through 3

Operations

It is not anticipated that components of KOP Categories 1 through 3 and KOP Category 5 would result in a significant use of water such that demand would exceed supply. Channel modification projects could involve recreational use in the form of amphitheaters, which would not have associated restroom facilities and would not require utilities other than electricity for lighting and possibly sound. Channel modifications such as terraced bank, check dams and deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge

pier modifications, channel texturing/grooving/smoothing, and installation of access ramps would not be anticipated to result in demand for water during operation.

Amphitheaters would not require potable water and there would be no impact on water supply. Inclusion of crossings and platforms is a recreational use that would not include utility fixtures other than path or interior lighting; no restroom facilities would be included in this KOP category. It is not expected that crossings and platform operation would result in a substantial demand for water. Lastly, operation of channel modifications would not require water.

Impacts would be less than significant for operation of subsequent projects under KOP Category 1 through KOP Category 3.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Operations

Operation of diversion projects would not involve an increase in demand for water; they are simply diversion projects and involve no recreational use except for minor educational uses during dry seasons. Goal 8 of the *2020 LA River Master Plan* is to improve local water supply reliability.

Subsequent projects that strategically capture and treat flows before they reach the river would help expand water supply opportunities in the watershed and along the river corridor and could also improve water quality. Diverted water could be used to enhance habitat, support recreation, or supply water for municipal and industrial uses. Therefore, projects under KOP Category 4 are anticipated to improve water supply reliability.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

KOP Category 5

Operations

Floodplain reclamation (KOP Category 5) could include recreation fields and other recreational uses, which would require the use of water. However, many new recreational fields could use artificial turf. Synthetic fields offer many advantages over natural turf fields, which require a significant amount of maintenance, chemical fertilizers, and water. However, synthetic fields could interfere with groundwater recharge and therefore would not be beneficial for use in KOP Category 5 projects. While recreational fields would require water for irrigation, they would be designed to contribute to groundwater recharge or floodplain reclamation. Similar to the Typical Projects, floodplain reclamation projects under KOP Category 5 would be accounted for as planned land uses in the various resource management plans prepared by the various jurisdictions and utility providers along the LA River.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Operations

As noted, numerous resource master plans are applicable to the study area that consider planned growth and zoning to ensure adequate provision of water into the future. Preparation of a Utilities Plan during the design phase would identify insufficiencies in water supply versus demand and may implement appropriate mitigation measures as identified above. Similar to the Typical Projects, growth under KOP Category 6 that could result in increased demand for water has been accounted for in the various resource management plans of the service providers and municipalities along the LA River. SSB 610 requires that water supply assessments occur early in the land use planning process for all large-scale development projects (refer to thresholds identified in Section 3.18.3.2). In the absence of any project-specific, site-specific, and design-specific information at this program-level analysis, it is not feasible to prepare a water supply assessment. Because of the larger extent of KOP Category 6, there would be potentially significant impacts with regard to sufficient water supply.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

For all KOP Category 6 subsequent projects that meet the thresholds of SB 610 (for example, a residential development of more than 500 dwelling units or a development equivalent to a 500-

dwelling unit subsequent project), the implementing agency would implement the following mitigation measure:

Mitigation Measure UTIL-2: Prepare a Water Supply Assessment.

The implementing agency will prepare a water supply assessment in accordance with the requirements of SB 610.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

The specific location or size of subsequent projects under the *2020 LA River Master Plan* is not currently known. Considering the overall *2020 LA River Master Plan* includes 107 projects that would range in size from up to 3 acres/1 mile to more than 150 acres/10 miles in size, and that most of them (85) would be of smaller size (3 acres/1 mile), it is reasonable to assume that for larger projects, insufficiencies in utilities could occur that would require the expansion or construction of new facilities, which could, in turn, result in significant environmental impacts. Because it is unknown the location and extent of projects that could be proposed under any of the KOP categories, and whether site-specific mitigation could be implemented to minimize or avoid impacts, water shortages could occur where demand would exceed supply. Each project site will require evaluation to determine whether insufficiencies in utilities exist. Construction impacts for all projects would be less than significant with mitigation. For operation, projects implemented under KOP Category 4 and KOP Category 5 would result in a beneficial impact on water supply. For KOP Category 5 and KOP Category 6 under the *2020 LA River Master Plan*, implementation of mitigation would reduce the level of impact, but not necessarily to less-than-significant levels. Therefore, the impact would be significant and unavoidable.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure UTIL-2: Prepare a Water Supply Assessment.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.18(c): Would the proposed Project result in a determination by the wastewater treatment provider that serves or may serve the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction

In Los Angeles County the Sanitary Sewer Network covers approximately 824 square miles and encompasses 78 cities and unincorporated County areas. There are approximately 9,500 miles of tributary sewers that are owned and operated by the cities and County. The tributary sewers discharge into the LACSD, City of Los Angeles, and Las Virgenes Municipal Water Districts collection system for treatment.

The proposed project area is served by five different sanitation districts: LASAN, BWP, GWP, LACSD, and LBWD (see Figure 3.18-4). Each of these entities conveys millions of gallons of wastewater each day. Construction of the Typical Projects would not result in any generation of wastewater. Chemical toilets would be provided on all construction sites and no connection to the sewer system would be made. There would be no generation of wastewater during construction of the Typical Projects.

Impact Determination

No impacts would occur.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

No impacts would occur. No mitigation is required.

Operations

The Typical Projects would include restroom facilities and could also include cafés, both of which would generate wastewater. Generally, an average 80 percent of water demand becomes wastewater, although this can increase to 90 percent during wet weather (Vallecitos Water District 2010). Based on the estimated water demand calculated under Impact 3.18(b), it is estimated that approximately 12,416 gallons of wastewater would be generated per day by a Common Elements Typical Project and 14,611 gallons of wastewater would be generated per day by a Multi-Use Trails and Access Gateways Typical Project. Wastewater treatment facilities analyze growth projections from SCAG when planning future infrastructure needs. Operation of Typical Projects would not result in increased population growth that would change the growth projections from SCAG (please refer to Section 3.13, *Population and Housing*, for a detailed analysis of population growth). Through hydraulic condition assessment, population forecast, and modeling, various districts identify the current capacity needs, predict future requirements, and develop capital improvement projects to address them. When the peak flow in a sewer reaches a predetermined level, it usually triggers a planning study that is initiated in time to ensure that additional capacity is provided to meet future

demands. These systems have remaining capacity and would be expected to be able to accommodate the minimal amount of wastewater that would be generated by operation of the Typical Projects.

It would not be anticipated that these project components would generate substantial amounts of wastewater such that demand for wastewater treatment would exceed capacity of the several wastewater treatment facilities that exist in the County: Hyperion, Terminal Island, and Joint Water Pollution Control Plant. The Hyperion Water Treatment Plant alone has a capacity of 450 mgd. These facilities have remaining capacity and would be expected to be able to accommodate the minimal amount of wastewater that would be generated by operation of the Typical Projects.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 6

Construction

Similar to the Typical Projects, construction of the components under KOP Categories 1 through 6 would not generate significant amounts of wastewater, if any. It is anticipated that chemical toilets would be used on all construction sites and there would be no wastewater conveyance to the various treatment plants.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Categories 1 through 3 and KOP Category 5

Operations

It would not be anticipated that projects under KOP Categories 1 through 5 would generate substantial amounts of wastewater such that demand for wastewater treatment would exceed capacity of the several wastewater treatment systems that exist in the County: Hyperion, Terminal Island, and Joint Water Pollution Control Plant. The recreational uses of multi-use trails, channel modifications, and crossings and platforms would not generate substantial amounts of wastewater, as they would not include restroom facilities. KOP Category 5 could include recreation fields, which, if restroom facilities are provided, could result in increased generation of wastewater. However, as noted for the Common Elements Typical Project, recreational uses do not generate substantial amounts of wastewater even with restroom use. The other components of KOP Category 5 would not generate wastewater. It is anticipated that, given the capacity of the existing wastewater treatment facilities, wastewater flows from projects under KOP Category 5 could be accommodated by existing facilities.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Operations

Channel diversion projects, which would include pumps, diversion pipe/tunnel/channel, overflow weirs, underground gallery, side channel, storm drain interceptors, and wetlands, would not generate wastewater during operation. Some diversion projects may divert stormwater or dry-weather flows to the sanitary sewer. However, it is not anticipated there would be a substantial enough number of projects that divert stormwater to the sewer system to materially affect wastewater conveyance or treatment capacity.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Operations

KOP Category 6 could result in a wide variety of projects, many of which would generate wastewater. It should be noted that one of the potential KOP Category 6 design components is a water treatment facility, which would not generate substantial amounts of its own wastewater and would result in an increase in wastewater treatment capacity, a beneficial impact. Because the location, size, and extent of these projects are unknown, it cannot be quantified how much wastewater would be generated by an individual project under KOP Category 6. Wastewater generation could exceed the capacity of existing wastewater treatment facilities or local conveyance systems.

Through hydraulic condition assessment, population forecast, and modeling, various districts identify the current capacity needs, predict future requirements, and develop capital improvement projects to address them. When the peak flow in a sewer reaches a predetermined level, it usually triggers a planning study that is initiated in time to ensure that additional capacity is provided to meet future demands. However, it is possible that local sewer capacity could be constrained such that additional wastewater could not be accommodated.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

There would be no significant impacts on wastewater capacity as a result of the Typical Projects or components of KOP Categories 1 through 5. The specific location or size of subsequent projects under the *2020 LA River Master Plan* is not currently known. Considering the overall *2020 LA River Master Plan* includes 107 projects that would range in size from up to 3 acres/1 mile to more than 150 acres/10 miles in size, and that most of them (85) would be of smaller size (3 acres/1 mile), it is reasonable to assume that for larger projects under KOP Category 6, insufficiencies in utilities could occur that would require the expansion or construction of new facilities, which could, in turn, result in significant environmental impacts. However, operational impacts under KOP Category 6 could be significant. Because it is unknown the location and extent of projects that could be proposed under KOP Category 6, and whether site-specific mitigation could be implemented to minimize or avoid impacts, there could be insufficient wastewater capacity to serve the Project. Each project site will require evaluation to determine whether insufficiencies in wastewater infrastructure exist. Implementation of mitigation would reduce the level of impact, but not necessarily to less-than-significant levels. Therefore, the impact would be significant and unavoidable.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure UTIL-1: Prepare and Implement Utilities Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.18(d): Would the proposed Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Typical Projects

Common Elements

Construction

The California Integrated Waste Management Act of 1989 and its subsequent amendments required all California cities and counties to implement programs by 2000 that would reduce, recycle, or compost at least 50 percent of the quantity of wastes produced. CalRecycle, formerly called California Integrated Waste Management Board, is the State entity that administers the act. To facilitate the County's compliance with the waste reduction mandate, projects implemented by the County are required to comply with the County's C&D debris recycling specifications and submit reports to Public Works' Environmental Programs Division detailing the volume of debris generated and the percentages of debris that are recycled and disposed in landfills.

The U.S. EPA-approved Trash Total Maximum Daily Loads (TMDLs) for the LA River Watershed require annual determination of trash discharges. The TMDLs also require compliance monitoring calculations of the Trash Daily Generation Rate. These monitoring efforts allow permitting agencies to track and monitor the amounts being sent to landfills. The volume of trash removed from the regional waterways is small when compared to daily trash collection and disposal quantities in the highly urbanized County. The new trash collection would be accommodated with existing and planned trash disposal facilities. Based on landfill capacity in the Los Angeles region, there appears to be ample availability to receive trash that would be collected as part of compliance with the LA River Watershed Trash TMDLs (for further discussion of TMDL requirements, refer to Section 3.9, *Hydrology and Water Quality*).

All of the18 jurisdictions along the LA River contain policies in their general plans that address reduction of solid waste. During construction, a Common Elements Typical Project would comply with all State and local standards and solid waste reduction goals. Demand for landfill capacity is continually evaluated by the County through preparation of the Los Angeles County Integrated Waste Management Plan Annual Reports.

As detailed above, construction of a Common Elements Typical Project is not anticipated to result in substantial generation of solid waste that would be in excess of State or local standards or the capacity of local infrastructure. Waste-reduction techniques are incorporated into individual integrated resource management plans and would be expected to include reuse and diversion of materials in the waste stream from landfill disposal, such as through recycling, composting, transformation, and anaerobic digestion. The Design Guidelines contain recommended best practices for construction of river pavilions, which include recycling construction waste. During construction, projects would comply with all applicable local and State waste reduction required measures. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

During operations, a Common Elements Typical Project would include trash and recycling elements; trash and recycling receptacles would be placed on site with adequate signage. Recycling would divert as much waste as possible from landfills. Although trash would be generated by users of a Common Elements Typical Project, the amount of waste produced by a Common Elements Typical Project is not anticipated to be substantial enough to exceed State or local standards or the capacity of local infrastructure. Local, regional, and State ordinances concerning waste reduction and recycling would further reduce the amount of solid waste generated by a Common Elements Typical Project. Green waste from maintenance operations would be composted. Various recycling ordinances would further decrease the amount of solid waste diverted to landfills. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Impacts from construction of a Multi-Use Trails and Access Gateways Typical Project would be substantially similar to the impacts identified for a Common Elements Typical Project, as similar

construction equipment and activities would occur. Contractors would comply with local, regional, and State regulations concerning construction debris diversion. Construction of a Multi-Use Trails and Access Gateways Typical Project is not anticipated to result in substantial generation of solid waste that would be in excess of State or local standards or the capacity of local infrastructure. Waste-reduction techniques are incorporated into individual resource management plans (such as integrated resource management plans) and would be expected to include reuse and diversion of materials in the waste stream from landfill disposal. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Recreational use of trails and access gateways would not be expected to result in generation of substantial amounts of solid waste. Trash and recycling receptacles would be strategically placed with easy to understand educational signage to accommodate disposal needs of users of the trails and access gateways. The Common Elements Typical Project components, i.e., restroom facilities, cafés, and trails, that would be included in a Multi-Use Trails and Access Gateways Typical Project would not be anticipated to generate substantial amounts of solid waste that would exceed the capacity of existing landfills, as described above in the analysis for the Common Elements Typical Project. Projects would comply with local standards in each jurisdiction. Green waste from maintenance operations would be composted. Various recycling laws and ordinances would further decrease the amount of solid waste disposed of in landfills. Therefore, impacts related to solid waste generation during operations of Multi-Use Trails and Access Gateways Typical Project would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for

potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 5

Construction

Solid waste would be generated during construction of projects under KOP Categories 1 through 5, varying in amount by site size and existing structures. There are state, regional, and local ordinances and regulations focused on diversion of solid waste from landfills. Contractors would comply with all of these regulations regarding construction waste to minimize the amount of debris sent to landfills. The Los Angeles County Board of Supervisors adopted the C&D Debris Recycling and Reuse Ordinance in January 2005, which requires at least 65 percent of all debris generated by C&D projects in unincorporated County areas to be recycled or reused. Best management practices recommended in the *2020 LA River Master Plan* include recycling of construction waste. While the landfills serving Southern California have remaining capacity to accommodate solid waste that is not diverted from landfills, other projects in the County generate solid waste that contribute to landfill capacity. Because projects under KOP Categories 1 through 5 would comply with regulations and ordinances related to solid waste diversion, substantial amounts of solid waste would not be generated during construction of larger projects that could affect remaining landfill capacity.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Recreational uses of KOP Categories 1 through 5 would not generate substantial amounts of solid waste such that capacities of existing landfills would be exceeded. Channel modifications (except for amphitheaters, a recreational use) and diversion projects would not generate solid waste during operation and could incorporate a trash capture element during operation. Landfills have remaining capacity and would be expected to be able to accommodate the minimal amount of solid waste that would be generated by operation of projects under KOP Categories 1 through 5.

As discussed for the Multi-Use Trails and Access Gateways Typical Project, projects would comply with local standards in each jurisdiction. Various state, regional, and local recycling ordinances would further decrease the amount of solid waste disposed of in landfills. Green waste from maintenance operations would be composted.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

Subsequent projects under KOP Category 6 could be substantially larger than other KOP categories, depending on project elements such as affordable housing or museums, and could result in substantial generation of solid waste during construction depending on site location. Because the location of these projects is unknown, it is also not known how much construction waste would be generated, which would depend on existing conditions such as structures or paving that require removal prior to redevelopment. Because the extent of the subsequent projects is unknown, KOP Category 6 could result in substantial generation of solid waste during construction that could affect landfill capacity.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure UTIL-3: Recycle Construction Materials and Reduce Waste.

Implementing agencies will require construction contractors to recycle construction materials and divert inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill, according to local, regional, and State regulations and ordinances. Implementing agencies will incentivize construction contractors with waste minimization goals in bid specifications.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operation of the larger projects envisioned for KOP Category 6 could result in substantial amounts of solid waste unless requirements are included in each project for diversion of solid waste. All projects under KOP Category 6 would comply with state, regional, and local waste diversion regulations and ordinances, and would be expected to include provisions for reuse and diversion components such as recycling and composting. However, without implementation of specific measures to ensure reduction in operational solid waste, the impact would be potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure UTIL-4: Divert Solid Waste.

For every project under KOP Category 6, the implementing agency will include one or more of the following actions to reduce the amount of solid waste generated from operation of the Project:

- Provide on-site recycling containers both outside and indoors on each floor of the development.
- Ensure that all contracts for landscape maintenance include provisions for recycling/ composting of green waste.
- Provide for regular collection of recyclable material and green waste for diversion from landfill.
- Include signage throughout the project site encouraging the reuse and recycling of waste.
- Provide incentives for project operators to reduce and divert solid waste from operation of the project; these incentives could include rebates to property owners for identified volume levels of recycled waste per development and innovative changes to standard operating procedures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

Implementation of the *2020 LA River Master Plan* is not anticipated to result in substantial generation of solid waste that would be in excess of State or local standards or the capacity of local infrastructure. Waste-reduction techniques are incorporated into individual resource management plans and would be expected to include reuse and diversion of materials in the waste stream from landfill disposal. The Design Guidelines contain recommended best practices for construction of river pavilions, which include recycling construction waste. During construction and operations, projects would comply with all applicable local and State waste reduction measures. Furthermore, the Los Angeles County Board of Supervisors adopted the C&D Debris Recycling and Reuse Ordinance in January 2005, which requires at least 65 percent of all debris generated by C&D projects in unincorporated County areas to be recycled or reused.

Implementation of the *2020 LA River Master Plan* is not anticipated to generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Mitigation Measures UTIL-3 and UTIL-4 would be implemented for KOP Category 6, which would reduce the impacts to less-than-significant levels. Therefore, after mitigation, impacts would be less than significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure UTIL-3: Recycle Construction Materials and Reduce Waste .

Mitigation Measure UTIL-4: Divert Solid Waste.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.18(e): Would the proposed Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Typical Projects

Common Elements

Construction

As discussed above for Impact 3.18(d), during construction, Typical Projects would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. These would include compliance with the California Integrated Waste Management Act, AB 75, and the California Solid Waste Reuse and Recycling Access Act, as well as individual municipalities' ordinances concerning reduction of solid waste.

All of the 17 municipalities and unincorporated County areas (18 total jurisdictions) along the LA River contain policies in their general plans that address reduction of solid waste. Waste-reduction techniques are incorporated into individual resource management plans and would be expected to include reuse and diversion of materials in the waste stream from landfill disposal. The Design Guidelines contain recommended best practices for construction of river pavilions, which include recycling construction waste. During construction, a Common Elements Typical Project would be required to comply with all State and local standards and solid waste reduction goals. Design Guidelines recommend recycling construction waste to minimize waste disposed of in landfills. While these recommendations are not mandatory, compliance with local ordinances (e.g., the C&D Debris Recycling and Reuse Ordinance) minimizing and diverting construction waste would be expected to ensure that impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

As discussed above for Impact 3.18(d), during operations, Typical Projects would include diversion and disposal elements. Reuse, recycling, composting, and other diversion methods would divert as much waste as possible from landfills. The Common Elements Typical Projects would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. These would include compliance with the California Integrated Waste Management Act, AB 75, and the California Solid Waste Reuse and Recycling Access Act, as well as individual municipalities' ordinances concerning reduction of solid waste. Therefore, impacts would be less than significant during operations.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Impacts from construction of a Multi-Use Trails and Access Gateways Typical Project would be substantially similar to the impacts identified for the Common Elements Typical Project. Construction of a Multi-Use Trails and Access Gateways Typical Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Impacts from operations of a Multi-Use Trails and Access Gateways Typical Project would be substantially similar to the impacts identified for the Common Elements Typical Project. Restroom facilities, cafés, and trails that would be included in this Typical Project would generate solid waste.

The Multi-Use Trails and Access Gateways Typical Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste during operations.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 6

Construction

Contractors constructing subsequent projects under the KOP categories would be required to comply with all State and local standards and solid waste reduction regulations.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Recreational facilities and trails, crossings and platforms, and diversions would generate solid waste. Channel modifications (with the exception of amphitheater use) and diversion projects would not generate solid waste. KOP Categories 1 through 6 would comply with federal, state, and local management and reduction statutes and regulations related to solid waste during operations. These would include compliance with the California Integrated Waste Management Act, AB 75, and the California Solid Waste Reuse and Recycling Access Act, as well as individual municipalities' ordinances concerning reduction of solid waste.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

Projects resulting from implementation of the *2020 LA River Master Plan* would be required to comply with federal, state, and local management and reduction statutes and regulations related to solid waste. These would include compliance with the California Integrated Waste Management Act, AB 75, and the California Solid Waste Reuse and Recycling Access Act, as well as individual municipalities' ordinances concerning reduction of solid waste. Therefore, the impact would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts on utilities and service systems would collectively be the service areas of the utility providers, which would extend outside the study area boundaries. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on utilities and service systems, if, in combination with other projects within the greater Los Angeles region, it would require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years; result in a determination by the wastewater treatment provider that serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments; generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or not comply

with federal, state, and local management and reduction statutes and regulations related to solid waste.

Cumulative Condition

Cumulative growth and development, as well as implementation of transportation infrastructure improvements, would result in additional demands on utilities and services, such as water supplies, wastewater treatment, and solid waste disposal. As the County continues to grow, there will be a continued need for increased landfill capacities. A potential for cumulative impacts for solid waste management exists on a countywide level. Similarly, cumulative impacts could occur for wastewater treatment facilities for wastewater flows.

Due to planned transportation projects and anticipated development identified in the County's and individual jurisdictions' general plans, as well as the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), there would be potential for construction of new stormwater drainage facilities or expansion of existing facilities to be needed. The need for new or expanded facilities for plan projects in combination with other large projects outside the region—such as wastewater projects in adjacent counties or transportation projects that connect with projects to outside areas—could result in significant impacts. As such, there would be a cumulatively significant impact with regard to stormwater drainage capacity.

Drought, pollution, population growth, and land use affect the quantity and quality of local and regional water supplies. The climate in Los Angeles County is characterized by extended periods of dry weather and varying levels of rainfall, which range from an average of 27.5 inches per year in the San Gabriel Mountains to 7.8 inches in the Antelope Valley. The overall demand for water is projected to increase dramatically to 2035, and the cost, quality, and availability of water will affect future development patterns. (Los Angeles County 2015.)

The 2020 RTP/SCS would result in significant cumulative impacts on sufficient water supplies. The volume of water and water delivery infrastructure currently available within the SCAG region would not be sufficient to meet the future multiple dry year or average year water demand in 2040. Increases in population could require or result in the relocation or construction of new or expanded water facilities outside of the region. As such, the *2020 LA River Master Plan* would result in a cumulatively considerable impact. Development attributed to land use strategies would also increase water demand. Due to the uncertainties associated with water supply and management; this impact is considered cumulatively considerable. (SCAG 2020.)

Build-out of the County's and individual jurisdictions' general plans would be expected to contribute incrementally with related projects in the County to significant cumulative impacts on landfill capacity. Existing landfills are currently operating at 80 percent capacity across the SCAG region. Per capita generation of solid waste is decreasing across the SCAG region due to increased recycling and compliance with the requirements of AB 939 and other sustainable conservation measures. Additionally, transportation projects and development encouraged by land use strategies would be required to comply with AB 341, in which 75 percent of the waste stream would be recycled by the year 2020. However, the potential to exceed capacity over the planning horizon remains significant.

Cumulative growth and development in the greater Los Angeles region would result in increased consumption of electricity and natural gas. The anticipated power and natural gas demands for the buildout of the County's and individual jurisdictions' general plans, as well as the 2020 RTP/SCS, would be cumulatively significant in the context of future growth elsewhere in Los Angeles County.

A variety of energy conservation measures are being and will continue to be implemented statewide, which will reduce the demand for electricity and natural gas. While population growth will increase the demand for electricity and natural gas, programs for energy-efficiency are planned or have been developed to further increase energy-efficiency. However, despite statewide energy-efficiency programs, the cumulative condition related to electricity and natural gas consumption would be significant. Therefore, there is a cumulative condition with respect to utilities and service systems.

Contribution of the Project to Cumulative Impacts

Under the *2020 LA River Master Plan*, insufficiencies in utilities could occur that would require the expansion or construction of new facilities, which could, in turn, result in significant environmental impacts. Extension of water and other utility infrastructure could be required for the proposed Project, which would likely include some trenching activities. These activities would not result in a significant environmental impact. Construction debris would be generated but would be recycled according to state and local regulations, therefore not having a significant impact on landfill capacity. Solid waste generation during operation would be minimal and would not make a considerable contribution to landfill capacity shortages.

Construction activities under the *2020 LA River Master Plan* would result in ground disturbance, which may create the potential for erosion to occur. Temporary best management practices (BMPs)—such as silt fences, straw waddles, sediment traps, gravel sandbag barriers, or other effective BMPs—would be implemented to control runoff and erosion during construction activities. Implementation of erosion and sediment control BMPs would prevent soil erosion and sedimentation from exposed soils. Furthermore, the *2020 LA River Master Plan* would be required to comply with the County's low-impact development standards. The proposed Project may also include storm drainage improvements, particularly with floodplain and channel improvements. Therefore, the Project would not result in a cumulatively considerable contribution to impacts on storm drainage infrastructure.

With regard to water supply, during construction, water would be used primarily for pouring and mixing concrete as well as mitigating fugitive dust impacts associated with construction activities. Construction impacts for all projects would be less than significant with mitigation. For operation of the *2020 LA River Master Plan*, implementation of Mitigation Measure UTIL-1 would reduce the level of impact, but not necessarily to less-than-significant levels. Therefore, the proposed Project would result in a cumulatively considerable contribution to impacts on water supplies.

Electricity consumption during construction activities would be minimal, and there would be no consumption of natural gas. Operations would require electricity for lighting; however, energy-conservation measures as outlined above would be implemented. Minimal amounts of natural gas would be consumed during operation of the *2020 LA River Master Plan*. The proposed Project would not make a cumulatively considerable contribution to cumulative impacts on electricity and natural gas. For a comprehensive discussion regarding cumulative impacts related to electricity and natural gas, see *Cumulative Impacts* in Section 3.5, *Energy*.

Section 3.19
Wildfire

3.19.1 Introduction

This section addresses potential wildfire impacts that may result from implementation of the *2020 LA River Master Plan*. The following discussion addresses existing wildfire hazard conditions of the program site and surroundings, considers applicable goals and policies, identifies and analyzes environmental impacts, and includes measures to reduce or avoid significant impacts anticipated from project implementation, as applicable.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.19.2 Setting

3.19.2.1 Geographic

Regional Setting

Los Angeles County is subject to both wildland and urban fires due to its climate, topography, and native vegetation The climate in the County is characterized as Mediterranean dry-summer featuring cool, wet winters and warm, dry summers. High moisture levels during the winter rainy season significantly increase the growth of plants. However, the vegetation is dried during the long, hot summers, decreasing plant moisture content and increasing the ratio of dead fuel to living fuel. As a result, fire susceptibility increases dramatically, particularly in late summer and early autumn. In addition, the presence of chaparral, a drought-resistant variety of vegetation that is dependent on occasional wildfires, is expected in Mediterranean dry-summer climates (Stephenson and Calcarone, 1999).

Fire Hazard Designations

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards in the State through its Fire and Resource Assessment Program. These maps designate areas of the State into different Fire Hazard Severity Zones (FHSZs) based on various

factors, including vegetation, topography, weather, crown fire production, and ember production and movement (CAL FIRE 2007). CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire State and includes classifications for Federal Responsibility Areas (FRAs), State Responsibility Areas (SRAs), and Local Responsibility Areas (LRAs). For a more detailed description of how FHSZs are designated, see below under Section 3.19.2.2, *Regulatory* (Fire Hazard Severity Zones: PRC Sections 4201–4204 and Very High Fire Hazard Severity Zones – Government Code Sections 51175–51189).

A large portion of the County, even in highly developed areas, is designated as a Very High FHSZ (Los Angeles County 2018). As shown on the CAL FIRE FHSZ maps, in Los Angeles County, there are:

- 386.06 square miles (8.11 percent) in the Very High LRA FHSZ,
- 625.01 square miles (13.13 percent) in the Very High SRA FHSZ, and
- 132.77 square miles (2.79 percent) in the High SRA FHSZ.

The LA River intersects and is adjacent to several Very High FHSZs, as designated by CAL FIRE. Approximately 12 miles of the LA River corridor is within or adjacent to Very High FHSZ along the Santa Monica Mountains and the Glendale Narrows areas. Historically, fires have occurred throughout Griffith Park, with the most recent wildfire coming close to the river corridor in 2007. While large portions of the LA River are concrete-lined channels, areas with soft bottom channels and vegetation pose potential wildfire risks.

Wildland-Urban Interface

The Wildland-Urban Interface (WUI) is an area where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels (USDA and USDOI 2001) and occur in areas designated by CAL FIRE as a FHSZ. A WUI is defined as a buffer around areas of residential density greater than 0.05 dwelling unit per acre and is divided into a Defense Zone (the area up to 0.25 mile from the developed area) and a Threat Zones (from 0.25 to 1.5 miles from developed areas) (CAL FIRE 2018a).

The WUI creates an environment in which fire can move readily between structural and vegetation fuels. Once homes are built within (or bordering) natural habitat settings, fighting wildland fires becomes more complex because the goal of extinguishing the wildland fire is often superseded by protecting human life and private property.

The WUI is composed of communities that border wildlands or are intermixed with wildlands and where the minimum density exceeds one structure per 40 acres. WUI communities are created when the following conditions occur: (1) structures are built at densities greater than one unit per 40 acres, (2) the percentage of native vegetation is less than 50 percent, (3) the area is more than 75 percent vegetated, and (4) the community is within 1.5 miles of a wildland area more than 1,325 acres. The 1.5-mile buffer distance was adopted according to the 2001 California Fire Alliance definition of vicinity, which is roughly the distance that burning material can be transported from wildland fire to the roof of a structure (UW 2008).

Recent Wildfires

Wildfires are a common occurrence in Los Angeles County. Some of the County's most destructive fires have occurred since 2000, including:

- The Grand Prix Fire started on October 21, 2003 and burned a total of 50,618 acres between Claremont and Lytle Creek. The fire destroyed 136 homes and was ruled "accidental but human-initiated."
- The Simi Fire started on October 25, 2003 and burned a total of 107,570 acres between Simi Hills and southeastern Simi Valley, in eastern Ventura County and western Los Angeles County, California. It destroyed 37 homes and 278 outbuildings. The cause of the fire remains unknown.
- The Day Fire started on October 30, 2006 and burned a total of 161,816 acres. The fire primarily burned the Los Padres National Forest. The cause of the fire was human-ignited debris.
- The Ranch Fire started on October 20, 2007 and burned a total of 58,410 acres near Townsend Peak in the Angeles National Forest. The cause of the fire was equipment.
- The Station Fire started on September 22, 2009 and burned a total of 160,883 acres in the Angeles National Forest. The Station Fire is the largest recorded fire in Los Angeles County. It destroyed 89 residences and another 120 buildings of significance. Two firefighters were killed. The cause of the fire was arson.
- The Woolsey Fire started November 8, 2018 and burned a total of 96,949 acres in Los Angeles and Ventura Counties, including Thousand Oaks, Agoura Hills, Calabasas, the Santa Monica Mountains, Malibu, and West Hills. A total of 1,643 structures were destroyed and 3 people were killed.

Project Study Area Setting

As seen in Table 3.19-1 and on Figure 3.19-1, no wildfire hazards as designated by CAL FIRE are present in Frames 1 through 4 or Frame 9. Therefore, the discussion below focuses on Frames 5 through 8. Table 3.19-1 shows that the acreage of Very High FHSZs designated land is concentrated in Frames 6 and 7, with less acreage in Frame 5 and Frame 8.

Table 3.19-1. Very High FHSZs Acreage in Each Frame

Frame	Very High FHSZ Designated Land (acres)
Frame 1	0
Frame 2	0
Frame 3	0
Frame 4	0
Frame 5	124
Frame 6	5,580
Frame 7	3,058
Frame 8	1,883
Frame 9	0

Source: CAL FIRE 2007

Frame 5

As seen on Figure 3.19-2, approximately 124 acres of Frame 5 is designated as a Very High FHSZ, in its northernmost portion adjacent to Frame 6 (Figure 3.19-2). This includes the northeastern portion in the residential Montecito Heights Neighborhood and the northernmost portion of Frame

5, which encompasses the LA River, although the river is a concrete channel in this location (Mile 24). Primarily industrial and commercial land uses lie directly adjacent to the FHSZ to the east.

Frame 6

As seen on Figure 3.19-3, almost the entirety of Frame 6 west of the LA River is in a Very High FHSZ (Figure 3.19-3). The FHSZ encompasses 5,580 acres including the eastern portions of the Santa Monica Mountains, encompassing areas such as Elysian Reservoir and Park, Dodger Stadium, Griffith Park, and the Los Angeles Zoo. Aside from government-owned areas, land uses in the FHSZ are primarily residential. The FHSZ briefly includes the LA River at approximately Mile 29. Portions of Frame 6 to the east of the LA River are also in Very High FHSZs. These areas include the Cypress Park neighborhood, Glassell Park neighborhood, and Forest Lawn Cemetery in the south, and Los Angeles Equestrian Center in the north.

Frame 7

As seen on Figure 3.19-4, approximately 3,058 acres of Frame 7 are designated Very High FHSZ along the northern portion of the Santa Monica Mountains. Most of the Very High FHSZ is south of the LA River (Figure 3.19-4). These areas include Griffith Park, Mount Sinai Memorial Parks and Mortuaries, Universal Studios, and various open space areas with hiking trails. Many residential areas in the Studio City and Sherman Oaks neighborhoods are in the FHSZ. A Very High FHSZ is also in Frame 7 at approximately Mile 34. This FHSZ is in the southernmost part of Burbank, south of the Ventura Freeway, adjacent to Griffith Park (City of Los Angeles). This area includes studio buildings as well as a residential area.

Frame 8

As seen on Figure 3.19-5, approximately 1,883 acres of Frame 8 are designated Very High FHSZ. This frame has a high residential context. Similar to Frame 7, most of the Very High FHSZ in this frame is south of the LA River (Figure 3.19-5).

3.19.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of wildfire in this PEIR.

Federal

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code (IBC) use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

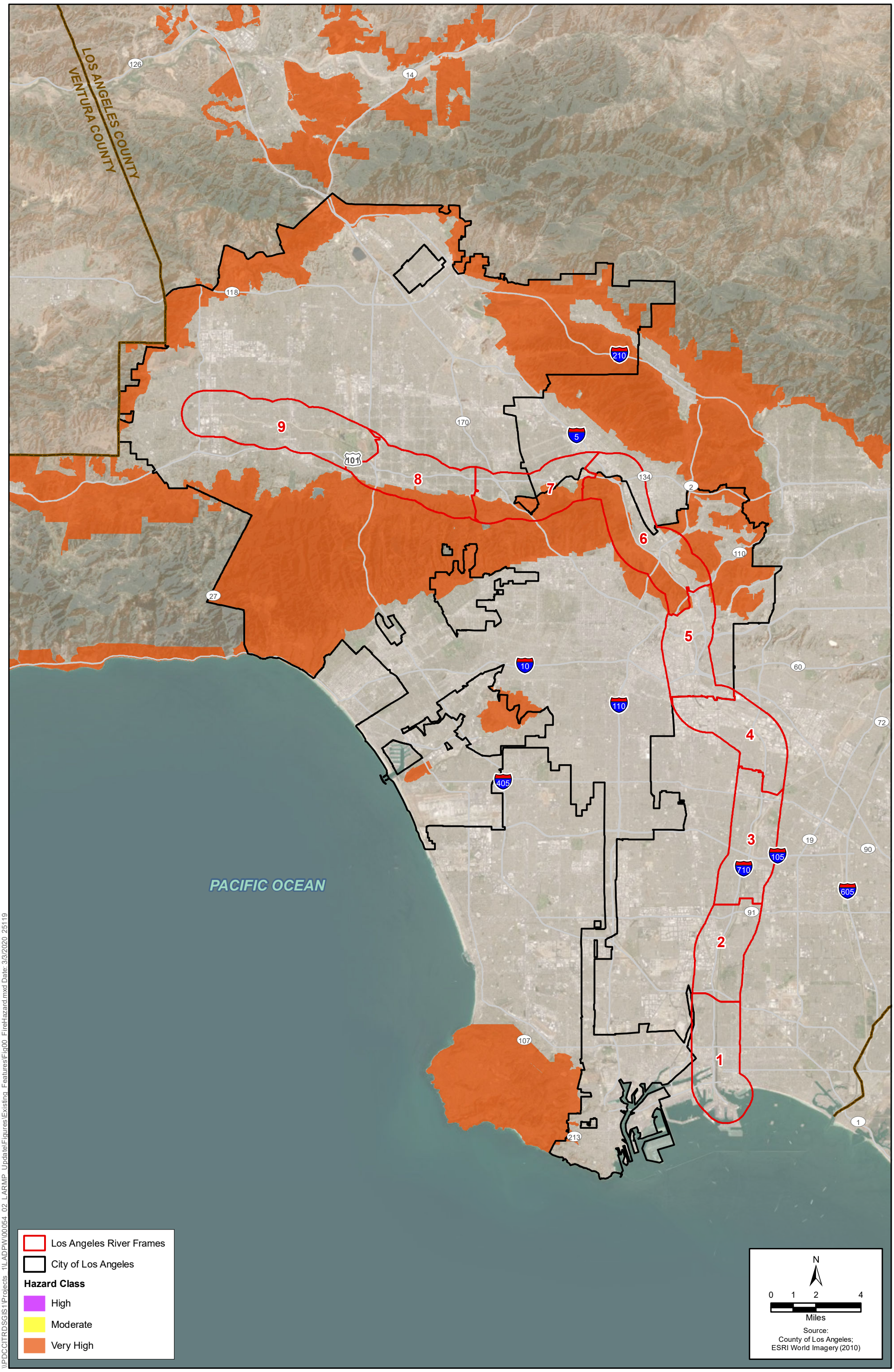


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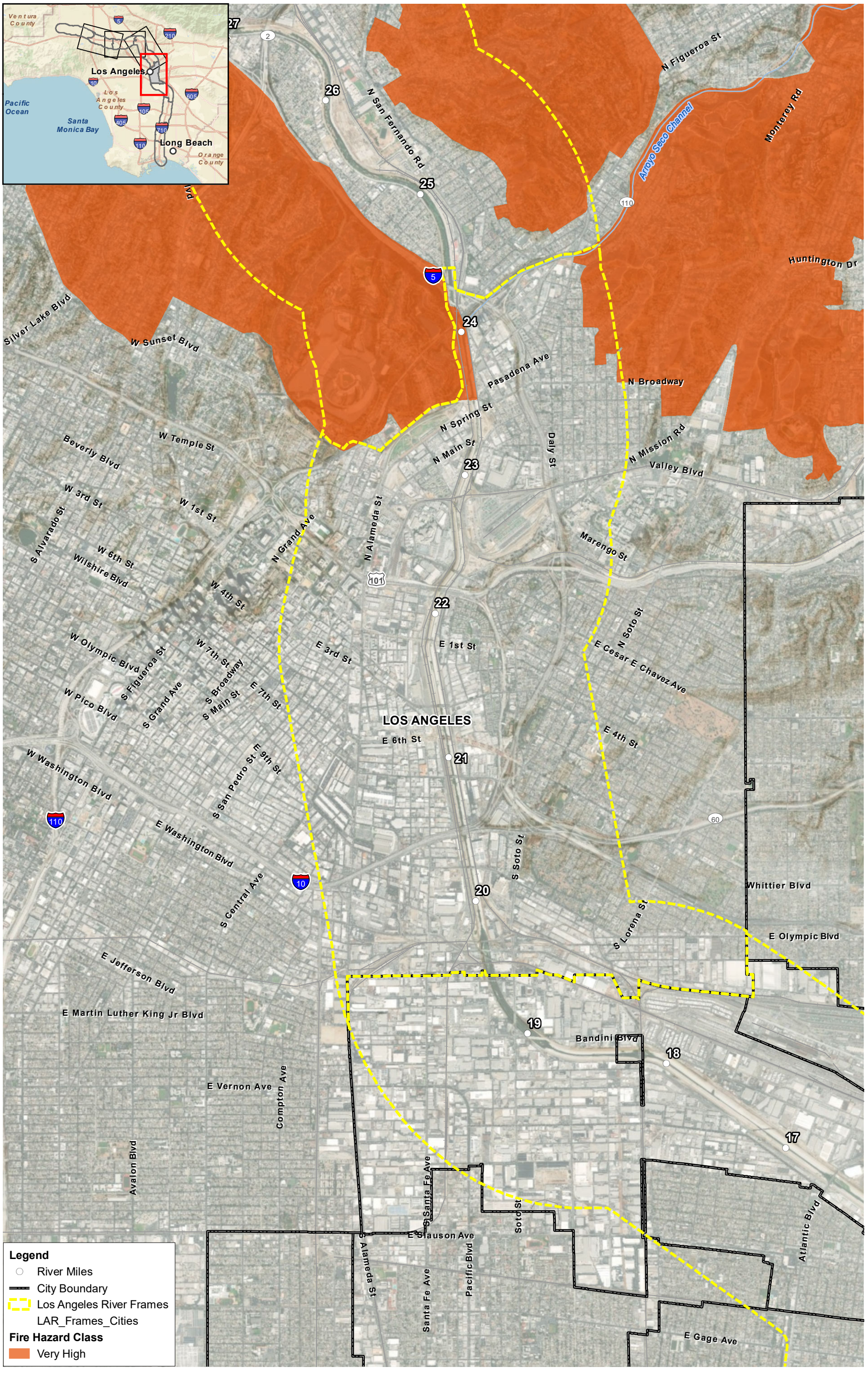
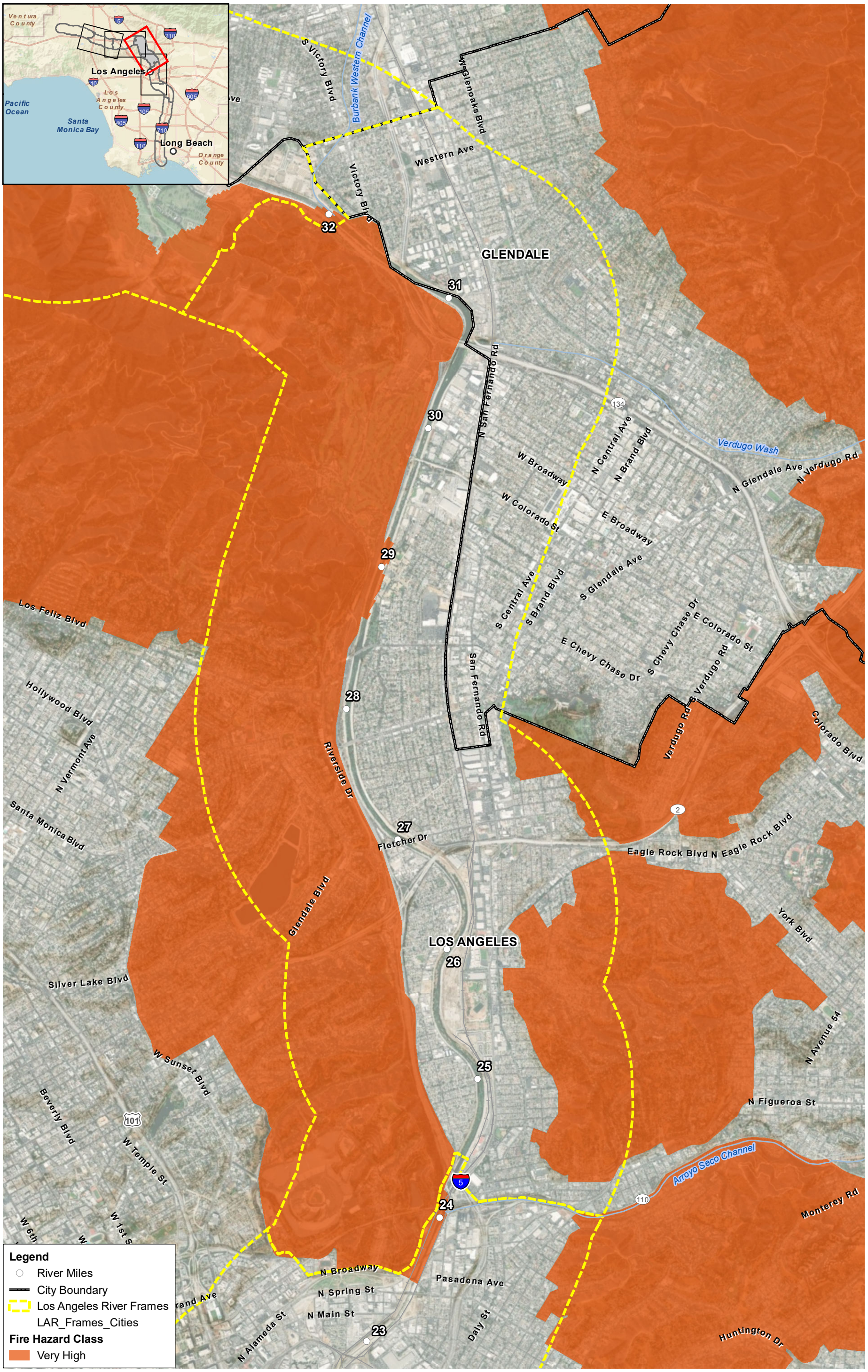
Figure 3.19-1
Fire Hazard Map
Los Angeles River Master Plan Update Program EIR Study Area



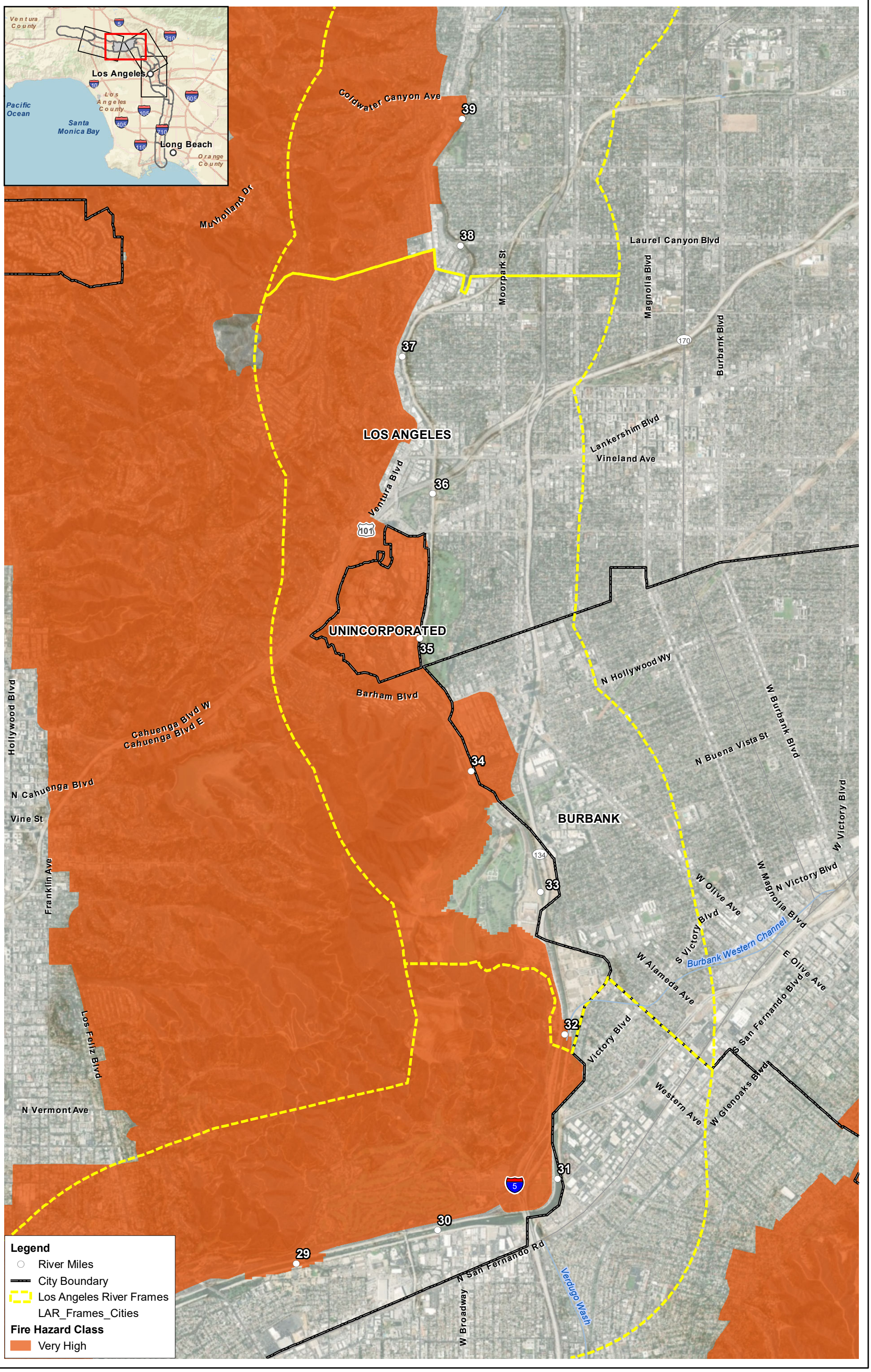
Source: CALFIRE; County of Los Angeles; ESRI

Figure 3.19-2
Frame 5
Fire Hazard Map
Los Angeles River Master Plan Update Program EIR Study Area



Source: CALFIRE; County of Los Angeles; ESRI

Figure 3.19-3
Frame 6
Fire Hazard Map
Los Angeles River Master Plan Update Program EIR Study Area

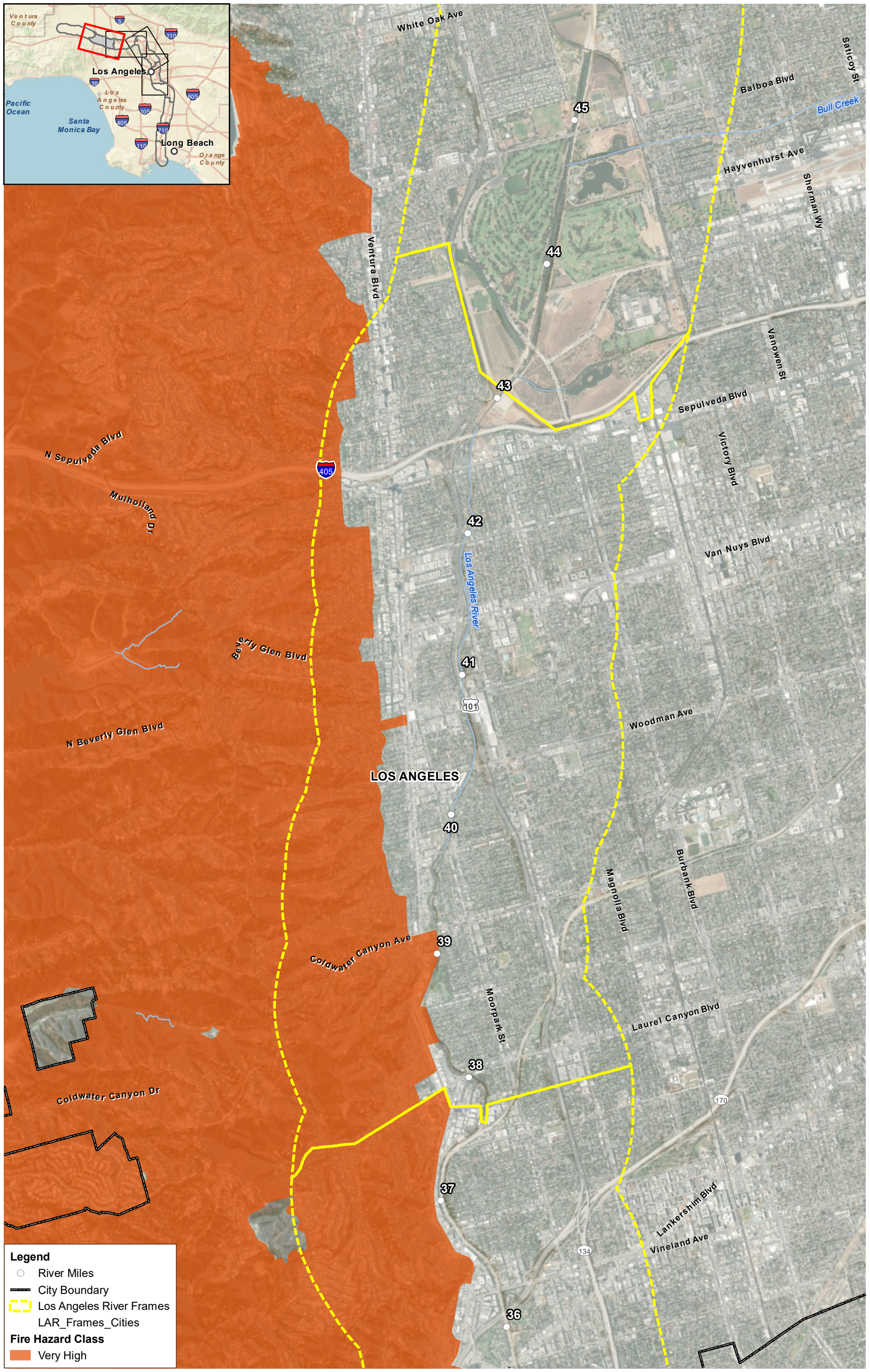


0 1,625 3,250 Feet
1:39,000

N

Source: CALFIRE; County of Los Angeles; ESRI

Figure 3.19-4
Frame 7
Fire Hazard Map
Los Angeles River Master Plan Update Program EIR Study Area



0 1,625 3,250 Feet
1:39,000

N

Source: CALFIRE; County of Los Angeles; ESRI

Figure 3.19-5
Frame 8
Fire Hazard Map
Los Angeles River Master Plan Update Program EIR Study Area

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International Wildland–Urban Interface Code

The International Wildland–Urban Interface Code is published by the IFC and is a model code addressing wildfire issues.

Federal Wildland Fire Management Policy

The 1995 Federal Wildland Fire Management Report produced the first single comprehensive federal fire policy for the Departments of the Interior and Agriculture. That review was prompted not only by the 1994 fire season, with its 34 fatalities, but also by growing recognition of fire problems caused by fuel accumulation. The resulting 1995 Federal Fire Policy recognized, for the first time, the essential role of fire in maintaining natural systems. In the aftermath of the escape of the Cerro Grande Prescribed Fire in May of 2000, the Secretaries of the Interior and Agriculture requested a review of the 1995 Federal Fire Policy and its implementation. The subsequent 2001 Federal Fire Policy (U.S. Department of the Interior et al. 2001) and its implementation are founded on the following guiding principles:

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, State, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.
- State

California Emergency Services Act

The California Emergency Services Act was adopted to establish the State's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the State. This act is intended to protect health and safety by preserving the lives and property of the people of the State.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or after the governor issues a proclamation of a State emergency. Once the act is activated, the local government

is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values, providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each year (CAL FIRE 2016).

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention, providing support through a wide variety of fire-safety responsibilities, including:

- Regulating buildings in which people live, congregate, or are confined;
- Controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire;
- Providing statewide direction for fire prevention in wildland areas;
- Regulating hazardous liquid pipelines;
- Reviewing regulations and building standards; and
- Providing training and education in fire protection methods and responsibilities.

2018 Strategic Fire Plan for California

2018 Strategic Fire Plan for California (CAL FIRE 2018b) is a cooperative effort between CAL FIRE and the Board of Forestry and Fire Protection (the Board). The Board has adopted fire plans since the 1930s and periodically updates them to reflect current and anticipated needs. Over time, as the environmental, social, and economic landscape of California's wildlands has changed, the Board has evolved the Strategic Fire Plan to better respond to these changes and to provide the CAL FIRE with appropriate guidance "…for adequate statewide fire protection of state responsibility areas" (Public Resources Code [PRC] 4130). In 2018, the Board adopted a strategic fire plan to update and address fire concerns in California.

Reflecting a society that must be more aware of and responsive to the benefits and threats of wildland fire, the 2018 Strategic Fire Plan calls for a more fire-resistant natural environment, with buildings and infrastructure that are also more fire resistant, all achieved through local, State, federal, tribal, and private partnerships. The goals that are critical to achieving the 2018 Strategic Fire Plan's vision revolve around fire prevention, natural resource management, and fire suppression efforts, as broadly construed. Major components are:

- Improve the availability and use of consistent, shared information on hazard and risk assessment;
- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities;
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans (CWPP);

- Increase awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implement needed assessments and actions for post-fire protection and recovery. (CAL FIRE 2018b.)

Fire Hazard Severity Zones: PRC Sections 4201–4204

In 1965, PRC Sections 4201–4204 and Government Code Sections 51175–51189 directed CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as FHSZs, define the application of various mitigation strategies to reduce risk associated with wildland fires (State of California 1965).

Very High Fire Hazard Severity Zones – Government Code Sections 51175–51189

In 1992, Government Code Sections 51175–51189 established the classification for Very High FHSZs based on fuel loading, terrain, weather, and other relevant factors identified by CAL FIRE as major causes of wildfire spread and based on the severity of fire hazard that is expected to prevail in those areas. The code established the requirements for those that maintain an occupied dwelling within a designated Very High FHSZ. The Very High FHSZs require the application of mitigation measures to reduce risk associated with uncontrolled wildfires and require that the measures be taken. Local agencies designate the locations of Very High FHSZs within their jurisdictions as required by CAL FIRE.

Senate Bill 1241

In 2012, Senate Bill (SB) 1241 added Section 66474.02 to Title 7, Division 2, of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels that are designated as Very High FHSZs or located in an SRA, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. In brief, the three findings require that: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290–91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

Senate Bill 901

SB 901 (Dodd 2018) requires every electric utility to prepare a wildfire mitigation plan (WMP). SB 901 amended Public Utilities Code Section 8387, which generally requires every publicly owned utility to construct, maintain, and operate its electrical facilities to minimize the risk of wildfire posed by those facilities. As amended by SB 901, Section 8387 more specifically requires every publicly owned utility to prepare and present a WMP to its governing body by January 1, 2020, and annually thereafter. As further required by Assembly Bill (AB) 1054 enacted in 2019, the WMPs will

be submitted to the California Wildfire Safety Advisory Board for review and advisory opinion by July 1, 2020.

Assembly Bill 1054

On July 12, 2019, Governor Gavin Newsom signed AB 1054. AB 1054 provides for a Wildfire Fund, which electrical corporations may access upon meeting specified requirements. Electrical corporations must opt into the fund, make financial commitments, and maintain a safety certificate from the California Public Utilities Commission (CPUC), among meeting other conditions required by AB 1054.

Fire Safe Development Regulations

The Fire Safe Development Regulations section of the 2018 Strategic Fire Plan implements PRC Section 4290 and stipulates minimum requirements for building construction in SRAs. These regulations address ingress and egress (e.g., road widths, turnouts), building and street sign visibility, emergency water standards, and fuel modification. In June 2012, the Board and CAL FIRE formed a workgroup to revise the Fire Safe Development Regulations. The workgroup made the first significant changes to the regulations since they were initially effective in 1991 and identified future areas of study. Changes to the regulations were effective January 1, 2016. This workgroup was re-engaged in 2017 to align the update timeline for the Fire Safe Regulations with the triennial California Fire Code (CFC) cycle. The workgroup has been reviewing the existing regulations, based on feedback received from the 2016 updates, to reduce inconsistencies and improve clarity. These changes are anticipated to be effective with the 2020 CFC on January 1, 2020.

California Building Code and Fire Code

The California Code of Regulations, Title 24, is a compilation of building standards, including fire safety standards for residential and commercial buildings. The California Building Code (CBC) standards serve as the basis for the design and construction of buildings in California; the CFC is a component of the CBC. Typical fire safety requirements of the CFC include the installation of sprinklers in all high-rise buildings, the establishment of fire resistance standards for fire doors, building materials, and particular types of construction, and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The CFC applies to all occupancies in California, except where more stringent standards have been adopted by local agencies. Specific CFC regulations have been incorporated by reference, with amendments, in the Los Angeles Building Code, Fire Safety Regulations.

Regional

Office of Emergency Management

The Office of Emergency Management (OEM), established by Chapter 2.68 of the County Code, is responsible for organizing and directing emergency preparedness efforts, as well as the day-to-day coordination efforts, for the County's Emergency Management Organization. The OEM's broad responsibilities include, among others, planning and coordination of emergency services on a countywide basis. The County organizes a formal mutual aid agreement between all emergency responders (including police and fire) within its jurisdiction to provide emergency personnel and resources to assist other member agencies during emergency and/or conditions of extreme peril.

The Mutual Aid Operations Plan provides a structure of response should an emergency arise which requires immediate response by a greater number of emergency personnel than would be available to individual departments using all other available resources.

Los Angeles County All-Hazards Mitigation Plan 2019

To meet the requirements of the Disaster Management Act of 2000, the OEM prepared an All-Hazards Mitigation Plan (AHMP) to assess risks posed by natural hazards and to develop a mitigation action plan for reducing the risks in unincorporated County areas. Hazard mitigation aims to reduce losses from future disasters. It is a process that identifies and profiles hazards, analyzes the people and facilities at risk, and develops mitigation actions to reduce or eliminate hazard risk. The implementation of the mitigation actions includes short- and long-term strategies that involve planning, policy changes, programs, projects, and other activities.

The 2019 AHMP replaces the AHMP that was approved in 2014.

Los Angeles County Operational Area Emergency Response Plan

The Los Angeles County Operational Area Emergency Response Plan (OAERP) addresses the operational area's (OA) coordinated response to emergency situations associated with natural, man-made, and technological incidents. An OA is defined as a single county and all political subdivisions. The OAERP does not address normal day to-day emergencies; the operational concepts reflected in this plan focus on potential large-scale disasters which can generate unique situations requiring an unusual or extraordinary emergency response.

As described above, the AHMP identifies potential threats to the OA. The OAERP identifies procedures to coordinate and support emergency response and recovery activities and will be tested through exercises and validated by the results of actual response. The goal is to maintain an emergency management organization with strong collaborative ties among governments, community-based organizations, volunteers, public service agencies, and the private sector.

Local

As shown on Figure 3.19-1, no wildfire hazards as designated by CAL FIRE are present in Frames 1 through 4 or Frame 9. Therefore, review of wildfire regulations below is focused on Frames 5 through 8.

Frame 5

City of Los Angeles

City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code contains 18 chapters, including Chapter 5, *Public Safety and Protection* (City of Los Angeles 2013). In that document, Article 2, *Police and Special Officers*, contains regulations governing administrative issues, such as requirements for police badges and uniforms, and Article 7, *Fire Protection and Prevention*, contains the fire code for the City of Los Angeles. The City of Los Angeles Fire Code (Fire Code) prescribes laws that may be enforced by the City of Los Angeles Fire Department (LAFD) to help safeguard life and property from fire, explosion, panic, or other hazardous conditions that may arise in the City of Los Angeles. The Fire Code includes information pertaining to administrative issues, such as the requirements for filling out and

submitting Hazardous Materials Release Response Plans and Inventory Statements, and technical requirements associated with the storage, management, and disposal of hazardous materials, such as underground chemical storage tanks, asbestos-containing materials/building material, and various other combustible and flammable materials. The Fire Code also includes mandates from the State of California's Fire Code.

City of Los Angeles General Plan Framework Element

The *Citywide General Plan Framework, an Element of the City of Los Angeles General Plan* (Framework), adopted in December 1996 and readopted in August 2001, provides a comprehensive, long-range strategy for accommodating long-term growth in the City of Los Angeles. The Infrastructure and Public Services chapter of the Framework sets forth goals, objectives, and policies for fire protection and emergency medical services (EMS) in the City of Los Angeles. The objectives and policies in the Infrastructure and Public Services chapter ensure that every neighborhood has the necessary level of fire protection service, EMS, and infrastructure. Under the Framework, the City of Los Angeles standard for response distance from the fire station to the destination location is 1.5 miles (City of Los Angeles 1995), which is consistent with the specifications for response distances in the City of Los Angeles Municipal Code.

City of Los Angeles General Plan Safety Element

The *Safety Element of the Los Angeles City General Plan* (City of Los Angeles 1996) recognizes that most jurisdictions rely on emergency personnel (i.e., police, fire, gas, and water) to respond to and handle emergencies. The Safety Element sets forth specific policies and objectives related to safety. These policies and objectives emphasize hazard mitigation, emergency response, and disaster recovery. The Safety Element serves as a guide for the construction, maintenance, and operation of fire protection facilities in the City of Los Angeles. It sets forth policies and standards for fire station distribution and location, fire suppression water flow (or "fire flow"), firefighting equipment access, emergency ambulance services, and fire prevention activities. Population density, nature of on-site land uses, and traffic flow are also considered by LAFD in evaluating the adequacy of fire protection services throughout the City of Los Angeles.

City of Los Angeles Emergency Operations Organization and Hazard Mitigation Plan

The Emergency Operations Organization within the City of Los Angeles is responsible for the City of Los Angeles's emergency preparations (i.e., planning, training and mitigation), response and recovery operations. The Emergency Operations Organization is composed of all agencies of the City of Los Angeles's government and centralizes command and information coordination to enable its unified chain-of-command to operate efficiently and effectively in managing the City of Los Angeles's resources.

The City of Los Angeles 2018 Hazard Mitigation Plan (HMP) was prepared to lessen the City of Los Angeles's vulnerability to disasters and to reduce risks from natural hazards. An HMP serves as a guide for decision makers as they commit City of Los Angeles resources to minimize the effects of natural hazards. The HMP integrates with existing planning mechanisms, such as building and zoning regulations, long-range planning mechanisms, and environmental planning. The planning process includes conducting a thorough hazard vulnerability analysis, creating community disaster mitigation priorities, and developing subsequent mitigation strategies and projects.

Los Angeles Fire Department Strategic Plan 2018–2020

The LAFD's *Strategic Plan 2018–2020*, *A Safer City 2.0* (LAFD n.d.), is the next generation of the first-ever LAFD strategic plan. This plan focuses on five goals to guide the LAFD in the next 3 years:

1. Provide exceptional public safety and emergency service.
2. Embrace a healthy, safe and productive work environment.
3. Implement and capitalize on advanced technology.
4. Enhance LAFD sustainability and community resiliency.
5. Increase opportunities for personal growth and professional development.

Frame 6

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 5.

City of Glendale

City of Glendale General Plan Safety Element

The City of Glendale's *Safety Element of the General Plan* (City of Glendale 2003) contains goals, policies, and regulations to address fire, earthquakes, flooding, and other geologic hazards as well as other safety issues that the City of Glendale considers important. The ultimate objective of the Safety Element is to improve the safety of the City of Glendale, and in the process make the City of Glendale more sustainable and prosperous.

Chapter 4 of the City of Glendale's Technical Report to the Safety Element contains the detailed technical analysis and maps regarding wildland fires used to prepare the Safety Element. Chapter 4 outlines Glendale's susceptibly to wildland fires and hazard mitigation programs currently implemented in the City of Glendale. These programs include Fire Prevention, Vegetation Management, Prescribed Fire, and Hazard Abatement Notices.

Glendale Water and Power Wildfire Mitigation Plan 2019

The *Wildfire Mitigation Plan* (City of Glendale 2019) details a two-pronged approach to mitigate wildfires. Glendale's Water and Power focuses efforts on (1) limiting the likelihood of ignition of localized fires from its assets and equipment and (2) limiting the spread of localized fires into a wildfire. Reducing the likelihood of igniting fires and containing any fires that do start would significantly mitigate the risk of igniting and spreading wildfires while complying with SB 901 and other related mandates.

Mitigating efforts listed in the *Wildfire Mitigation Plan* include, but are not limited to, enhanced vegetation management, use of non-wood poles, 24/7 monitoring of weather station data and high-definition cameras, moving overhead conductors and assets underground, and proactive de-energization during high-wildfire risk periods. Determination of the specific mitigating measure(s) will depend evaluation of criteria such as up-front and life-cycle costs, effectiveness in reducing risk, longevity, impact on reliability and serviceability, and alignment with long-term utility and City of Glendale goals and priorities.

Glendale Fire Department's Vegetation Management Program, Defensible Space Guidelines

The ultimate goal of the Vegetation Management Program is to reduce the risk of buildings being ignited by a nearby wildfire through creating a buffer of defensible space with maintained vegetation between the building and the surrounding unmaintained/natural vegetation. The Vegetation Management Program details vegetation management guidelines for defensible space around buildings (0–100 feet from the building), roads (0–10 feet from the paved surface), and extended distances (100–200 feet from the nearest building). Vegetation management for extended distances may be required by the City of Glendale Fire Department in areas where a specific extreme fire hazard exists.

Frame 7

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 5.

City of Burbank

City of Burbank General Plan Safety Element

The *Burbank2035 General Plan* Safety Element (City of Burbank 2013) contains goals and policies that provide Burbank with a framework for keeping residents, businesses, and visitors safe from natural and human hazards. The Safety Element considers the following hazards, as applicable to the City of Burbank: seismically induced conditions including ground shaking, surface rupture, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other geologic hazards; flooding; wildland and urban fires; evacuation routes, police protection, fire protection, emergency response and preparedness, airport safety, and hazardous materials.

Goal 4 of the Safety Element contains policies that center around providing high-quality fire protection services and reducing threats to public safety and property from wildland and urban fire hazards. Policies include maintaining short response times, providing adequate fire protection services, implementing fire prevention and suppression programs in areas of high fire hazard risk, and maintaining adequate fire breaks.

City of Burbank All-Hazard Mitigation Plan (2005)

The City of Burbank's *All-Hazard Mitigation Plan* (City of Burbank 2011) is an update and enhancement of Burbank's original 2005 HMP and covers each of the major natural hazards that pose risks to the City of Burbank. The primary objective of the mitigation plan is to reduce the negative impacts of future disasters on Burbank: to save lives and reduce injuries, minimize damage to buildings and infrastructure (especially critical facilities), and minimize economic losses.

Chapter 7 of the City of Burbank's All-Hazard Mitigation Plan focuses on WUI fires that pose a substantial threat to parts of Burbank. This chapter provides a summary of common strategies for reducing the level of fire risk to both property and life safety in WUI areas. Strategies listed include: reduce the probability of fire ignitions, reduce the probability that small fires will spread, minimize property damage, minimize life safety risk, and adhere to local fire ordinances and policies.

Burbank enforces the 2010 CFC, including the Wildland-Urban Interface Chapter 47, and historically enforced previous versions of the Code. In addition, a Burbank ordinance mandated that all wood shake or shingle roofs in the FHSZ (Mountain Fire Zone) had to be removed by August 14, 2005 and removed city-wide by August 14, 2012.

City of Burbank Municipal Code

Section 9-1-9-304.1.2.2 of the Burbank Municipal Code, Fire Hazard Reduction in Very High Fire Hazard Severity Zone, is added to Chapter 3, Part 9 of the CFC and details specific brush removal, vegetation management, and fire break requirements. This section was added by ordinance No. 19-3,922, effective on January 1, 2020.

Unincorporated County

Los Angeles County Fire Department Strategic Plan 2017–2021

The Los Angeles County Fire Department (LACFD) is responsible for providing fire protection and life safety services to over four million residents residing in 59 cities and all unincorporated County areas. The LACFD Strategic Plan 2017–2021 (LACFD 2018) identifies goals for continuing improvements in the areas of service delivery, operational effectiveness, the welfare of the workforce, emergency preparedness, fostering a culture of inclusivity, and fiscal solvency.

Los Angeles County Fire Department Fire Prevention Service Fees

LACFD Fire Prevention works with developers, architects, and engineers to ensure that all fire protection requirements are met for building improvements, new developments, and structural modifications. Plans are reviewed to ensure the proposed systems meet the CFC and County codes and standards. LACFD, in conjunction with the Los Angeles County Board of Supervisors, implemented fees for fire prevention/life safety services. As of November 1, 2018, LACFD updated and added new fees, including engineering, field permit, film unit, forestry, high rise, land development unit, petroleum/chemical, and regional service fees (LACFD 2019).

Los Angeles County Hillside Management Areas Ordinance

The policies of the *Los Angeles County General Plan* (Los Angeles County 2015), and area and community plans where applicable, seek to preserve significant natural features in hillside areas. The Hillside Management Areas Ordinance and the Hillside Design Guidelines implement those policies by ensuring that hillside development projects use sensitive and creative engineering, architectural, and landscaping site design techniques. Hillside management areas are defined as areas with 25 percent or greater natural slopes. Adherence to Hillside Design Guidelines is required for development in hillside management areas, unless exempted under the ordinance's provisions. In hillside areas with less than 25 percent slope, use of the guidelines is optional but encouraged. The guidelines include specific and measurable design techniques that can be applied to residential, commercial, industrial, and other types of projects. Some design techniques may be more appropriate or feasible than others, depending on the type of project, location, size, complexity, site constraints, and other design techniques incorporated into the project.

Los Angeles County Code of Ordinances Title 32 Fire Code

The Los Angeles County Fire Code establishes guidelines and requirements for fuel modification and clearance of brush and vegetative growth. Specifically, Fire Code Section 1117.2.1 requires the

submittal of a fuel modification plan, a landscape plan, and an irrigation plan for the area within a proposed project's boundaries designated a Very High FHSZ. The plan must be prepared by a registered landscape architect, landscape designer, landscape contractor, or other individual with expertise acceptable to the forestry division of LACFD prior to any new construction. The Weed Abatement Division of the Los Angeles County Department of Agricultural Commissioner has been given authority to create defensible space for unimproved properties. In accordance with Los Angeles County Fire Code Section 317 et seq., the Agricultural Commissioner may notify all owners of property affected that they must clear all flammable vegetation and other combustible growth or reduce the amount of fuel content for a distance greater than 30 feet, but not to exceed 200 feet.

Los Angeles County General Plan

The *Los Angeles County General Plan* provides the policy framework for how and where the unincorporated County areas will grow through 2035 and establishes goals, policies, and programs to foster healthy, livable, and sustainable communities (Los Angeles County 2015).

Chapter 12, the Safety Element, identifies the goals and policies that serve to reduce the potential risk of death, injuries, and economic damage resulting from natural and man-made hazards. Also, CAL FIRE and the Board have drafted a comprehensive document for wildland fire protection in California. The Forestry Division's Fire Plan Unit is in charge of implementing the California Fire Plan in Los Angeles County. Chapter 13, the Public Services and Facilities Element, provides a summary of some of the major public services and facilities that serve the unincorporated County areas.

Frame 8

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 5.

3.19.3 Impact Analysis

3.19.3.1 Methods

The analysis of potential impacts related to wildfire was based on a review of available data to determine the presence of Very High FHSZs within and immediately adjacent to the 2-mile-wide study area and considered whether construction and operations activities associated with the implementation of the *2020 LA River Master Plan* would exacerbate wildfire risk and related hazards. The *2020 LA River Master Plan* consists of two Typical Projects that represent typical improvement projects that could be implemented anywhere in the proposed project study area, six kit of parts (KOP) categories, and implementation of the overall *2020 LA River Master Plan*. Specific project site design and locations are currently unknown. The impact analysis considers the potential for each improvement associated with the *2020 LA River Master Plan* to exacerbate wildfire risk at a programmatic level. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.19.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if, in or near SRAs or lands classified as Very High FHSZs, the Project would:

3.19(a) Substantially impair an adopted emergency response plan or emergency evacuation plan.

3.19(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

3.19(c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment.

3.19(d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

3.19.3.3 Impacts and Mitigation Measures

Impact 3.19(a): Would the proposed Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Typical Projects

Common Elements

Construction

Emergency management services in Los Angeles County are overseen by the OEM that provides leadership and coordination of disaster plans and exercises within the 88 cities, 137 unincorporated communities, and 288 special districts in the County. Specifically, LACFD is responsible for providing fire protection and life safety services to over 4 million residents residing in 59 cities and all unincorporated County areas. In addition, the County maintains an AHMP that addresses issues related to multiple hazards, including earthquakes, floods, wildfires, landslides, and tsunamis.

Construction of the Common Elements Typical Project may result in short-term localized increases in delay and traffic queuing that stems from lane closures. Due to the programmatic nature of the *2020 LA River Master Plan*, project sites and staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would occur on the LA River right-of-way. All large construction vehicles entering and exiting the site would be guided by personnel using signs and flags to direct traffic. Construction activities for the Common Elements Typical Project would have the potential to temporarily restrict access for emergency vehicles traveling to and around the program sites. However, construction would be required to comply with the Los Angeles

County OAERP, and it is anticipated that construction would not result in the full closure of roadways or other means of emergency access.

Emergency access to facilities within project study area, however, could be temporarily affected by construction, including temporary lane closures and construction-related traffic causing delays or obstructing the movement of emergency vehicles.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure WF-1: Construction Coordination with Emergency and Fire Services.

The implementing agency and construction contractor will regularly notify and coordinate with Los Angeles County and/or local jurisdictions' emergency departments on project construction design, activities, and scheduling. For future projects with substantial construction periods (e.g., more than 10 months), the following measures will be implemented as applicable to minimize construction impacts on emergency response requirements of relevant police and fire departments.

- Prior to the start of construction, consult the fire station(s) serving the project area and review phasing, road/lane closure, and detour plans. The fire station(s) may then identify alternative fire and emergency medical response routes.
- Prior to the start of construction, consult the police station(s) serving the project area, as appropriate, of project-related lane and/or road closures and detour plans. The police station(s) may then identify alternative police emergency response routes.
- If determined to be necessary by the relevant police and/or fire service providers, implement one or more of the following applicable traffic control measures capable of reducing the temporary adverse effects on police and emergency vehicle travel during project construction:
    - Use flag persons to direct traffic.
    - Post "No Parking" signs along the affected area.
    - Install temporary signals or signs to direct traffic or other equivalent traffic control measures.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once operational, the Common Elements Typical Project could attract up to 500 daily users and 10 daily full-time equivalent operations and maintenance staff. Although proposed development under the *2020 LA River Master Plan* would potentially introduce new structures and increase employees and visitors, it would not result in structures or activities that would substantially obstruct or

interfere with emergency vehicles or impair emergency response or evacuation plans. New development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants. New operations associated with the Common Elements Typical Project would not change the existing site access in a way that would impair or interfere with implementation of adopted emergency response plans or evacuation plans. As such, implementation of the Common Elements Typical Project would not impair or physically interfere with an emergency response.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Construction impacts of the Multi-Use Trails and Access Gateways Typical Project would be similar to those described for the Common Elements Typical Project above; however, it could last up to 20 months, disturb a larger area, and have fewer daily workers, but with more extensive construction equipment use. During construction, temporary lane closures and an increase in construction-related traffic within the project study area could delay or obstruct the movement of emergency vehicles. However, construction would be required to comply with the Los Angeles County OAERP, and it is anticipated that construction would not result in the full closure of roadways or other means of emergency access.

Similar to the Common Elements Typical Project, emergency access to facilities within the 51-mile-long and 2-mile-wide study area could be temporarily affected by construction. Temporary lane closures and construction-related traffic within the proposed project area could delay or obstruct the movement of emergency vehicles.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-1, Construction Coordination with Emergency and Fire Services.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once operational, the Multi-Use Trails and Access Gateways Typical Project could attract up to attract up to 1,000 daily users and three FTE daily operations and maintenance staff. Although proposed development under the *2020 LA River Master Plan* would potentially introduce new structures and increase employees and visitors, it would not result in structures or activities that would substantially obstruct or interfere with emergency vehicles or impair emergency response or evacuation plans. New development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses KOP categories only.

KOP Categories 1 through 6

Under the *2020 LA River Master Plan*, the multi-benefit design components of the KOP categories can be implemented individually or in combination with other design components as subsequent projects under the *2020 LA River Master Plan*. The specific location (in-channel/off-channel, frame, etc.), configuration, and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing agency, community needs, policy decisions, and availability of funding. Once site-specific and project-specific details are available for the subsequent projects informed by the multi-benefit design components of the six KOP categories, additional CEQA analysis would be required before subsequent projects can be implemented.

Construction

The specific location, configuration, and design for KOP categories has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP Categories 1 through 6 would vary depending on the specific design component and its intended function. Projects under the KOP categories would likely be larger than Typical Projects. The construction area (including staging areas) could be substantially larger than Typical Projects, have a longer construction

duration with more intensive construction activities, and involve additional temporary lane closures as well as an increase in construction-related traffic within the 51-mile-long and 2-mile-wide study area.

Similar to the Typical Projects, emergency access to facilities within the project study area could be temporarily affected by construction. Temporary lane closures and construction-related traffic within the 51-mile-long and 2-mile-wide study area could delay or obstruct the movement of emergency vehicles.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-1, Construction Coordination with Emergency and Fire Services.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operational impacts for KOP Categories 1 through 6 would be substantially similar to the impacts for Typical Projects. Although proposed development would potentially introduce new structures and increase employees and visitors, it would not result in structures or activities that would substantially obstruct or interfere with emergency vehicles or impair emergency response or evacuation plans. New development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

The *2020 LA River Master Plan* would involve construction and operation activities to implement 107 projects that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel), configuration, and design for these components along with

associated operation and maintenance activities have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Because the specific locations of *2020 LA River Master Plan* projects are unknown, there is a potential for *2020 LA River Master Plan* projects to result in a significant impact related to substantially impairing an adopted emergency response plan or emergency evacuation plan. However, new development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-1, Construction Coordination with Emergency and Fire Services.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Impact 3.19(b): Would the proposed Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Typical Projects

Common Elements

Construction

As discussed in Section 3.19.2.1, *Geographic*, State law requires that all local jurisdictions identify Very High FHSZs within their areas of responsibility (California Government Code 51175–51189). Inclusion within these zones is based on vegetation density, slope severity, and other relevant factors that contribute to fire severity. As shown on Figures 3.19-1 through 3.19-5, the 51-mile-long and 2-mile-wide study area includes several areas designated as Very High FHSZs.

Under the *2020 LA River Master Plan*, there is a potential that construction could occur in or adjacent to canyons, steep slopes, or other areas designated as Very High FHSZ areas. Construction activities, when at sites within a Very High FHSZ, would involve equipment that may exacerbate wildfire risk in these areas. Heat or sparks from construction equipment or vehicles, as well as the use of flammable materials, have the potential to ignite adjacent vegetation and start a fire. This risk is increased during Santa Ana weather events, which consist of low humidity and high wind speeds and can occur year-round in the Los Angeles region, but are more common in the summer and fall (Los Angeles County 2019). The following construction-related equipment and practices of the

Common Elements Typical Project have the potential to generate heat or sparks that could result in wildfire ignition:

- Small cranes, excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, trucks, and vehicles may result in heated exhaust that, if it came into contact with vegetation, could result in fire ignition.
- Welders consist of an open heat source that may result in metallic sparks that could ignite vegetation.

Construction activities could also introduce new potential ignition sources in the form of building materials (e.g., wood), vegetation for landscaping, and other materials for construction that are considered flammable, such as fuels and household cleaners. These potential sources of ignition or fuel would contribute to the risk of a wildfire starting at the construction site, which would exacerbate the existing high wildfire risk if within a Very High FHSZ. If a newly constructed Common Elements Typical Project is within or adjacent to a Very High FHSZ, it could expose additional construction workers to hazardous conditions associated with the high risk of wildfire at the site who were not previously exposed to this risk.

Proposed construction would be required to comply with applicable construction standards that ensure the implementation of fire prevention features. This includes complying with the regulations set forth in the CFC and Occupational Safety and Health Administration Safety and Health Regulations for Construction, during both project planning/design and construction. Chapter 33, Fire Safety During Construction and Demolition, Section 3308 of the CFC requires the preparation of a "pre-fire plan." Occupational Safety and Health Administration Regulations Part 1926 Subpart F, Fire Protection and Prevention, requires the development of a fire protection program through all phases of construction and demolition work, and addresses requirements for appropriate firefighting equipment, water sources, sprinkler systems, and alarm systems. Additionally, all new structures must comply with the CBC and CFC. The CBC establishes fire safety requirements, such as fire resistance standards for fire doors, building materials, and particular types of construction. The CFC includes safety measures to be followed during construction and demolition activities, such as the proper storage procedures for combustible materials and the proper refueling protocol.

Additionally, the *2020 LA River Master Plan* includes recommended *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) that have been developed to support the development of specific design and technical solutions for subsequent projects to be implemented under the *2020 LA River Master Plan*. Included are wildfire management Design Guidelines for larger projects or those projects that interface with wildfire areas. As applicable, the subsequent projects under the *2020 LA River Master Plan* would be constructed and operated using these recommended Design Guidelines.

The Common Elements Typical Project constructed within lands designated as Very High FHSZs is subject to additional fire safety provisions, including fuel modification plans, review by the State Fire Marshall, and would comply with the County's Very High FHSZ Plan Review.

Existing regulations would address potential fire risks associated with the construction of new structures, including using appropriate equipment, conducting fuel modification, and obtaining review and approval by the State Fire Marshall. However, if construction or demolition activities associated with the *2020 LA River Master Plan* occur within Very High FHSZs, the existing regulations may not adequately address the heightened risks, and further precautions may need to

be taken. Because the locations of future project sites are not known, future sites could have conditions on site that would present additional wildfire risks, and it is not known whether existing regulations would be adequate to address all potential risks. Therefore, construction activities associated with the Common Elements Typical Project within or adjacent to Very High FHSZs could result in a potentially significant impact related to exacerbating wildfire risks of, and thereby exposing project occupants to, direct or indirect risk of injury, loss, or death due to wildfire.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

For construction projects that are proposed in or adjacent to areas designated as Very High FHSZs, prior to construction, the implementing agency will prepare a construction fire protection plan. The construction fire protection plan will include, but will not be limited to, the following measures to address potential ignition sources during construction:

- Parking for workers' vehicles and equipment will be designated away from dry brush and other ignition sources.
- Vehicle idling will be prohibited.
- Specify that personnel must be trained in the practices of the fire safety plan relevant to their duties. Construction and maintenance personnel will be trained and equipped to extinguish small fires to prevent them from growing into more serious threats.
- Prohibit smoking in wildland areas, with smoking limited to paved areas or areas cleared of all vegetation.
- During high fire risk conditions, designated vehicles will carry fire-prevention equipment, such as water, a shovel, and/or a fire extinguisher, on the construction site at all times.
- Fireproof mats or shields will be used during welding or other construction activities that could produce sparks during high fire risk conditions.
- Demonstrate compliance with applicable plans and policies established by State agencies.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operation of a Common Elements Typical Project could introduce additional visitors and staff. If a newly constructed Common Elements Typical Project is within or adjacent to a Very High FHSZ, it could expose additional visitors, staff, and structures to hazardous conditions associated with the high risk of wildfire at the site who were not previously exposed to this risk. Furthermore, the addition of more people and structures to an area that is designated as a Very High FHSZ could

exacerbate existing wildfire risks by increasing the possibility of human-caused wildfires, as it is estimated that 80 percent of wildfires are ignited by humans (Balch et al. 2017).

The Common Elements Typical Project would be required to operate in compliance with the CFC, CBC, and State-mandated 100-foot defensible space standards (PRC Section 4291). In addition, as applicable, subsequent projects under the *2020 LA River Master Plan* would be operated using the recommended wildfire Design Guidelines included in the *2020 LA River Master Plan*. However, because the exact locations of project sites are unknown at this time, and could be within or immediately adjacent to a Very High FHSZ, it cannot be guaranteed that the operation of any Common Elements Typical Project would not exacerbate wildfire risk, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

For projects that are proposed in areas designated as Very High FHSZs, the implementing agency will prepare a fire protection plan (FPP) for the project prior to commencing operation of the facility. The FPP will be prepared to ensure that projects developed within Very High FHSZs are in compliance with current regulatory codes and that impacts resulting from wildland fire hazards are adequately mitigated. The FPP will include, but will not be limited to, the following:

- Measures to address specific location, topography, geology, level of flammable vegetation, and climate of the project site
- Measures consistent with applicable fire codes
- A vegetation management plan that includes measures such as reducing flammable vegetation around the property's structure and installing sprinklers that activate in the case of fire

In addition, the following elements will be included in the FPP:

- Emergency Services – Availability and Travel Time
- Access for Emergency Services and Evacuation of Students and Faculty (primary and, if required, additional access)
- Firefighting Water Supply
- Fire Sprinkler System
- Ignition Resistant Construction
- Defensible Space, Ornamental Landscaping, and Vegetation Management

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Multi-Use Trails and Access Gateways

Construction

Construction impacts of the Multi-Use Trails and Access Gateways Typical Project would be similar to those discussed for the Common Elements Typical Project above under Impact 3.19(b). Construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to that of the Common Elements Typical Project, but could last up to 20 months, disturb a larger area, and have fewer daily workers, but with more extensive construction equipment.

Heat or sparks from construction equipment or vehicles, as well as the use of flammable materials, have the potential to ignite adjacent vegetation and start a fire. The following construction-related equipment and practices of the Multi-Use Trails and Access Gateways Typical Project have the potential to generate heat or sparks that could result in wildfire ignition: excavators, dump trucks, backhoes, motor graders, hydraulic impact hammers, forklifts, paving machines, and truck-mounted cranes. Welders consist of an open heat source that may result in metallic sparks that could ignite vegetation.

Existing regulations would address potential fire risks associated with the construction of new structures, including using appropriate equipment, conducting fuel modification, and obtaining review and approval by the State Fire Marshall. However, if construction or demolition activities associated with the *2020 LA River Master Plan* occur within Very High FHSZs, the existing regulations may not adequately address the heightened risks, and further precautions may need to be taken. Therefore, impacts are potentially significant.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once operational, the Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 daily users and three daily FTE operations and maintenance staff. If a newly constructed Multi-Use Trails and Access Gateways Typical Project is within or adjacent to a Very High FHSZ, it could expose additional visitors, staff, and structures to hazardous conditions associated with the high risk of wildfire at the site who were not previously exposed to this risk.

The Multi-Use Trails and Access Gateways Typical Project would be required to operate in compliance with the CFC, CBC, and State-mandated 100-foot defensible space standards (PRC Section 4291). However, because the exact locations of project sites are unknown at this time, and could be within or immediately adjacent to a Very High FHSZ, it cannot be guaranteed that the

operation of any Multi-Use Trains and Access Gateways Typical Project would not exacerbate wildfire risk, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 6

Construction

The specific location and design for the KOP category design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP Categories 1 through 6 would vary depending on the specific design component and its intended function. Projects under KOP Categories 1 through 6 would likely be larger than Typical Projects.

There is a potential that construction could occur in or adjacent to canyons, steep slopes, or other areas designated as Very High FHSZ areas. Construction activities, when at sites within a Very High FHSZ, would involve equipment that may exacerbate wildfire risk in these areas. Heat or sparks from construction equipment or vehicles, as well as the use of flammable materials, have the potential to ignite adjacent vegetation and start a fire.

Similar to the Typical Projects, existing regulations would address potential fire risks associated with the construction of new structures, including using appropriate equipment, conducting fuel modification, and obtaining review and approval by the State Fire Marshall. However, if construction or demolition activities associated with the *2020 LA River Master Plan* occur within Very High FHSZs, the existing regulations may not adequately address the heightened risks, and further precautions may need to be taken. Because the locations of future project sites are not known, future sites could have conditions on site that would present additional wildfire risks, and it is not known whether existing regulations would be adequate to address all potential risks. Therefore, construction activities associated with KOP Categories 1 through 6 within or adjacent to Very High FHSZs could result in a potentially significant impact related to exacerbating wildfire risks of, and thereby exposing project occupants to, direct or indirect risk of injury, loss, or death due to wildfire.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operational impacts for KOP Categories 1 through 6 would be substantially similar to the impacts for the Typical Projects. The operation of KOP categories could introduce additional visitors and staff. If a newly constructed project with KOP category design components is within or adjacent to a Very High FHSZ, it could expose additional visitors, staff, and structures to hazardous conditions associated with the high risk of wildfire at the site who were not previously exposed to this risk.

All KOP categories would be required to operate in compliance with the CFC, CBC, and State-mandated 100-foot defensible space standards (PRC Section 4291). However, because the exact locations of project sites are unknown at this time, and could be within or immediately adjacent to a Very High FHSZ, it cannot be guaranteed that the operation of any KOP categories would not exacerbate wildfire risk, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

The *2020 LA River Master Plan* would involve construction of 107 projects that include recreational facilities that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel), configuration, and design for these components have not been determined yet and would depend on numerous factors, including project proponent and

availability of funding. Construction under the *2020 LA River Master Plan* could result in impacts similar to those described above for the Typical Projects and KOP categories.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The *2020 LA River Master Plan* includes the implementation of multi-benefit projects that would serve a range of functions and uses including flood management, ecological, and recreational uses. Examples of recreational facilities and uses include trails, parks, skate parks, cafés, amphitheaters, farmer's markets, and arts and culture facilities. This would increase the amount of development within the 51-mile-long and 2-mile-wide study area along the LA River.

As applicable, the subsequent projects under the *2020 LA River Master Plan* would be constructed and operated using the recommended wildfire Design Guidelines included in the *2020 LA River Master Plan*. In addition, as specified in the Design Guidelines, projects along the LA River under the *2020 LA River Master Plan* would require the submission of a 3-year maintenance and monitoring program for vegetation management. All new development would be required to operate in compliance with the CFC, CBC, and State-mandated 100-foot defensible space standards (PRC Section 4291). However, because the exact locations of project sites are unknown at this time, and could be within or immediately adjacent to a Very High FHSZ, it cannot be guaranteed that the operation of any new projects would not exacerbate wildfire risk, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Impact 3.19(c): Would the proposed Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or result in temporary or ongoing impacts on the environment?

Typical Projects

Common Elements

Construction

The Common Elements Typical Project could be constructed on land without utilities or other infrastructure, or on developed sites that would require relocation of or modifications to existing utilities and infrastructure. Construction of the Common Elements Typical Project could require localized installation of water, electric, natural gas, and sewer infrastructure such as mains and distribution pipes, as well as relocation of existing utilities on certain sites. Given the relatively small size of the Common Elements Typical Project (no more than 3 acres), major utility upgrades would not likely be required. However, the installation or extension of new utilities, such as water, electricity, and telecommunications, on sites that are within or adjacent to Very High FHSZ areas could exacerbate wildfire risk, particularly the installation of electrical utilities, due to the high fire-ignition potential of electricity and the highly flammable nature of materials used during construction.

Construction of the Common Elements Typical Project would be required to comply with all applicable CBC and CFC requirements for development in a Very High FHSZ including, but not limited to, specific requirements for structural hardening, water supply and flow, hydrant and standpipe spacing, signage, and fire department access. The construction process of installing overhead or underground electric utilities may temporarily increase the risk of fire ignition due to the type of materials and equipment used during the process, as well as the high fire risk of electricity in general. Electric utility construction would be conducted by qualified technicians (either Southern California Edison personnel or the local jurisdiction's electrical utilities' personnel) who would implement proper safety procedures required by CPUC, and the structures to which these utilities would supply electricity would be required to be built in accordance with CBC requirements. However, due to the unknown future locations of project sites it is possible the construction or extension of utilities associated with the Common Elements Typical Project would exacerbate the existing wildfire risk at the site if they are located in Very High FHSZs. Therefore, implementation of the Common Elements Typical Project may include construction activities that would exacerbate wildfire risk or result in additional temporary or permanent impacts on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operation of the Common Elements Typical Project would not require the installation of new infrastructure once the project has been constructed or completed. A Common Elements Typical Project on a developed site would be served by existing public utilities or, if public utilities do not exist on the site, they would be extended from the nearest location to the site (see Section 3.18, *Utilities/Service Systems*). Operation of the Common Elements Typical Project within or adjacent to Very High FHSZs will require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. These measures would be intended to reduce the potential risk of fire ignition and spread. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other impacts on the environment. Therefore, because the locations of Common Elements Typical Projects are unknown, and the types of fire breaks or utilities that may be required at these locations are unknown, there is the potential that operation and maintenance of fire breaks, utilities, or other infrastructure could pose temporary or permanent environmental impacts.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Multi-Use Trails and Access Gateways

Construction

Construction impacts of the Multi-Use Trails and Access Gateways Typical Project would be similar to those discussed for the Common Elements Typical Project above under Impact 3.19(c). Construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to that of the Common Elements Typical Project but could last up to 20 months, disturb a larger area, and have fewer daily workers, but with more extensive construction equipment use (such as hydraulic impact hammers, forklifts, and truck-mounted cranes).

The Multi-Use Trails and Access Gateways Typical Project could be constructed on land without utilities or other infrastructure or on developed sites that would require relocation or modifications to existing utilities and infrastructure. Construction of the Multi-Use Trails and Access Gateways Typical Project would require localized installation of water, electric, natural gas, and sewer infrastructure such as mains and distribution pipes, as well as relocation of existing utilities on

certain sites. Given the type of project (continuous path for multiple uses such as bike trails, equestrian trails, and pedestrian trails and access gateways for access to the river), it would not be anticipated that major utility upgrades would be required. However, due to the unknown future locations of project sites it is possible the construction or extension of utilities associated with the Multi-Use Trains and Access Gateways Typical Project would exacerbate the existing wildfire risk at the sites if located in Very High FHSZs.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Once operational, the Multi-Use Trails and Access Gateways Typical Project could attract up to 1,000 daily users and three daily FTE operations and maintenance staff. Operation of the Multi-Use Trails and Access Gateways Typical Project within or adjacent to Very High FHSZs may require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. These measures would be intended to reduce the potential risk of fire ignition and spread. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other impacts on the environment.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

The specific location and design for these KOP category design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under the KOP categories would vary depending on the specific design component and its intended function. Projects under the KOP categories would likely be larger than Typical Projects.

KOP categories could be constructed on land without utilities or other infrastructure or on developed sites that would require relocation or modifications to existing utilities and infrastructure. Construction of KOP categories would require localized installation of water, electric, natural gas, and sewer infrastructure such as mains and distribution pipes, as well as relocation of existing utilities on certain sites. Given the variance of types of projects, it could be anticipated that major utility upgrades would be required. Due to the unknown future locations of project sites it is possible the construction or extension of utilities associated with the KOP categories would exacerbate the existing wildfire risk at the sites if located in Very High FHSZs.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operational impacts for KOP categories would be substantially similar to the impacts for the Common Elements Typical Project. Operation of KOP categories within or adjacent to Very High FHSZs may require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. These measures would be intended to reduce the potential risk of fire ignition and spread. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other impacts on the environment.

All KOP categories would be required to operate in compliance with the CFC, CBC, and State-mandated 100-foot defensible space standards (PRC Section 4291). However, because the exact locations of project sites are unknown at this time, and could be within or immediately adjacent to a Very High FHSZ, it cannot be guaranteed that the operation of any KOP categories would not exacerbate wildfire risk.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction and Operation

The *2020 LA River Master Plan* would involve construction of 107 projects that include recreational facilities that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel), configuration, and design for these components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Construction of the *2020 LA River Master Plan* would be required to comply with all applicable CBC and CFC requirements for development in a Very High FHSZ including, but not limited to, specific requirements for structural hardening, water supply and flow, hydrant and standpipe spacing, signage, and fire department access. The construction process of installing overhead or underground electric utilities may temporarily increase the risk of fire ignition due to the type of materials and equipment used during the process, as well as the high fire risk of electricity in general. Electric utility construction would be conducted by qualified technicians (either Southern California Edison personnel or local jurisdiction's electrical utilities' personnel) who would implement proper safety procedures required by CPUC, and the structures to which these utilities would supply electricity would be required to be built in accordance with CBC requirements. However, due to the unknown future locations of project sites it is possible the construction or extension of utilities associated with implementation of the *2020 LA River Master Plan* could exacerbate the existing wildfire risk at the site if they are located in Very High FHSZs.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure WF-2: Prepare a Construction Fire Protection Plan.

Mitigation Measure WF-3: Prepare a Fire Protection Plan.

Significance after Required Mitigation

Construction impacts would be less than significant for construction within County jurisdiction and would be significant and unavoidable outside of the County's jurisdiction. Operations impacts would be significant and unavoidable.

Impact 3.19(d): Would the proposed Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Typical Projects

Common Elements

Construction

Wildfires can greatly reduce the amount of vegetation on hillsides. Plant roots stabilize the soil and aboveground plant material slows water flow, allowing it to percolate into the soil. Removal of surface vegetation resulting from a wildfire reduces the ability of the soil surface to absorb rainwater and can allow for increased runoff that may include large amounts of debris. If hydrophobic conditions exist post-fire, the rate of surface water runoff is increased as water percolation into the soil is reduced (Moench and Fusaro 2012). The potential for surface runoff and debris flows therefore increases substantially for areas recently burned by large wildfires. According to the U.S. Geological Survey, fast-moving and highly destructive debris flows triggered by intense rainfall are considered one of the most dangerous post-wildfire hazards (USGS 2018). Slope failures, mudflows, and landslides are common in areas where steep hillsides and embankments are present, and such conditions would be exacerbated in a post-fire environment where vegetative cover has been removed. These hazards pose a risk to life and property due to their sudden occurrence, extreme force, and ability to strip vegetation, block drainages, and damage infrastructure. The U.S. Geological Survey further notes that post-wildfire flooding and runoff may continue for several years in burn areas although the greatest risk of debris flow happens during the first post-fire storm season (USGS 2018).

As discussed in Section 3.9, *Hydrology and Water Quality*, the project study area is predominantly outside of the Federal Emergency Management Agency (FEMA) 100-year floodplain. However, the LA River Channel and tributaries to the channel are within the FEMA special flood hazard area in the 100-year floodplain. Areas adjacent to the channel are moderate flood hazard areas between the limits of the FEMA 100- and 500-year floodplain (Zone X [shaded]) or areas of minimal flood hazard beyond the 500-year floodplain (Zone X [unshaded]), depending on variations in the surrounding topology (as identified by FEMA's Flood Insurance Rate Maps; see Figure 3.9-1).

Areas adjacent to a flood zone could experience flood conditions during large storm events made more severe by runoff caused by post-fire conditions. The Common Elements Typical Project may be within both Very High FHSZ areas and mapped flood zone areas. In addition, project sites at the base of slopes or canyons could experience increased runoff and drainage changes that could result in downhill flood conditions due to post-fire slope instability. Construction of the Common Elements Typical Project in both Very High FHSZs and flood zones or other flood-prone areas could expose workers and property to additional flood risk from post-fire flooding due to increased runoff or altered drainage. However, as stated in Section 3.9, *Hydrology and Water Quality*, **Mitigation**

Measure HYDRO-1a would require site-specific drainage studies to address stormwater management.

There are areas adjacent to the LA River classified as having a high potential for landslides or being landslide-prone (see Figures 3.6-1 through 3.6-9 in Section 3.6, *Geology, Soils, and Paleontological Resources*). However, as described in Section 3.6, **Mitigation Measure GEO-1** would require site-specific geotechnical studies and implementation of their recommendations prior to beginning construction activities. Lastly, construction personnel required would involve small numbers on a brief, temporary basis, staying on site only during construction. However, wildfires could exacerbate conditions of slope instability or flood because wildfires destroy vegetation and change soil conditions, which could expose people or structures to post-fire hazards regardless of whether geologic hazards are addressed during project design. Because the locations of specific sites are unknown at this time, construction of projects located in Very High FHSZs or that have recently involved wildfires combined with areas prone to landslides or slope instability could expose workers, structures, and property to significant risks related to post-fire conditions.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan.

This measure is required to ensure that if a project is in Very High FHSZs or an area that was recently burned by wildfire, then the implementing agency will prepare a post-fire risk reduction plan. The plan will focus on the specific construction site and be finalized prior to the beginning of construction. The post-fire risk reduction plan will implement one or more of the following applicable measures:

- Treat all wildfire burned areas within the construction area to control stormwater runoff prior to winter rains.
- Restore wildfire areas within the construction area by planting native vegetation cover or encouraging the re-growth of native species using best practices as soon as possible to aid in control of stormwater runoff.
- Remove dead, woody vegetation along watercourses following a catastrophic fire, as directed by local fire officials.
- Post-fire, implement slope stabilization measure by planting native vegetation cover as soon as possible to aid in landslide control, as directed by local fire officials.
- Ensure excess storm flow is properly diverted away from important property improvements or unstable slopes.
- Check drainage systems and clear out culverts, roof gutters, street gutters, infiltration and detention basins, concrete waterways, etc., to allow water to drain, as directed by local fire officials.
- Remove potentially toxic materials, ideally before rain washes toxic runoff into storm drains and waterways, as directed by local fire officials.

- Minimize foot traffic, equipment, and disturbance on burned landscapes.

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

The location of the Common Elements Typical Project could be within or adjacent to a Very High FHSZ and an area prone to flood, landslide, or slope instability. The operation of these new facilities could introduce visitors, staff, and structures into an area highly susceptible to landslides or slope instability after a wildfire event.

Therefore, operating a new project or facility in these areas would be exacerbating the existing risk of post-fire hazard by exposing additional people to this existing hazard. Because the locations of projects are unknown, implementation of the Common Elements Typical Project could result in a significant impact related to post-fire hazards.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan.

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Multi-Use Trails and Access Gateways

Construction

As high fire conditions, slope instability, and potential flooding conditions in the project study area would be similar to those described under the Common Elements Typical Project above, the impacts of the Multi-Use Trails and Access Gateways Typical Project would also be similar.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Similar to the Common Elements Typical Project, the location of the Multi-Use Trails and Access Gateways Typical Project could be within a Very High FHSZ and an area prone to flood, landslide, or slope instability. The operation of the projects could introduce new staff, visitors, and structures into an area highly susceptible to landslides or slope instability after a wildfire event. Therefore, operating a Multi-Use Trails and Access Gateways Typical Project in these areas would be exacerbating the existing risk of post-fire hazard by exposing additional people to this existing hazard. Because the locations of future projects are unknown, there is a potential the implementation of the Multi-Use Trails and Access Gateways Typical Project could result in a significant impact related to post-fire hazards.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan.

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

The specific location and design for these design components has not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Potential impacts from construction of the design components under KOP categories would vary depending on the specific design component and its intended function. Projects under the KOP categories would likely be larger than Typical Projects.

Construction of KOP categories adjacent to or located in Very High FHSZs that are also areas prone to flood, landslide, or slope instability would have the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan.

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Operations

Operational impacts for KOP categories would be substantially similar to the impacts for the Common Elements Typical Project. Depending on the locations of the KOP categories, projects could be within or adjacent to a Very High FHSZ and an area prone to flood, landslide, or slope instability. The operation of these projects could introduce visitors, staff, and structures into an area highly susceptible to landslides or slope instability after a wildfire event.

All KOP categories would be required to operate in compliance with the CFC and CBC. However, because the exact locations of project sites are unknown at this time, and could be within or immediately adjacent to a Very High FHSZ, it cannot be guaranteed that the operation of any KOP categories would not exacerbate wildfire risk.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan.

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

The *2020 LA River Master Plan* would involve construction of 107 projects that include recreational facilities that could occur anywhere in the study area over a 25-year period. The specific location (in-channel or off-channel), configuration, and design for these components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. Construction of the *2020 LA River Master Plan* would be required to comply with all applicable CBC and CFC requirements for development in a Very High FHSZ including, but not limited to, specific requirements for structural hardening, water supply and flow, hydrant and standpipe spacing, signage, and fire department access. However, construction of *2020 LA River Master Plan* projects that are adjacent to or in Very High FHSZs as well as areas prone to flood, landslide, or slope instability would have the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure WF-4: Post-Fire Risk Reduction Plan.

Apply the following mitigation measure, which is described in Section 3.6, *Geology, Soils, and Paleontological Resources*.

Mitigation Measure GEO-1: Conduct a Site-Specific Geotechnical Study and Implement Recommendations for Load-Bearing Subsequent Projects Prior to Construction Activities.

Apply the following mitigation measure, which is described in Section 3.9, *Hydrology and Water Quality*.

Mitigation Measure HYDRO-1a: Require Site-Specific Drainage Studies to Address Stormwater Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts related to wildfire is the six-county Southern California Association of Governments (SCAG) region, as counties in this region are adjacent to Los Angeles County and projects in this region could contribute to cumulative wildfire impacts. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact related to wildfire, if, in combination with other projects within the greater Los Angeles region, it would: substantially impair an adopted emergency response plan or emergency evacuation plan; exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment; or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Cumulative Condition

Los Angeles County faces major wildland fire threats due to its hilly terrain, dry weather conditions, and the nature of its plant coverage. Although fires are a natural part of the wildland ecosystem, development in wildland areas increases the danger of wildfires to residents, property, and the environment. Cumulative growth and development within the Los Angeles region would increase the number of wildfire events and increase the exposure of people to risks associated with wildfires. Continued growth and development in Los Angeles County would significantly affect LACFD operations, as well as the operations of individual jurisdictions' fire departments. In an effort to reduce the threats to lives and property, LACFD in particular has instituted a variety of regulatory programs and standards for vegetation management, pre-fire management and planning, fuel modification, and brush clearance. In addition to these programs, LACFD and Public Works enforce fire and building codes related to development in Very High FHSZs. The LACFD has access requirements for single-family residential uses built in Very High FHSZs. Individual jurisdictions in the study area have similar policies and programs related to wildfire management. Any future development would be required to comply with applicable federal, State, and local regulations related to wildland fires.

Implementation of the transportation projects included in the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)—when taken into consideration with related development and infrastructure projects within the SCAG region and surrounding areas, and anticipated growth and land use development patterns—would contribute to cumulative significant impacts with regard to the potential to expose people and structures to wildland fires. The 2020 RTP/SCS includes a set of regional land use strategies that are intended to guide future land development patterns to focus new growth in transit priority areas or existing infill sites, existing suburban town centers, and walkable mixed-use communities. While the specific impact of this pattern of development relative to wildland fires is unknown, it could result in cumulative

significant impacts with regard to more people being exposed to the effects of effects of wildland fires (SCAG 2020). Therefore, there is a cumulative condition with respect to wildfire.

Contribution of the Project to Cumulative Impacts

The proposed Project would result in development within urban or suburban areas. However, some projects would occur in areas that are designated as Very High FHSZs. Projects constructed within lands designated as Very High FHSZs are subject to additional fire safety provisions, including fuel modification plans and review by the State Fire Marshall, and they would comply with the County's Very High FHSZ Plan Review. Construction of projects under the *2020 LA River Master Plan* would not be performed near flammable materials that would exacerbate wildfire risks. Compliance with existing laws for construction sites on, adjacent to, or in the immediate vicinity of a Very High FHSZ would further minimize potential risks. The *Los Angeles County General Plan* policies and conditions of approval for future development projects, in addition to compliance with applicable regulations, would minimize proposed Project impacts related to wildland fires. Implementation of Mitigation Measures WF-1, WF-2, WF-3, and WF-4 would reduce potential impacts on wildfire from the proposed Project, but not to a less-than-significant level. Considering the cumulative condition with respect to wildfire and that the Project would be implemented in Very High FHSZs, the Project would result in a cumulatively consideration contribution to wildfire impacts, including with regard to more people being exposed to the effects of wildland fires.

Chapter 4
Other CEQA Considerations

This chapter addresses the potential for additional consequences related to the implementation of the *2020 LA River Master Plan*, pursuant to State CEQA Guidelines Sections 15126 and 15128. Specifically, this chapter (1) discusses significant effects of the Project that cannot be avoided if the Project is implemented (Section 4.1); (2) addresses significant irreversible changes to the environment that would result from implementation of the *2020 LA River Master Plan* (Section 4.5); (3) discusses the environmental effects of the *2020 LA River Master Plan* that were determined not to be significant (Sections 4.2 and 4.3); and (4) discusses the potential for growth-inducing impacts of the *2020 LA River Master Plan*, which pertains to ways in which the *2020 LA River Master Plan* could promote either direct or indirect growth (Section 4.4). Mitigation measures proposed to minimize the significant effects are discussed in Chapter 3, *CEQA Environmental Impact Assessment*, and alternatives to the proposed Project are discussed in Chapter 5, *Alternatives*. Cumulative impacts are presented in Chapter 3 under each resource topic.

Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

4.1 Significant Unavoidable Adverse Environmental Impacts

Significant unavoidable impacts would occur as a result of the proposed Project in the following resource areas, regardless of whether later activities are carried out by the County or another jurisdiction (i.e. one of the 17 cities in the study area):

- Aesthetics
- Air Quality
- Cultural Resources
- Greenhouse Gas Emissions
- Land Use and Planning
- Noise
- Public Services
- Transportation
- Tribal Cultural Resources

- Utilities/Services Systems
- Wildfire

4.1.1 Aesthetics (Section 3.1)

4.1.1.1 Scenic Vistas (Impact 3.1(a))

Construction

None.

Operation

Operations impacts from kit of parts (KOP) Category 6 would include introducing a broad range of civic amenities to the viewshed, including flood management, recreational improvements, affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Scenic vistas within the project study area are limited in nature, with the viewshed largely consisting of an urban hardscape with limited scenic resources. However, aboveground structures related to KOP Category 6, if constructed in an area encompassing a scenic vista, could result in a substantial adverse effect on a scenic vista or could obscure a panoramic view. Because the size, extent, and specific location of subsequent design components under KOP Category 6 are not yet known, it is possible that KOP Category 6 could substantially block or obstruct scenic vistas such as views of the ocean, ridgelines, and open space areas. Even with implementation of Mitigation Measure AES-2, designed to minimize the obstruction of scenic vistas, the impact could remain significant and unavoidable.

This conclusion of significant and unavoidable impacts also applies to the overall *2020 LA River Master Plan*.

4.1.2 Air Quality (Section 3.2)

4.1.2.1 Criteria Pollutants (Impact 3.2(b))

Construction

Projects under the KOP categories would likely be substantially larger than the Typical Projects. Construction of the six KOP categories would result in the generation of air pollutant emissions from heavy-duty construction equipment, construction worker vehicle trips, material deliveries, trips by heavy-duty haul trucks, earthwork activities, and other construction activities. Such emissions could exceed construction thresholds for regional and localized pollutant emissions depending on the schedules, equipment used, and material movement required. This conclusion of significant and unavoidable impacts for construction also applies to the overall *2020 LA River Master Plan*.

Operation

Operation of KOP Categories 1 through 6 would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, landscaping, and other sources. Emissions could exceed

operational thresholds for regional and localized pollutant emissions depending on project details. Although Mitigation Measures AQ-2, GHG-1a, and TRA-1b would control emissions during both construction and operation periods under the six KOP categories, it cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Therefore, with mitigation the impact could be significant and unavoidable. This conclusion of significant and unavoidable impacts for operation also applies to the overall *2020 LA River Master Plan*.

4.1.2.2 Sensitive Receptors (Impact 3.2(c))

Construction

For the Typical Projects and KOP categories, without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where diesel particulate matter emissions could result in cancer or non-cancer health risks that exceed the South Coast Air Quality Management District's (SCAQMD's) thresholds. Because it cannot be concluded what the result of the subsequent project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Therefore, even with implementation of Mitigation Measures AQ-1, AQ-3, and GHG-2, this impact could be significant and unavoidable. This conclusion of significant and unavoidable impacts for the construction period also applies to the overall *2020 LA River Master Plan*.

Operation

During the operations period for the Typical Projects and KOP categories, criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. It is not anticipated that the Common Elements Typical Project would exceed the most stringent 1-hour carbon monoxide standard and no detailed carbon monoxide hot-spots analysis would be required. However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where diesel particulate matter emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that Mitigation Measures AQ-2, AQ-3, GHG-1a, and TRA-1b may be inadequate to reduce operations impacts below SCAQMD's threshold level. For KOP Category 6, an additional mitigation measure (Mitigation Measure AQ-4) is required due to the potential siting of sensitive receptors in close proximity to existing toxic air contaminant hazards. Therefore, even with implementation of Mitigation Measures AQ-2, AQ-3, GHG-1a, and TRA-1b (and AQ-4 for KOP Category 6), this impact could be significant and unavoidable. This conclusion of significant and unavoidable impacts for the operation period also applies to the overall *2020 LA River Master Plan*.

4.1.3 Cultural Resources (Section 3.4)

4.1.3.1 Historical Resources (Impact 3.4(a))

Construction

Construction of the Typical Projects and KOP categories would involve site disturbance, movement of construction equipment, and import and export of materials to build facilities such as cafés, pavilions, restrooms, multi-use trails, and art/performance spaces. Ground disturbance would include site clearing and excavation. Excavation would be a maximum depth of 7 feet below ground

surface (bgs) to construct pavilions and install footings for bollards, lighting, or fences and generally 2 feet bgs for trails. New construction has the potential to cause ground disturbance, demolish historical resources or alter character-defining features of historical resources, and/or make changes to the setting of historical resources, a potentially significant impact. Implementation of Mitigation Measures CR-1a and b and CR-2a through c would help reduce the impacts on cultural resources; however, given that the specific locations of Typical Projects and KOP categories and the presence of significant historical resources as well as the potential effects on the resources are not known at this time, it is conservatively assumed that the impacts could be significant and unavoidable. This conclusion of significant and unavoidable impacts for the construction period also applies to the overall *2020 LA River Master Plan*.

Operation

During operations of the Typical Projects and KOP categories, there is the potential to cause substantial adverse change in the significance of historical resources. Impacts could include damage to historical resources due to water and/or waste leakages from hygiene facilities, restrooms, and/or water features, for example. Furthermore, if historical resources are integrated into the design of the proposed Project, increased foot traffic could affect the integrity of material. Depending on the project design and location, presence or absence of historical resources, and character-defining features of the historical resource (facts anticipated to become available as individual projects are proposed under the *2020 LA River Master Plan*), implementation of Mitigation Measures CR-3a through c may not be enough to reduce the impact; therefore, the impacts could be significant and unavoidable. This conclusion of significant and unavoidable impacts for the operation period also applies to the overall *2020 LA River Master Plan*.

4.1.3.2 Archaeological Resources (Impact 3.4(b))

Construction

As discussed above for historical resources, construction of the Typical Projects and KOP categories would generally involve site disturbance, movement of construction equipment, and import and export of materials. Construction would occur along the right-of-way, include an area of approximately 3 acres (for the Common Elements Typical Project) or up to 40 acres (for the Multi-Use Trails and Access Gateways Typical Project), and last about 10 to 20 months, respectively. Ground disturbance would include site clearing and excavation to a maximum depth of 7 feet bgs to construct pavilions and install footings for bollards, lighting, or fences and generally 2 feet bgs for trails. Previously recorded or unrecorded California Register of Historical Resources–eligible archaeological resources could be present within the area of potential impact of subsequent projects.

Although implementation of Mitigation Measures CR-1a-b, CR-4a through d, and CR-5 would help reduce the impacts, the specific locations of Typical Projects and presence of significant archaeological resources as well as the Typical Projects' effects on the resources are not known at this time. Therefore, for the purposes of this PEIR, impacts are considered to be significant and unavoidable. This conclusion of significant and unavoidable impacts for the construction period also applies to the overall *2020 LA River Master Plan*.

Operation

Operations activities related to the Typical Projects and KOP categories could include operation of new single-story structures such as pavilions and cafés, restrooms, or lower-profile infrastructure such as multi-use trails, signs, lighting, benches, and other associated recreational facilities, which could introduce activities that could directly affect archaeological resources. Operational elements such as increased erosion along proposed trail alignments, facilities, and recreational areas could result from increased public use. Additionally, introducing recreationists and trail users near new facilities associated with the Typical Projects near a California Register of Historical Resources–eligible archaeological resource could directly affect the resources either through exposure and removal from unanticipated disturbance or increased looting potential due to increased use, and otherwise negatively affect the integrity of the resource. Although implementation of Mitigation Measures CR-5 and CR-6 would help reduce the impacts, the specific locations of Typical Projects and presence of significant archaeological resources as well as the Typical Projects' effects on the resources are not known at this time. Therefore, it was concluded impacts would remain significant and unavoidable. This conclusion of significant and unavoidable impacts for the operation period also applies to the overall *2020 LA River Master Plan*.

4.1.3.3 Human Remains (Impact 3.4(c))

Construction

Existing cemeteries are not anticipated for incorporation into any of the proposed project scenarios for the Typical Projects and KOP categories. However, there is potential for previously unknown prehistoric to historic-period burials and unmarked cemeteries to be located in the project study area. Construction of the Typical Projects would generally involve site disturbance, movement of construction equipment, and import and export of materials. Any disturbance of human remains is considered significant. Although implementation of Mitigation Measure CR-7 would help reduce the impacts, the specific locations of Typical Projects and potential presence of unknown human remains as well as the Typical Projects' effects on the remains are not known at this time. Therefore, impacts could be significant and unavoidable. For the overall *2020 LA River Master Plan*, Mitigation Measures CR-1a-b, CR-4a through d, and CR-5 are also required, but the impact would remain significant and unavoidable.

Operations

Operations activities related to the Typical Projects could introduce or increase public use activities such as increased erosion along proposed trail alignments, facilities, and recreational areas. Additionally, introducing recreationists and trail users near new facilities associated with the Typical Projects near buried human remains could indirectly affect the resources either through exposure and removal from unanticipated disturbance or increased looting potential due to increased use, and otherwise negatively affect the integrity of the resource. Although implementation of Mitigation Measure CR-7 would help reduce the impacts, the specific locations of Typical Projects and presence of human remains as well as the Typical Projects' effects on the remains are not known at this time. Therefore, it was concluded that impacts could be significant and unavoidable. For the KOP categories, Mitigation Measures CR-5 and CR-6 are also required; however, for purposes of this PEIR (and lack of site-specificity similar to the Typical Projects), impacts are considered to be significant and unavoidable. This conclusion of significant and unavoidable impacts for the operation period also applies to the overall *2020 LA River Master Plan*.

4.1.4 Greenhouse Gas Emissions (Section 3.7)

4.1.4.1 Generate GHG Emissions (Impact 3.7(a))

Construction and Operation

The significance determination of greenhouse gas (GHG) emissions from the Project is based on a sector-by-sector analysis using the most applicable regulatory programs, policies, and thresholds recommend by the California Air Resources Board and the California Governor's Office of Planning and Research. The significance determination is based on the combined GHG emissions generated by both project construction activities and operations activities; therefore, the construction and operations impact determination is combined. In addition, as project emissions would not vary based on the planning frame and the regulatory programs analyzed are not specific to any one frame, the analysis provided in Section 3.7 was applied equally to projects in all nine frames.

The Common Elements Typical Projects would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limiting land use emissions. The *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) for the Common Elements Typical Project related to water, energy, and waste, if implemented, would be consistent with the 2017 Scoping Plan's measures and the State's regulatory programs within these sectors (the Design Guidelines are draft guidelines and will be finalized with adoption of the *2020 LA River Master Plan*). However, while the County would encourage implementation of the Design Guidelines, there is no guarantee that any of these measures will be incorporated into the design of the Common Elements Typical Project given that they are not required and the decision to implement them would be determined by the project proponent. Furthermore, it is anticipated that buildings would use natural gas and landscaping equipment would be gasoline powered, both of which are inconsistent with the California Governor's Office of Planning and Research (2018a) guidance. In addition, daily vehicle trips would exceed the California Governor's Office of Planning and Research's (2018b) daily trip screening threshold.

With implementation of Mitigation Measure GHG-1a, compliance with a minimum of the Design Guidelines for the Common Elements Typical Project related to water, energy, and waste would be required for all new construction. Mitigation would also require electrified buildings and landscaping equipment. Nonetheless, there would still be an increase in vehicle miles traveled (VMT) resulting from the Project. Mitigation Measure TRA-1b would require various transportation demand management (TDM) measures to reduce VMT, which would reduce mobile-source emissions. Nonetheless, given the range in the possible size and programmatic intensity of the project elements/design, significant VMT impacts may not be fully mitigated even with TDM measures. Consequently, while emissions from the land use, energy, area, water, and waste sectors would generally be consistent with the 2017 Scoping Plan with implementation of mitigation, emissions from the mobile sector would be inconsistent with the 2017 Scoping Plan and applicable regulatory programs. No other feasible mitigation measures that would reduce mobile-source VMT emissions to a less-than-significant level are available at this time. Therefore, emissions associated with both the construction and operation phases of the Common Elements Typical Project would be significant and unavoidable.

For the six KOP categories, subsequent project-level analyses will identify the appropriate strategies from Mitigation Measure GHG-1a for their projects. For example, if, at the time specific project

details are known, it can be stated with certainty that KOP Category 3 would not result in emissions associated with a particular sector (e.g., area) outlined in Mitigation Measure GHG-1a, then the corresponding mitigation for that sector (e.g., electric landscaping equipment) would not need to be implemented for that KOP category. Although Mitigation Measures GHG-1a and TRA-1b would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project design details (e.g., sustainability features, expected VMT, electricity and natural gas consumption), it cannot be stated with certainty that the KOP Categories 1 through 6 would comply with the long-term GHG reduction targets and goals of applicable regulatory programs. Even with mitigation, both construction and operation impacts would remain significant and unavoidable.

This conclusion of significant and unavoidable impacts also applies to the overall *2020 LA River Master Plan*.

4.1.4.2 Plan Consistency (Impact 3.7(b))

Construction and Operation

Because the applicable policies, plans, and regulations adopted for the purpose of reducing the emissions of GHGs are relevant to both the construction and operation phases of the Project, discussion of the plan consistency has been combined.

The lack of specific sites or detailed design information makes it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for the KOP categories. It is assumed that development under the KOP categories would be greater than for the Typical Projects, and that associated GHG emissions could potentially result in an inconsistency with one or more of the GHG plans. Impacts related to the potential for construction and operation of the KOP categories to conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be potentially significant. Although Mitigation Measures GHG-1a and GHG-2 would be implemented to ensure that impacts are minimized to the extent feasible, in the absence of specific project details (e.g., expected VMT, proximity to transit centers), it cannot be stated with certainty that the construction and operation of the KOP categories would be consistent with the applicable GHG regulatory programs. Even with mitigation, impacts would remain significant and unavoidable.

This conclusion of significant and unavoidable impacts also applies to construction and operation of the overall *2020 LA River Master Plan*.

4.1.5 Land Use and Planning (Section 3.10)

4.1.5.1 Divide an Established Community (Impact 3.10(a))

KOP Category 6 and Overall 2020 LA River Master Plan Implementation

Construction

Off-channel land asset projects would likely entail greater levels of construction for KOP Category 6 than for the Typical Projects and the other five KOP categories and would occur outside the right-of-way. Design components under KOP Category 6 could be considerably larger than design components under the other KOP categories, resulting in more extensive environmental effects during construction. These projects could occur within established neighborhoods and result in

temporary road closures and obstructions to community facilities, which could divide an established community. Site-specific and project-specific design details of subsequent projects would determine their construction schedules and would ultimately be driven by the County's needs or the needs of any other jurisdictions implementing these projects under the *2020 LA River Master Plan*. Even with implementation of Mitigation Measures LU-1 and LU-2, a potentially significant impact could remain for KOP Category 6 during the construction period as a result of physical division of an established community.

Operation

None.

4.1.5.2 Conflicts with Applicable Land Use Plans, Policies, or Regulations (Impact 3.10(b))

Construction

Larger off-channel land asset design components in KOP Category 6, such as affordable housing and museums, would entail greater levels of construction than under the other five KOP categories. As it is unknown the location and extent of design components under KOP Category 6, there could be inconsistencies with applicable land use plans, policies, and regulations, a potentially significant impact. Despite implementation of Mitigation Measures LU-1 and LU-2, if further CEQA review determines a potentially significant impact could occur from construction of the specific design components proposed under KOP Category 6 and no feasible mitigation is available, a significant and unavoidable impact for KOP Category 6 could occur under the *2020 LA River Master Plan*. This conclusion of significant and unavoidable impacts also applies to the overall *2020 LA River Master Plan*.

Operation

Minor inconsistencies with applicable land use policies could occur, such as if a design component under KOP Categories 1 and 2 would conflict with planned land uses on adjacent parcels, be incompatible with adjacent land uses, or result in out-of-scale development. Projects under KOP Categories 1 and 2 would consist of multi-use trails, a recreational use, or a range of flood management, recreation, and ecological functions to provide additional recreation uses serving visitors and residents, and would not be within residential neighborhoods and therefore would not be expected to result in inconsistency with the goals listed in Table 3.10-7. As it is unknown the location and extent of subsequent projects that could operate under KOP Category 6, in the absence of specific details (e.g., type of project, detailed design, location, size), it cannot be stated with certainty whether there would be inconsistencies with applicable land use plans, policies, or regulations. However, the potential remains for a significant impact to occur despite implementation of Mitigation Measure LU-4. Should further CEQA review determine that a potential impact could occur from operation of the specific design components proposed under KOP Categories 1, 2, and 6, and no further feasible mitigation is available, a significant and unavoidable impact would occur. This conclusion of significant and unavoidable impacts also applies to the overall *2020 LA River Master Plan*.

4.1.6 Noise (Section 3.12)

4.1.6.1 Increase in Ambient Noise Levels (Impact 3.12(a))

Construction

The specific location and design for KOP Category 6 design components have not been determined yet and would depend on numerous factors including location of the improvements, type of construction equipment, project proponent, and availability of funding. Considering this KOP category includes a variety of construction activities including but not limited to up to 107 potential projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) that would be implemented over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives, construction impacts of KOP Category 6 cannot be directly quantified, as the specific locations are not known. Therefore, based on the jurisdictions in which the KOP Category 6 design components could occur and the possibility that noise-sensitive land uses may exist in the immediate vicinity of construction sites, construction could result in potentially significant impacts. Inclusion of Mitigation Measures NOI-1 through NOI-3 and compliance with the jurisdictional codes and planning documents would reduce impacts. However, with the uncertainty as to the location and extent of design components associated with this KOP category, it is possible that impacts may not be mitigated below significance. As such, construction impacts from KOP Category 6 could be significant and unavoidable.

Operation

Potential impacts from operation of the design components under KOP Category 6 would vary depending on the specific design component and its intended function, as well as on the specific location. As described in Chapter 2, *Project Description*, this KOP category could include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Considering the uncertainty associated with the location, surrounding potential land uses, and general activity that could occur at these locations as they relate to noise, quantification of these types of impacts is not known and not discernable at this time. Inclusion of Mitigation Measure LU-4, preparation of a focused noise study, and implementation of site-specific mitigation measures identified in that noise study would reduce impacts. However, with the uncertainty as to the location and extent of design components associated with this KOP category, it is possible that impacts may not be mitigable. As such, operational impacts from KOP Category 6 could be significant and unavoidable.

For similar reasons, even with implementation of Mitigation Measures NOI-1 through NOI-5, operational impacts could remain significant and unavoidable for the overall *2020 LA River Master Plan*.

4.1.6.2 Groundborne Vibration (Impact 3.12(b))

Construction

The specific design for KOP Category 6 design components have not been determined and would depend on numerous factors including location of the improvements, type of construction equipment, project proponent, and availability of funding. Considering this KOP category includes a

variety of construction activities including but not limited to affordable housing, recreation fields, urban agriculture/composting, and arts and culture facilities, construction impacts of KOP Category 6 cannot be directly quantified, as the specific locations are not known. Therefore, depending on the jurisdiction in which the KOP Category 6 design component occurs and the presence or absence of vibration-sensitive uses in the immediate project vicinity, construction could result in potentially significant impacts. Inclusion of Mitigation Measure NOI-7 and compliance with the jurisdictional codes and planning documents would reduce impacts. However, it cannot be stated with certainty that vibration impacts could be reduced to levels below the County's 0.01 peak particle velocity threshold. As such, construction impacts associated with KOP Category 6 could be significant and unavoidable.

For similar reasons, even with implementation of Mitigation Measures NOI-6 through NOI-8, construction impacts could remain significant and unavoidable for the overall *2020 LA River Master Plan*.

Operation

None.

4.1.7 Public Services (Section 3.14)

4.1.7.1 Provision of New or Physically Altered Government Facilities (Impact 3.14(a))

Construction

It is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented over the 25-year period to meet the nine objectives of the *2020 LA River Master Plan*. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. There may be localized road closures and detours that could increase response times for emergency services. Mitigation Measure LU-1 would minimize construction impacts; however, because the size, extent, and location of the projects are unknown, impacts could remain significant and unavoidable for police and fire services. This conclusion of significant and unavoidable impacts for the construction phase also applies to the overall *2020 LA River Master Plan.*

Operation

The 107 projects under the *2020 LA River Master Plan* would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable jurisdictional code requirements related to construction, access, water mains, fire flows, and hydrants. The majority of the KOP categories include recreational components or provide opportunities for recreational uses such as parks and trails, farmer's markets, soccer fields, and amphitheaters. Operation of KOP Categories 1 through 6 could result in a substantial increase of daily users such that there could be an increase in demand on police or fire protection services. Increases in the number of visitors and residents could result in more incidents requiring police and fire response, which could affect police provider service ratios and response times and necessitate additional law enforcement staff. Because the overall size, extent, and location of the projects are unknown, even with

implementation of Mitigation Measure PS-1, operation impacts from a need for more patrols or other areas that have coverage issues could remain significant and unavoidable for police and fire protection. This conclusion of significant and unavoidable impacts for the operation phase also applies to the overall *2020 LA River Master Plan*.

4.1.8 Recreation (Section 3.15)

4.1.8.1 Require Construction of Recreational Facilities (Impact 3.15(b))

Construction

Throughout all nine frames, the Typical Projects, KOP categories, and the overall *2020 LA River Master Plan* would include the construction of recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. Construction could require demolition, grading, and excavation activities, and construction could include permanent facilities. These construction activities would result in a temporary increase in noise and an increase in air quality construction-related emissions. They could also have impacts on aesthetics, biological resources, cultural resources, geology, hydrology and water quality, land use, traffic, and utilities. Refer to Sections 3.1, *Aesthetics*; 3.2, *Air Quality*; 3.3, *Biological Resources*; 3.4, *Cultural Resources*; 3.5, *Energy*; 3.6, *Geology, Soils, and Paleontological Resources*; 3.7, *Greenhouse Gas Emissions*; 3.8, *Hazards and Hazardous Materials*; 3.9, *Hydrology and Water Quality*; 3.10, *Land Use and Planning*; 3.11, *Mineral Resources*; 3.12, *Noise*; 3.13, *Population and Housing*; 3.14, *Public Services*; 3.16, *Transportation*; 3.17, *Tribal Cultural Resources*; 3.18, *Utilities and Service Systems*; and 3.19, *Wildfire*, for detailed descriptions and potential construction impacts that could be significant and unavoidable.

Operations

Similar to construction impacts, throughout all nine frames, the Typical Projects, KOP categories, and the overall *2020 LA River Master Plan* would include the operation of recreational facilities that might have an adverse physical effect on the environment. Operation of new recreational facilities could attract new users and operations and maintenance staff. Refer to Sections 3.1, *Aesthetics*; 3.2, *Air Quality*; 3.3, *Biological Resources*; 3.4, *Cultural Resources*; 3.5, *Energy*; 3.6, *Geology, Soils, and Paleontological Resources*; 3.7, *Greenhouse Gas Emissions*; 3.8, *Hazards and Hazardous Materials*; 3.9, *Hydrology and Water Quality*; 3.10, *Land Use and Planning*; 3.11, *Mineral Resources*; 3.12, *Noise*; 3.13, *Population and Housing*; 3.14, *Public Services*; 3.16, *Transportation*; 3.17, *Tribal Cultural Resources*; 3.18, *Utilities and Service Systems*; and 3.19, *Wildfire*, for detailed descriptions and potential operational impacts that could be significant and unavoidable.

4.1.9 Transportation (Section 3.16)

4.1.9.1 Conflict or Be Inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b) (Impact 3.16(b)).

Construction

None.

Operation

Tables 3.16-2 and 3.16-3 in Section 3.16, *Transportation*, of this PEIR show all of the design components that could be constructed for the Typical Projects and KOP categories. As shown in these two tables, the majority of the design components are screened from VMT analysis and therefore would result in a less-than-significant impact. However, the following 10 design components were not screened out and were determined to have the potential to result in a significant VMT impact:

- Tier III Pavilions (Common Elements Typical Project)
- Art/Performance Spaces (Common Elements Typical Project)
- Equestrian Facility (KOP Category 1)
- Terraced Banks (KOP Category 2)
- Platform (KOP Category 3)
- Side Channel (KOP Category 4)
- Fields (KOP Category 5)
- Recreation Fields (KOP Categories 5 and 6)
- Urban Agriculture/Composting (KOP Category 6)
- Art and Culture Facilities (KOP Category 6)

Implementation of a site-specific screening pursuant to County Guidelines Sections 3.1.2.1, 3.1.2.2, and 3.1.2.3 for land use projects and Guidelines Section 3.2.1 and 3.2.2 for transportation projects and implementation of a TDM and/or site/neighborhood enhancement program for any subsequent project that does not screen out (Mitigation Measure TRA-1a) would reduce VMT impacts. However, given the range in the possible size and programmatic intensity of the potentially significant project elements/design components for the Common Elements Typical Projects, KOP Categories 1 through 6, and the overall *2020 LA River Master Plan*, significant VMT impacts may not be fully mitigable even with TDM measures (Mitigation Measure TRA-1b). As such, impacts could remain significant and unavoidable.

4.1.10 Tribal Cultural Resources (Section 3.17)

4.1.10.1 Substantial Adverse Change in the Significance of a TCR (Impact 3.17(a))

Construction

Construction of the Typical Projects would involve site disturbance, movement of construction equipment, and import and export of materials. Construction would occur along the right-of-way and include an area of approximately 3 acres (for the Common Elements Typical Project) or up to 40 acres (for the Multi-Use Trails and Access Gateways Typical Project) and last about 10 to 20 months, respectively. Excavation would be a maximum depth of 7 feet bgs to construct pavilions and install footings for bollards, lighting, or fences and generally 2 feet bgs for trails. A Sacred Lands File search conducted through the Native American Heritage Commission on March 12, 2020, identified positive

results on two U.S. Geological Survey quadrangles that intersect Frames 5, 6, and 9 within the project study area. In addition, other sensitive areas may be identified through ongoing consultation with Native American tribes. Therefore, surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be tribal cultural resources (TCRs) have been identified in Frames 5, 6, and 9, but yet-to-be-identified TCRs could be present within all nine frames and construction of the Typical Projects could cause a substantial adverse change in the significance of a TCR, if present.

Although implementation of Mitigation Measures CR-1, CR-4a through d, and CR-5 (as discussed in Section 3.4, *Cultural Resources*, of this PEIR) would help reduce the impacts, the specific locations of Typical Projects and presence of TCRs as well as the Typical Projects' effects on TCRs are not known at this time. Therefore, it is possible that construction impacts for Typical Projects, based on the specific TCR, could remain significant and unavoidable.

As with the Typical Projects discussed above, the six KOP categories would be implemented over a period of 25 years, depending on such factors as availability of funding and necessary approvals. The construction activities proposed under all the KOP categories could result in significant impacts on TCRs. The Native American Heritage Commission identified positive results on two U.S. Geological Survey quadrangles that intersect the study area. These occur in Frames 5, 6, and 9. Other sensitive areas may be identified through ongoing consultation in any frame. Although implementation of Mitigation Measures TCR-1, TCR-2, CR-1, CR-4a through d, and CR-5 could help reduce the impacts, the specific locations of subsequent design components under the six KOP categories and presence of TCRs as well as the subsequent projects' effects on TCRs are not known at this time. Therefore, it is possible that construction impacts from KOP Categories 1 through 6 could remain significant and unavoidable.

Operation

The Typical Projects could include new single-story structures, such as pavilions, cafés, and restrooms, or lower-profile infrastructure, such as multi-use trails, signs, lighting, benches, and other associated recreational facilities that could interfere with or otherwise adversely affect the setting or viewshed of a nearby TCR, which could indirectly affect the integrity of the resource. Operational impacts, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users in new facilities associated with a Typical Project near a potentially significant TCR could directly affect TCRs, through unanticipated destruction of in-situ TCRs, or otherwise negatively affect the integrity of the resource. These activities could result in the exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded TCRs.

Similar to construction-related impacts on TCRs, although implementation of Mitigation Measures TCR-3 and TCR-4 could help reduce the impacts, the specific locations of projects and presence of TCRs, as well as the projects' effects on TCRs, are not known at this time. Therefore, it is possible that operational impacts for Typical Projects could remain significant and unavoidable.

Potential impacts from operation of the design components under the KOP categories would vary depending on the specific design component and its intended function, as well as on the specific location, including in-channel or off-channel. The specific location and design for these components have not been determined yet and would depend on numerous factors, including project proponent and availability of funding. The operation of the KOP categories could result in significant impacts on

TCRs, which include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use. These activities could result in the exposure, disturbance, and potential destruction through damage or removal of existing resources and previously unrecorded TCRs.

Although implementation of Mitigation Measures TCR-3 and TCR-4 could help reduce the impacts, the specific locations of subsequent design components under the six KOP categories and presence of TCRs, as well as the subsequent projects' effects on TCRs, are not known at this time. Therefore, it is possible that operational impacts of the KOP categories could remain significant and unavoidable.

This conclusion for the operation phase also applies to the overall *2020 LA River Master Plan*.

4.1.11 Utilities/Service Systems (Section 3.18)

4.1.11.1 Relocation or Construction of New or Expanded Utility Facilities (Impact 3.18(a))

Construction

None.

Operation

During operation of the six KOP categories, there are numerous resource master plans that are applicable to the study area that consider planned growth and zoning to ensure adequate provision of utility services into the future. Similar to under the Typical Projects, growth that could result in increased demand for utilities has been accounted for in the various resource management plans of the service providers and municipalities along the LA River. However, there could be potentially significant impacts with regard to sufficient supply/capacity for one or more utilities for operation of KOP Categories 1 through 5. For KOP Category 6, a housing or wastewater treatment facility project would demand greater amounts of water, electricity, and natural gas. These design components would be evaluated on a subsequent-project-specific and location-specific basis to determine the level of impact, if any, on utilities. Because the extent of these projects is unknown, there could be localized insufficiencies of utility services that could require expansion of existing infrastructure or construction of new infrastructure and an environmental impact could occur. Despite implementation of Mitigation Measure UTIL-1, there could be localized utility insufficiencies that remain. Operation impacts could be significant and unavoidable for the KOP categories.

This conclusion of significant and unavoidable impacts for the operation phase also applies to the overall *2020 LA River Master Plan*.

4.1.11.2 Water Supply (Impact 3.18(b))

Construction

None.

Operation

Preparation of a utilities plan during the design phase would identify potential insufficiencies in water supply versus demand. Growth that could result in increased demand for water has been accounted for in the various resource management plans of the service providers and municipalities along the LA River. Senate Bill 610 requires that water supply assessments occur early in the land use planning process for all large-scale development projects. Nevertheless, because of the larger extent of KOP Category 6 design components, potentially significant impacts with regard to sufficient water supply for the operations period could occur. Given the specific location, size, and extent of subsequent design components under KOP Category 6 are unknown, the associated water demand could result in significant and unavoidable impacts even with implementation of Mitigation Measure UTIL-4.

This conclusion of significant and unavoidable impacts also applies to both the construction and operation phases of the overall *2020 LA River Master Plan*.

4.1.11.3 Wastewater Treatment (Impact 3.18(c))

Construction

None.

Operation

KOP Category 6 could result in a wide variety of projects, many of which would generate wastewater during the operations period. It should be noted that one of the potential KOP Category 6 elements is a water treatment facility, which would not generate substantial amounts of its own wastewater and would result in an increase in wastewater treatment capacity, a beneficial impact. Because the location, size, and extent of these projects are unknown, it cannot be quantified how much wastewater would be generated by an individual design component under KOP Category 6. Wastewater generation could exceed the capacity of existing wastewater treatment facilities or local conveyance systems. Despite implementation of Mitigation Measure UTIL-4 during the design phase, there could be localized wastewater conveyance or treatment deficiencies that remain. Impacts could be significant and unavoidable.

This conclusion of significant and unavoidable impacts also applies to both the construction and operation phases of the overall *2020 LA River Master Plan*.

4.1.12 Wildfire (Section 3.19)

4.1.12.1 Exposure of Occupants to Wildfire-Related Pollutants (Impact 3.19(b))

Construction

None.

Operation

Operation of the Typical Projects or KOP categories could introduce additional visitors and staff. If a newly constructed Typical Project or KOP Category 1 through 6 design component is within or adjacent to a Very High Fire Hazard Severity Zone, it could expose additional visitors, staff, and structures to hazardous conditions associated with the high risk of wildfire at the site who were not previously exposed to this risk. Furthermore, the addition of more people and structures to an area that is designated as a Very High Fire Hazard Severity Zone could exacerbate existing wildfire risks.

Mitigation Measure WF-3 is required to ensure that the implementing agency will prepare a Fire Protection Plan (FPP) to minimize potential operations-related impacts associated with wildfire risk for projects. However, the locations of future projects are unknown, and the potential wildfire-related risks (e.g., types of vegetation at project sites and level of human activity) are also unknown. Accordingly, it cannot be guaranteed that the preparation and implementation of an FPP would effectively reduce the potential impacts to less-than-significant levels. Therefore, operational impacts for the six KOP categories and Typical Projects could be significant and unavoidable.

This conclusion of significant and unavoidable impacts for operations also applies to the overall *2020 LA River Master Plan*.

4.1.12.2 Exacerbation of Wildfire Risk (Impact 3.19(c))

Construction

None.

Operation

Operation of the Typical Projects or KOP categories within or adjacent to Very High Fire Hazard Severity Zones will require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. These measures would be intended to reduce the potential risk of fire ignition and spread. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other impacts on the environment. Therefore, because the locations of the Typical Projects and KOP categories are unknown, and the types of fire breaks or utilities that may be required at these locations are unknown, there is the potential that operation and maintenance of fire breaks, utilities, or other infrastructure could pose temporary or permanent environmental impacts.

Mitigation Measure WF-3 requires the County or local jurisdiction implementing the *2020 LA River Master Plan* to prepare an FPP to mitigate the risk of wildfire impacts related to flammable vegetation. However, the locations of future project sites are unknown, and the potential wildfire-related risks (e.g., types of vegetation at project sites and level of human activity) are also unknown. Accordingly, it cannot be guaranteed that the preparation and implementation of an FPP would effectively reduce the potential impacts to less-than-significant levels. Therefore, operational impacts from the Typical Projects and six KOP categories could be significant and unavoidable.

This conclusion of significant and unavoidable impacts for operations also applies to the overall *2020 LA River Master Plan*.

4.2 Impacts Found to Be Less than Significant with Mitigation for Later Activities Carried Out by the County and Significant Unavoidable When Not Carried Out by the County

Impacts on the following resource areas would be less than significant with mitigation for later activities when carried out by the County. However, because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, the impact would be significant and unavoidable when these activities are not carried out by the County.

- Aesthetics (Section 3.1)
    - Scenic Vista
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
    - Visual Character
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
    - Light and Glare
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (Operations)
- Air Quality (Section 3.2)
    - Objectionable Odors
        - KOP Category 1 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (Operations)
- Biological Resources (Section 3.3)
    - Species
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)

        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Sensitive Natural Community
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 3 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Wetlands
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 2 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Wildlife Corridors or Wildlife Nursery Sites
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 3, KOP Categories 5 and 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Local Policies or Ordinances
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Category 1 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Geology, Soils, and Paleontological Resources (Section 3.6)
    - Earthquake Fault Rupture, Seismic Shaking, Ground Failure, or Landslides
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - On- or Off-Site Landslide, Lateral Spreading, Subsidence, Liquefaction or Collapse
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction)

        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Expansive Soil
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Paleontological Resources
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Greenhouse Gas Emissions (Section 3.7)
    - Policies (Construction and Operations)
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
- Hazards and Hazardous Materials (Section 3.8)
    - Upset and Accident Conditions
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Hazards to Schools
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Hazardous Materials Sites
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)

    - Wildland Fire
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Hydrology and Water Quality (Section 3.9)
    - Drainage Alteration Resulting in Erosion, Flooding, Runoff, or Altered Flood Flows
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction)
        - KOP Categories 1 through 6 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Land Use and Planning (Section 3.10)
    - Divide Established Community
        - KOP Category 6 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (KOP 6 - Construction and Operations)
- Noise (Section 3.12)
    - Temporary or Permanent Increase in Ambient Noise Levels in Excess of Standards
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 5 (Construction and Operations)
    - Groundborne Vibration or Groundborne Noise Levels
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 5 (Construction)
- Public Services (Section 3.14)
    - Police and Fire Services, Schools, Parks
        - KOP Categories 1 through 6 (Construction)
- Recreation (Section 3.15)
    - Increased Use of Existing Parks
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)

        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
    - Require Construction of Recreational Facilities
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Transportation (Section 3.16)
    - Conflict with Circulation System Program, Plan, Ordinance, or Policy
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
    - CEQA Guidelines Section 15064.3 subdivision (b)
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
    - Increase Hazards due to Geometric Design Feature or Result in Inadequate Emergency Access
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
- Utilities/Service Systems (Section 3.18)
    - Generation of Waste
        - KOP Category 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Wildfire (Section 3.19)
    - Emergency Response Plan
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 6 (Construction)

- Overall *2020 LA River Master Plan* Implementation (Construction and Operations)

- Exposure of Occupants to Wildfire-Related Pollutants
  - Common Elements Typical Project (Construction)
  - Multi-Use Trails and Access Gateways Typical Project (Construction)
  - KOP Categories 1 through 6 (Construction)
  - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Exacerbation of Wildfire Risk
  - Common Elements Typical Project (Construction)
  - Multi-Use Trails and Access Gateways Typical Project (Construction)
  - KOP Categories 1 through 6 (Construction)
  - Overall *2020 LA River Master Plan* Implementation (Construction)
- Expose People or Structures to Significant Post-Fire Risks
  - Common Elements Typical Project (Construction and Operations)
  - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
  - KOP Categories 1 through 6 (Construction and Operations)
  - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)

4.3 Impacts Found to Be Less than Significant

The environmental analyses presented in Chapter 3, *CEQA Environmental Impact Assessment*, are summarized below (pursuant to CEQA Section 15128) and broken down by no impacts and impacts found to be less than significant.

4.3.1 No Impacts

Chapter 3 concluded that the proposed Project would result in no impacts in both County and non-County jurisdictions in the following areas:

- Biological Resources (Section 3.3)
  - Conservation Plan
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
    - KOP Categories 1 through 6 (Construction and Operations)
    - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Geology, Soils, and Paleontological Resources (Section 3.6)
  - Use of Septic Tanks or Alternative Waste Disposal Systems

        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Hazards and Hazardous Materials (Section 3.8)
    - Safety Hazard or Excessive Noise within or near Airport
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Hydrology and Water Quality (Section 3.9)
    - Water Quality Standards
        - KOP Category 4 (Operations)
    - Groundwater Management Plan
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Land Use (Section 3.10)
    - Divide Established Community
        - KOP Categories 1 through 3 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (KOP Categories 1 through 5 - Construction and Operations)
- Utilities/Service Systems (Section 3.18)
    - Water Supplies
        - KOP Category 4 (Operations)
    - Adequate Capacity for Wastewater Treatment Provider
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)

4.3.2 Impacts Found to Be Less than Significant

The analyses presented in Chapter 3, *CEQA Environmental Impact Assessment*, concluded that the proposed Project would result in less-than-significant impacts in the following resource areas in both County and non-County jurisdiction, and, therefore, no mitigation measures are required.

- Aesthetics (Section 3.1)
  - Scenic Vista
    - Common Elements Typical Project (Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Operations)
    - KOP Categories 1 through 5 (Operations)
  - Scenic Resources
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
    - KOP Categories 1 through 6 (Construction and Operations)
    - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
  - Visual Character
    - Common Elements Typical Project (Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Operations)
    - KOP Categories 1 through 6 (Operations)
    - Overall *2020 LA River Master Plan* Implementation (Operations)
  - Light and Glare
    - Common Elements Typical Project (Construction)
    - Multi-Use Trails and Access Gateways Typical Project (Construction)
    - KOP Categories 1 through 6 (Construction)
    - Overall *2020 LA River Master Plan* Implementation (Construction)
- Air Quality (Section 3.2)
  - Obstruct Implementation of the Applicable Air Quality Plan
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
    - KOP Categories 1 through 6 (Construction and Operations)
    - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
  - Violate Air Quality Standard
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
  - Objectionable Odors
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)

        - KOP Category 1 (Construction)
        - KOP Categories 2 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
- Energy (Section 3.5)
    - Consumption of Energy
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - State or Local Plans
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Geology, Soils, and Paleontological Resources (Section 3.6)
    - Soil Erosion or Loss of Top Soil
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - On- or Off-Site Landslide, Lateral Spreading, Subsidence, Liquefaction or Collapse
        - KOP Categories 1 through 6 (Operations)
    - Expansive Soil
        - KOP Categories 1 through 6 (Operations)
- Hazards and Hazardous Materials (Section 3.8)
    - Routine Transport
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Upset and Accident Conditions
        - Common Elements Typical Project (Operations)

        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)
    - Hazards to Schools
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)
    - Hazardous Materials Sites
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)
    - Emergency Response
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Hydrology and Water Quality (Section 3.9)
    - Water Quality Standards
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1, 2, 3, 5, and 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Groundwater Supplies
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction)
        - KOP Categories 1 through 6 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
    - Drainage Alteration Resulting in Erosion, Flooding, Runoff, or Altered Flood Flows
        - Common Elements Typical Project (Construction)
    - Inundation
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)

        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Land Use and Planning (Section 3.10)
    - Divide Established Community
        - Common Elements Typical Project (Construction)
        - Multi-Use Trails and Access Gateways Typical Project (Construction)
        - KOP Categories 1 through 5 (Construction)
        - KOP Categories 4 and 5 (Operations)
    - Conflict with Applicable Plans and Policies
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 and 2 (Construction)
        - KOP Categories 3, 4, and 5 (Construction and Operations)
- Mineral Resources (Section 3.11)
    - Locally Important Mineral Resource
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Noise (Section 3.12)
    - Temporary or Permanent Increase in Ambient Noise Levels in Excess of Standards
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
    - Groundborne Vibration or Groundborne Noise Levels
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)
    - Airstrip
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)
        - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Population and Housing (Section 3.13)

- Population Growth
  - Common Elements Typical Project (Construction and Operations)
  - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
  - KOP Categories 1 through 6 (Construction and Operations)
  - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Displace Substantial Numbers of Existing Housing Units
  - Common Elements Typical Project (Construction and Operations)
  - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
  - KOP Categories 1 through 6 (Construction and Operations)
  - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)

- Public Services (Section 3.14)
  - Police and Fire Services, Schools, Parks
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
- Recreation (Section 3.15)
  - Increased Use of Existing Parks
    - Common Elements Typical Project (Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Operations)
    - KOP Categories 1 through 6 (Operations)
    - Overall *2020 LA River Master Plan* Implementation (Operations)
  - Require Construction of Recreational Facilities
    - Common Elements Typical Project (Construction and Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
    - KOP Categories 1 through 6 (Construction and Operations)
    - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Transportation (Section 3.16)
  - Conflict with Circulation System Program, Plan, Ordinance, or Policy
    - Common Elements Typical Project (Operations)
    - Multi-Use Trails and Access Gateways Typical Project (Operations)
    - KOP Categories 1 through 6 (Operations)
    - Overall *2020 LA River Master Plan* Implementation (Operations)
  - CEQA Guidelines Section 15064.3 subdivision (b)

        - Multi-Use Trails and Access Gateways Typical Project (Operations)
    - Increase Hazards due to Geometric Design Feature or Result in Inadequate Emergency Access
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)
        - Overall *2020 LA River Master Plan* Implementation (Operations)
- Utilities/Service Systems (Section 3.18)
    - Exceed Water or Wastewater Treatment Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications Facilities
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1–6 (Construction)
        - Overall *2020 LA River Master Plan* Implementation (Construction)
    - Water Supplies
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 3 (Construction and Operations)
        - KOP Categories 4 through 6 (Construction)
        - KOP Category 5 (Operations)
    - Adequate Capacity for Wastewater Treatment Provider
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Construction)
        - KOP Categories 1 through 5 (Operations)
    - Generation of Waste
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 5 (Construction and Operations)
    - Compliance with Solid Waste Regulations
        - Common Elements Typical Project (Construction and Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Construction and Operations)
        - KOP Categories 1 through 6 (Construction and Operations)

    - Overall *2020 LA River Master Plan* Implementation (Construction and Operations)
- Wildfire (Section 3.19)
    - Emergency Response Plan
        - Common Elements Typical Project (Operations)
        - Multi-Use Trails and Access Gateways Typical Project (Operations)
        - KOP Categories 1 through 6 (Operations)

4.4 Growth-Inducement and Indirect Impacts

According to Section 15126.2 (e) of the State CEQA Guidelines, growth-inducing impacts of the proposed Project shall be discussed in the PEIR. Growth-inducing impacts are those effects of the proposed Project that might foster economic or population growth or the construction of new housing, either directly or indirectly, in the surrounding environment. According to CEQA, increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place without implementation of the proposed Project. Typically, the growth-inducing potential of a project would be considered significant if it results in growth or population concentration that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities. However, the creation of growth-inducing potential does not automatically lead to growth, whether it would be below or in exceedance of the projected level. Under CEQA, it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The *2020 LA River Master Plan* builds on the adopted *1996 LA River Master Plan* and other regional planning studies. As described in Section 3.13, *Population and Housing,* the temporary and specialized nature of construction work, as well as the large available construction workforce in the Los Angeles region, would not lead to a substantial population increase during the construction period. With respect to the operations period, Section 3.13 states that the *2020 LA River Master Plan* includes goals and objectives of providing clean water, native habitat, parks, recreation, multiuse trails, art, and cultural resources to improve human and ecosystem health, equity, access, mobility, and economic opportunity for the diverse communities of the County, while providing flood risk management. Many of the approximately 107 projects proposed under the *2020 LA River Master Plan* are intended to provide flood management, recreational uses, and ecological uses. Projects are intended to serve the local community and not intended to substantially increase population growth.

One of the nine objectives of the *2020 LA River Master Plan* (Objective No. 6) is addressing potential adverse impacts on housing affordability and people experiencing homelessness. About a third (32 percent) of renters in the County are severely rent-burdened, meaning they spend more than half of their income on rent. As the affordable housing shortfall has risen, so has the number of people experiencing homelessness, which exceeded 50,000 people across the County. Of particular relevance to the Project is the estimate of approximately 8,800 persons experiencing homelessness living in neighborhoods adjacent to the river. Objective No. 6 of the Project recognizes that the goal

of increasing parks and open space may simultaneously have the potential to negatively affect housing affordability. The *2020 LA River Master Plan* seeks to improve neighborhoods without causing negative effects of displacement by proactively implementing a strategy for preventing displacement and supporting continuing affordability of housing in river-adjacent communities.

As concluded in Section 3.13, inclusion of affordable housing in the *2020 LA River Master Plan* would not induce population but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness. Therefore, the Typical Projects and KOP Categories 1 through 6, even when considered together, would not induce substantial unplanned population growth in the project study area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). Consequently, the proposed Project is not expected to result in significant growth-inducing impacts on the environment.

4.5 Irreversible Environmental Changes

State CEQA Guidelines Section 15126.2(d) requires a discussion of any significant irreversible environmental changes that would be caused by the proposed Project, and states:

> Uses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as a highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Implementation of the proposed Project would occur along the 51 miles of the LA River and through 17 local jurisdictions and unincorporated County areas. Proposed development would include the irreversible commitment of natural resources (water and raw materials required during construction and operations), energy, land, and human resources. Ongoing maintenance and operation of the flood management infrastructure as well as new retail amenities, natural resource areas, trails, art, parks, and cultural resources would entail a further irreversible commitment of energy resources in the form of petroleum products (diesel fuel and gasoline), natural gas, and electricity generated by burning fossil fuels. Long-term impacts would also result from an increase in vehicular traffic and the associated air pollutant and noise emissions.

Chapter 5
Alternatives

5.1 Introduction

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to a project or its location that could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant environmental impacts, if any exist. According to the State CEQA Guidelines, an EIR should compare the merits of the alternatives and determine an environmentally superior alternative. The range of alternatives discussed in an EIR is governed by the *rule of reason*, which requires the identification of only those alternatives necessary to permit a reasonable choice between the alternatives and the proposed Project. An EIR need not consider an alternative that would be infeasible. State CEQA Guidelines Section 15126.6(f)(1) explains that the evaluation of project alternative feasibility can consider a number of factors, including site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, and jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise access the alternative site. Therefore, an EIR is also not required to evaluate an alternative that (1) has an effect that cannot be reasonably identified or that has remote or speculative implementation, or (2) would not achieve the basic project objectives.

5.2 Alternatives Considered

This chapter considers alternatives to the Project, including the No Project Alternative, so that decision-makers can compare the impacts of approving the proposed Project (i.e., the *2020 LA River Master Plan*) with the impacts of not approving the proposed Project (15126.6(e)(1) of the State CEQA Guidelines requires that the alternatives analysis include a discussion of a no-project alternative). As described above, the alternatives must reduce or avoid the impacts of the Project and meet the basic objectives. Therefore, pursuant to the State CEQA Guidelines Section 15126.6, the County considered the following project objectives (see Chapter 2, *Project Description*, of this EIR) with respect to developing alternatives to the proposed Project for the *2020 LA River Master Plan*.

1. Reduce flood risk and improve resiliency.
2. Provide equitable, inclusive, and safe parks, open space, and trails.
3. Support healthy connected ecosystems.
4. Enhance opportunities for equitable access to the river corridor.
5. Embrace and enhance opportunities for arts and culture.
6. Address potential adverse impacts on housing affordability and people experiencing homelessness.[1]

[1] The aim of the *2020 LA River Master Plan* objective 6, "Address potential adverse impacts on housing affordability and people experiencing homelessness," is to maintain strategies for ensuring continuing housing affordability in LA River–adjacent communities. Therefore, the use of "impacts" in objective 6 is distinct from the use of "impacts" under CEQA where, per State CEQA Guidelines Section 15358 (b), impacts analyzed under CEQA must be related to a physical change in the environment.

7. Foster opportunities for continued community engagement, development, and education.
8. Improve local water supply reliability.
9. Promote healthy, safe, clean water.

The County considered and evaluated the feasibility of alternatives that had the potential to avoid or substantially lessen the following significant adverse environmental impacts of the proposed *2020 LA River Master Plan*:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Based on the above, the following alternatives to the proposed Project have been identified and are further detailed below:

- Alternative A: No Project Alternative
- Alternative B: Channel Avoidance Alternative

5.2.1 Alternative A – No Project

As required by State CEQA Guidelines Section 15126.6(e), a No Project Alternative:

> …shall be evaluated along with its impact. The purpose of describing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Project Alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline.

Alternative A: No Project (No Project Alternative) assumes that development along the LA River would continue in accordance with the adopted *1996 Los Angeles River Revitalization Master Plan* (the 1996 Master Plan). Under the No Project Alternative, comprehensive improvements, guided by the nine multi-benefit goals of the proposed *2020 LA River Master Plan*, consistent with the six kit of parts (KOP) categories and common elements would not occur.

Under the No Project Alternative, the original 1996 Master Plan that was adopted by the County Board of Supervisors in 1996 will continue to serve as the framework for enhancing the LA River. Public Works, Department of Regional Planning, and Department of Parks and Recreation developed the 1996 Master Plan as a multi-objective program for the LA River while recognizing its primary purpose for flood management.

The 1996 Master Plan focuses on the approximately 51-mile-long LA River and included 9 miles of the Tujunga Wash from Hansen Dam to the LA River, as well as the adjacent lands of these two water resources in the County. Specifically, locations within approximately 0.5 mile on each side of the centerline of the river compose the study area in the 1996 Master Plan, compared to the 2-mile-wide (1 mile on each side of the river) study area corridor for the *2020 LA River Master Plan*. Within this area, 13 cities are identified in the 1996 Master Plan as jurisdictions through which the river and its tributaries pass: Bell, Bell Gardens, Burbank, Compton, Cudahy, Glendale, Long Beach, Los Angeles, Lynwood, Maywood, Paramount, South Gate, and Vernon, along with unincorporated County areas. The 1996 Master Plan divides the river and the Tujunga Wash into six reaches beginning in Long Beach, continuing upstream through the mid-cities, downtown Los Angeles, Glendale Narrows, San Fernando Valley, and Tujunga Wash areas.

The 9-mile Tujunga Wash is not included in the *2020 LA River Master Plan* and, under the No Project Alternative, planning for the Tujunga Wash would no longer be guided by the 1996 Master Plan. Instead, the planning framework for the Tujunga Wash would be informed by the more recently developed and issued 2020 *Upper Los Angeles River and Tributaries Revitalization Plan*, developed by the Upper Los Angeles River and Tributaries Working Group in the Santa Monica Mountains Conservancy, in accordance with Assembly Bill 466. Therefore, the Tujunga Wash is not considered part of the No Project Alternative. In addition, under the No Project Alternative, other plans for the LA River corridor will continue to be implemented, as driven by the respective planning agencies. Examples of such plans include the City of Los Angeles 2007 *Los Angeles River Revitalization Master Plan*, the City of Los Angeles and U.S. Army Corps of Engineers 2015 *Los Angeles River Ecosystem Restoration Integrated Feasibility Report*, and the Lower LA River Implementation Advisory Group's 2017 *Lower LA River Revitalization Plan.*

The 1996 Master Plan included 101 potential projects, including development of new or improved bikeways, trails, parks, bridges, and signage as well as developing studies, Earth Day events, landscape improvements, nursery gardens, rental facilities, and food concessions. Since 1996, over $100 million has been designated for the development of projects along the river. Project types have included bikeways, parks, signage, studies, Earth Days, and other landscape improvements. Four demonstration projects identified in the 1996 Master Plan have been completed; in addition, approximately 45 of the recommended site-specific projects have been completed or are in final design/construction.

All projects along the LA River need to conform with the 1996 Master Plan documents, which include the 1996 Master Plan, Landscape Guidelines, Sign Guidelines, and Maintenance Guidelines. In addition, the 1996 Master Plan notes that all proposed recreational and river enhancements under the 1996 Master Plan would be designed in accordance with the U.S. Army Corps of Engineers and County flood management standards.

Overall, the 1996 Master Plan advocates environmental enhancement, recreational opportunities, and economic development with a focus on improving the river without compromising the primary purpose of providing flood management. The 1996 Master Plan's vision comprises enhancement of the river corridor with open space and environmental, recreational, economic development, and

educational opportunities and encouragement of compatible developments along the LA River and Tujunga Wash. Specifically, the 1996 Master Plan identifies the following objectives:

1. Ensure flood control and public safety needs are met.
2. Improve the appearance of the river and the pride of local communities in it.
3. Promote the river as an economic asset to the surrounding communities.
4. Preserve, enhance, and restore environmental resources in and along the river.
5. Consider stormwater management alternatives.
6. Ensure public involvement and coordinate Master Plan development and implementation among jurisdictions.
7. Provide a safe environment and a variety of recreational opportunities along the river.
8. Ensure safe access to and compatibility between the river and other activity centers.

In comparison to the *2020 LA River Master Plan*, the original 1996 Master Plan did not identify specific goals focused on housing affordability, ecosystems, and water supply.

To achieve its overall objectives, the 1996 Master Plan included six major categories of recommended activities based on public outreach and coordination with various stakeholders, including agencies, interest groups, and community groups. Each of the six major categories of activities below includes a list of specific project recommendations for that category:

a. **Aesthetic Improvements**

- Mapping and signage system consists of creating a recognizable river logo to be placed at major trail entrances and interpretation sites.
- Tree plantings and aesthetic enhancement programs recommended in conjunction with existing and proposed entrances to the river.
- River art recommended for a number of locations along the LA River, including ten potential murals.
- Graffiti abatement programs recommended for selected stretches of the LA River.

b. **Economic Development**

- Enhancement of river frontage property at eight distinct geographic areas to create attractive frontage for new garden office, residential, and other uses.
- Major gateways at six locations along the LA River.
- Minor gateways recommended at three locations in conjunction with redevelopment projects proposed by local jurisdictions or as a connection between compatible land uses in neighboring jurisdictions.
- Concessionaire programs recommended at 13 potential locations where the County and individual cities could establish or expand concessionaire programs to provide for the sale of food and/or the rental of bicycles and skates.

c. **Environmental Enhancements**

- Tree planting encouraged to establish nearly continuous greenway of trees adjacent to the LA River and Tujunga Wash. Planting of vegetation is proposed in flat areas adjacent to levees.

- Habitat restoration identified as high potential for Dominguez Gap, Sepulveda Basin, Taylor Yard and estuary.
- Habitat protection to continue by County and U.S. Army Corps of Engineers for ongoing operations and maintenance on the river while considering measures to protect wildlife in the urban environment from negative impacts.
- Water quality and environmental education recommends initiating water quality and environmental education programs by developing interpretative sites at Hansen Dam, Dominguez Gap, Pacoima and Tujunga Washes, and other appropriate facilities in urban areas.

d. **Flood Management and Water Conservation**

- Allow for additional stormwater detention/retention (public/private facilities).
- Create additional recreational facilities.
- Create wildlife and native riparian habitats.

e. **Jurisdiction and Public Involvement**

- Ensure public involvement and coordinate master plan development and implementation among jurisdictions.

f. **Recreation**

- Regional trail system improvements that will join existing trails and enhance potential trail opportunities. In addition, opportunities to develop on-street bike lanes to connect other nearby recreation and public facilities to the existing LARIO Trail and proposed improvements have been identified throughout the 1996 Master Plan study area.
- Interpretative sites include development of 27 interpretive sites, each offering a unique experience related to topics such as history, culture, environment, river engineering, water conservation, or industrial development.
- Vista points at many bridges over the LA River.
- Development of recreation facilities in areas adjacent to public rights-of-way (ROWs), wherein the 1996 Master Plan identifies eight opportunities for development of parks to serve local neighborhoods in association with locations that are near or adjacent to the LA River.

The majority of the projects analyzed in the 1996 Master Plan are similar to those described in KOP Category 1, KOP Category 3, and the Common Elements Typical Project, as they included similar design components. Projects proposed under the 1996 Master Plan that would be similar to the design components of KOP Category 1 include trail improvements, connection of trails, enhancements to access points, landscape improvements, and habitat improvements. The 1996 Master Plan proposed projects that would be similar to the design components of KOP Category 3 including pedestrian and bicycle bridges. Projects that would be similar to the design components of the Common Elements Typical Project would include signage, bike/skate rental facilities, and food concessions. Additionally, some projects would be similar to KOP Category 6 design components because they included components such as nursery gardens, open air markets, and river-adjacent parks.

The 1996 Master Plan does not include projects that would fall under KOP Categories 2, 4, or 5. Overall, disturbance to the channel under the 1996 Master Plan would be limited to the construction of bridges. Other notable differences are that the 1996 Master Plan only includes 13 cities rather than 17 cities covered under the *2020 LA River Master Plan*. Furthermore, the 1996 Master Plan project area extended 0.5 mile on either side of the LA River, whereas the proposed Project includes an area of 1.0 mile on either side of the river. Therefore, the impacts discussed below for Alternative A are relevant only for the 13 cities described in the 1996 Master Plan, a smaller geographic area than the proposed Project.

5.2.2 Alternative B – Channel Avoidance Alternative

Under the Channel Avoidance Alternative, no channel modification associated with the *2020 LA River Master Plan* would occur. As such, no improvements would occur within bank-to-bank of the LA River. Later activities under the Channel Avoidance Alternative would occur from top of levee up to the 1-mile study area boundary on each side of the LA River. There would be no *2020 LA River Master Plan* projects within the channel.

Alternative B would include implementation of only five of the six KOP categories compared to the *2020 LA River Master Plan*; these include KOP Category 1: Trails and Access Gateways, KOP Category 3: Crossings and Platforms, KOP Category 4: Diversions, KOP Category 5: Floodplain Reclamation, and KOP Category 6: Off-Channel Land Assets. These would be implemented only between top of levee and up to the boundary of the 1-mile study area on each side of the LA River. The Channel Avoidance Alternative would not include KOP Category 2, which includes channel modifications, and would also not include implementation of the channel access design component under KOP Category 1. Therefore, the following design components under KOP Category 2 would not be implemented under the Channel Avoidance Alternative: terracing the banks, constructing dams or deployable barriers, modifying the channel for erosion protection, and redirecting water flow. In addition, other channel modifications including changing the materiality of the channel (e.g., adding or removing concrete depending on capacity requirements) would not be implemented. For KOP Category 3, no in-channel structural supports would be included; therefore, all interventions would require a clear span structure. For KOP Categories 4 and 5, all design components would require using existing connections or outflows if water were to move between the channel and a diversion or floodplain project.

Under the Channel Avoidance Alternative, a total of 107 projects would be implemented, similar to the *2020 LA River Master Plan;* however, none of these would include any activities within bank-to-bank of the LA River. Similar to the proposed Project, this alternative would also incorporate common elements along the LA River and would be subject to the relevant *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) recommendations and best management practices (BMPs).

The Channel Avoidance Alternative would include only the KOP categories and design components listed in Table 5-1.

Table 5-1. KOP Categories and Design Components for the Channel Avoidance Alternative

Kit of Parts	KOP Category 1: Trails and Access Gateways	KOP Category 3: Crossings and Platforms (all would require clear span structures for the channel avoidance alternative)	KOP Category 4: Diversions (all would require using existing connections and outflows; no changes to the channel would be made)	KOP Category 5: Floodplain Reclamation	KOP Category 6: Off-Channel Land Assets
Multi-Benefit Design Components Elements	River gateway	Pedestrian bridge	Diversion pipe	Side channel	Urban agriculture/ composting
	Pedestrian trail	Bike bridge	Side channel	Wetland	Solar power
	Bike trail	Equestrian bridge	Pump	Naturalized bank	Natural treatment system
	Equestrian trail	Multi-use bridge	Diversion channel	Braided channel	Wetland
	Equestrian facility	Cantilever	Diversion tunnel	Field	Recreation field
	Multi-use trail	Platform	Overflow weir	Recreation field	Surface storage
	Light tower/water tower	Habitat/wildlife bridge	Underground gallery	Storage (surface)	Subsurface storage
	Lookout				Injection well
	Boardwalk				Water treatment facility
	Vehicular access				Purple pipe connection
	Underpass and overpass				Dry well
	Vegetated buffer				Spreading ground
	Habitat corridor				Storm drain daylighting
					Affordable housing
					Art and culture facility
	Common elements and Design Guidelines, including best management practices				

5.3 Alternatives Considered but Eliminated from Detailed Consideration

Several alternatives were considered and eliminated from further evaluation either as part of the initial screening or in consideration of the comments received during the extensive outreach and scoping process conducted by the County for the *2020 LA River Master Plan*. These alternatives and the reasons for eliminating them from detailed consideration are described below.

5.3.1 In-Channel Alternative

Under this alternative, improvements under the *2020 LA River Master Plan* would be limited to the LA River channel with no improvements beyond the top of levee. This alternative was considered because it would avoid all impacts from improvements occurring outside the channel in the project study area. However, it would not avoid or lessen impacts associated with the in-channel improvements under the *2020 LA River Master Plan*. This alternative would not fully meet the nine objectives of the *2020 LA River Master Plan*, especially without complementary improvements outside the channel, such as access, healthy connected ecosystems, open space, parks, and opportunities for arts and culture. In addition, considering the primary function of the LA River as a flood management channel, potential improvements under this alternative would be restricted, considering the necessary ongoing operations and maintenance activities to provide the required flood risk management. Therefore, this alternative was eliminated from further consideration.

5.3.2 Adjacent Parcel Improvements Alternative

Under this alternative, improvements would be limited to vacant parcels adjacent to the LA River; no changes would be made to the channel itself (i.e., within the banks) or beyond the immediately adjacent vacant parcels. This alternative was considered because it could avoid all in-channel impacts under the proposed Project, as well as those resulting from off-channel improvements (beyond the fenceline) under the proposed Project. This alternative would meet some project objectives, including provision of equitable, inclusive, and safe parks, open space, and trails and opportunities for arts and culture, and for continued community engagement and development; however, other project objectives such as improved local water supply and clean water would not be fully met. There would be no reduction in flood risk or improved resiliency under this alternative. Furthermore, up to a couple of thousands of acres of open space opportunities could be lost as a result of excluding non-adjacent parcels under this alternative, and benefits such as wildlife connectivity and healthy connected ecosystems would not be realized. Therefore, this alternative was eliminated from further consideration.

5.3.3 Naturalize the LA River Alternative

This alternative involves removal of concrete along the entire length of the river and restoring the channel to a naturalized substrate while maintaining the current channel alignment. This alternative was considered because it may allow for limited improved infiltration and local water supply reliability, and it would encourage establishment of vegetation and improved ecosystem function and connectivity. However, naturalizing the channel would significantly negatively affect the

floodwater conveyance capacity of the river channel and significantly increase the chances of channel erosion and sedimentation, exacerbating flood risk. It would significantly impede the channel's ability to efficiently convey flood flows, which will significantly increase the risk of flooding along the 51 miles of the river. This standalone alternative would also not meet some of the project objectives such as reduced flood risk or improved resiliency provision of equitable, inclusive, and safe parks, open space, and trails, increased opportunities for equitable access to the river corridor, or for arts and culture or housing affordability strategies nor improvements to water quality. While this alternative would avoid construction and operation impacts associated with improvements outside the channel (i.e., beyond top of levee), it could cause more severe in-channel downstream impacts including at the Los Angeles and Long Beach ports and harbors. Therefore, this alternative was removed from further consideration.

5.3.4 Watershed Restoration Alternative

Under this alternative, implementation of the *2020 LA River Master Plan* and its proposed six KOP categories that include restoration, would expand the Project beyond the 2-mile-wide (1 mile on each side of the river) study area along the 51-mile river channel, to include the entire river watershed that covers a land area of up to 834 square miles, encompasses two counties, and has approximately 5 million inhabitants. The eastern portion of the watershed spans from the Santa Monica Mountains to the Simi Hills and the western portion spans from the Santa Susana Mountains to the San Gabriel Mountains. This alternative allows consideration of a substantially larger land area and approach to improved ecological function and habitat connectivity, reduced flood risk and improved resiliency from a system-wide perspective that encompasses improvements to the entire LA River watershed. This alternative would help meet many of the objectives of the proposed Project and specifically further the objectives of connected ecosystems and provision of equitable, inclusive, and safe parks, open space, and trails. However, none of the impacts of the proposed Project would be reduced or avoided given all KOP categories would be implemented throughout the watershed. Specifically, it would not reduce or avoid significant impacts for these environmental resources: aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, transportation, tribal cultural resources (TCRs), utilities and service systems, and wildfire. Therefore, this alternative was removed from further consideration.

5.3.5 Single and Combined Kit of Parts Alternatives

5.3.5.1 Channel Modifications Alternative

This alternative would focus on modification to the LA River channel to improve water conveyance. This alternative is considered to allow for improved conveyance of floodwater by increasing wall height in parts of the river that are currently constrained. This alternative would avoid impacts associated with implementation of five of the six KOP categories under the proposed Project except for KOP Category 2. However, it would meet only one of the nine basic project objectives of reducing flood risk, but would not improve resiliency. It would impede access, availability of open space, and ecosystem function in the river corridor and would not meet objectives focused on opportunities for arts and culture, strategies for housing affordability, community engagement, development, and education, or improved local water supply reliability and safe, clean water. Therefore, this alternative was removed from further consideration.

5.3.5.2 Maximize Recreation, Habitat, and Ecosystems Alternative

This alternative would maximize opportunities for recreation while improving habitat connectivity and ecosystem function of the study area corridor. Under this alternative, project improvements would focus primarily on KOP Categories 1, 3, and 5, and recreation, habitat and ecosystem design components of KOP Category 6. The remaining KOP categories of KOP Category 2 and KOP Category 4 would be implemented in a limited manner. This alternative would avoid construction and operations impacts of KOP Categories 2, 4, and 6 design components that do not focus on recreation, habitat, and ecosystems (such as surface and subsurface storage, injection well, dry well, and purple pipe connection). However, this alternative would not avoid or reduce impacts associated with implementation of KOP Categories 1, 3, and 5, and the recreation, habitat, and ecosystem design components of KOP Category 6.

With the maximization of recreation, habitat connectivity, and ecosystem function under this alternative, six of the nine project objectives focused on equitable, inclusive, and safe parks; open space, and trails; healthy connected ecosystems; equitable access to the river corridor; opportunities for arts and culture; continued community engagement, development, and education; and strategies for housing affordability would be met under this alternative. However, because KOP Categories 2 and 4 would be implemented in a limited manner and considering the primary function of the river as a flood management channel, this alternative would not meet the objective of reducing flood risk or improving resiliency. In addition, local water supply reliability and promotion of healthy, safe, clean water would not be met. Therefore, this alternative was removed from further consideration.

5.3.5.3 Single-Focused KOP Alternative

This alternative would include implementation of only one of the six KOP categories proposed under the *2020 LA River Master Plan*. Therefore, this alternative could avoid impacts associated with implementation of the other five KOP categories that would not be implemented under this Single-Focused KOP Alternative. However, depending on the KOP category implemented under this alternative, it would meet only a subset of the nine project objectives. Therefore, this alternative was removed from further consideration.

5.3.6 Large-Scale Floodplain Reclamation Alternative

Under this alternative, floodplain reclamation would expand beyond the channel to include widening of the channel into lands currently developed and occupied with industrial, commercial, and residential uses. Floodplain reclamation could include wetlands, naturalized banks, braided channels, fields, storage, and side channels. With the channel's role as a flood management system, any floodplain reclamation would need to maintain existing flood capacity. Project objectives focused on reducing flood risk and improving resiliency would be met under this alternative, along with improved ecosystem function, increased open space, and potentially local water supply reliability and water quality improvement. The other objectives would not be met under this alternative. In addition, there are a limited number of opportunities along the LA River for floodplain reclamation at any scale. Under this alternative, impacts associated with KOP categories related to trails, crossings and platforms, diversions and off-channel land assets would be minimized or avoided altogether because they would not be implemented. However, due to development and urbanization in the watershed, large-scale floodplain reclamation is not feasible and would result in displacement and disruption of existing residents, businesses, transportation corridors, and other vital infrastructure. Therefore, this alternative was removed from further consideration.

5.3.7 Regional Upstream Detention Alternative

Under this alternative, upstream detention improvements would be implemented to reduce peak flows during larger, rare storm events. This alternative is considered to reduce flood risk by building new or expanding the size of existing flood retention basins (e.g., increasing footprint and/or excavating and/or raising the dams and levees). With the exception of impacts from developing surface storage, this alternative would avoid some construction and operations impacts of the *2020 LA River Master Plan*. This alternative may help meet the project objectives of reducing flood risk as well as improving local water supply reliability. However, it would not meet the remaining seven basic project objectives. In addition, this alternative does not retain enough floodwater to substantially reduce the peak flow rate downstream (*2020 LA River Master Plan* Appendix Volume II, *Technical Backup Document*). Therefore, this alternative was removed from further consideration.

5.3.8 Reduced 2020 LA River Master Plan Project Study Area Alternative

Under this alternative, the 2-mile project corridor would remain; however, the 51-mile stretch of the LA River would be reduced to a shorter segment with fewer frames. Therefore, improvements would be limited along the length of the river focused in specific geographic areas. This could avoid impacts in areas that are excluded under this alternative; however, considering the LA River is one continuous channel from its headwaters to the mouth of the river in Long Beach, focused improvements in a shorter segment of the river with fewer frames would not adequately meet the nine objectives of the proposed Project that are focused on provision of connected open space, trails, and healthy connected ecosystems and improved flood management and resiliency along the entire 51-mile LA River. Therefore, this alternative was eliminated from further consideration.

5.4 Environmental Evaluation of CEQA Alternatives

The CEQA alternatives carried forward for further evaluation include Alternative A: No Project, and Alternative B: Channel Avoidance. An analysis of their impacts in comparison to those of the proposed *2020 LA River Master Plan* is provided below. As permitted by the State CEQA Guidelines, the impacts of the alternatives are discussed in less detail than the effects of the proposed *2020 LA River Master Plan*.

Table 5-2 summarizes the impacts of the proposed Project and compares them to each of the alternatives, as detailed below.

Table 5-2. Summary of Comparison of Impacts of the Alternatives to the Proposed Project

Environmental Topic	Proposed Project (when carried out by the County)	Alternative A No Project	Alternative B Channel Avoidance
Aesthetics	SU	<	=
Air Quality	SU	=	=
Biological Resources	LTSM*	<	<
Cultural Resources	SU	=	=
Energy	LTS	=	=

Environmental Topic	Proposed Project (when carried out by the County)	Alternative A No Project	Alternative B Channel Avoidance
Geology and Soils	LTSM*	=	=
Greenhouse Gas Emissions	SU	=	=
Hazards and Hazardous Materials	LTSM*	=	=
Hydrology and Water Quality	LTSM*	<	<
Land Use and Planning	SU	<	=
Mineral Resources	LTS	=	=
Noise	SU	=	=
Population and Housing	LTS	=	=
Public Services	SU	=	=
Recreation	LTSM*	=	=
Transportation	SU	=	=
Tribal Cultural Resources	SU	=	=
Utilities and Service Systems	SU	=	=
Wildfire	SU	=	=
Total	--	3	1

LTS = Less-than-significant impact; LTSM = Less-than-significant impact with mitigation; SU = Significant and unavoidable impact

< Lesser impacts

= Similar

*These impacts would be significant and unavoidable when not carried out by the County.

5.4.1 Environmental Evaluation of Alternative A

5.4.1.1 Aesthetics

Alternative A would result in less aesthetic impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.1, *Aesthetics*, the *2020 LA River Master Plan* would improve visual quality across and along the river, providing amenities and additional recreational uses and trails. These features would contribute to enhanced viewing opportunities for users to experience the vistas, result in increased scenic quality, and be consistent with zoning or design regulations governing scenic quality. However, the proposed Project was determined to result in significant and unavoidable impacts from implementation of KOP Category 6, which includes design components that could be multiple stories high or involve large massing, which could obstruct or block scenic vistas and views.

Similar to the proposed Project, this alternative would include projects that would enhance and improve the visual conditions within the planning area through new trails, parks, signage, landscape improvements, nursery gardens, and the like. However, this alternative would reduce or omit some of the design components within the river channel that contribute to the aesthetic benefits. These include features such as removal of concrete to return the channel to a naturalized condition, creation of places for people and habitat within the river channel, terraced banks or channel texturing/grooving/smoothing, and recreational and ecological uses (plantings, parks, wetland terraces) within the channel. Additionally, this alternative would not extend potential aesthetic

improvements to the larger geographic area (additional 1-mile buffer) that is covered by the proposed Project. Therefore, the aesthetic benefits may not be realized to the same degree with this alternative.

Similar to the proposed Project, views of project construction activities under this alternative, while temporary, could obstruct views of scenic resources. Additionally, adverse operational effects on scenic vistas from larger-scale and taller design components such as bridges could occur from obstructing scenic vistas from public views. However, this alternative would avoid potential impacts that may obstruct views from the introduction of new buildings into the landscape, such as museums, affordable housing, pavilions, cafés, etc.

New improvements associated with this alternative, like the proposed Project, could help to visually integrate the new uses and features with existing adjacent uses. However, temporary construction could introduce incompatible visual elements with the surrounding visual environment. As with the proposed Project, this alternative would be consistent with regulations that pertain to ensuring compatible uses for all development, ensuring high-quality design and architectural elements, avoiding out-of-scale development, and protecting existing residential neighborhoods from encroachment by incompatible uses.

Similarly, this alternative would not change the conclusions to light and glare relative to the proposed Project, as negligible changes to lighting would occur with this alternative.

Therefore, for the reasons discussed above, construction- and operations-related aesthetic impacts associated with Alternative A would be less than those analyzed and disclosed for the proposed Project due to excluding the introduction of new buildings into the landscape that could obstruct scenic views, such as museums, affordable housing, pavilions, cafés, etc. Consequently, this alternative would avoid or substantially reduce the significant impacts from the proposed Project, resulting in less-than-significant impacts on aesthetics.

5.4.1.2 Air Quality

Alternative A would result in similar air quality impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.2, *Air Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant pollutant emissions associated with construction activities, as well as long-term operations. This alternative would reduce or eliminate emissions associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar emissions from construction and operations activities.

Similar to the proposed Project, this alternative would not result in unplanned population growth in the County and would therefore be consistent with the region's Air Quality Management Plan. Construction of this alternative would generate similar air pollutant emissions as the proposed Project from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating activities would release volatile organic compounds from off-gassing. Similar to the proposed Project, regional and localized emissions associated with this alternative would potentially exceed significance thresholds. Similarly, operation-related emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions

associated with landscaping would potentially exceed South Coast Air Quality Management District (SCAQMD) regional or localized thresholds. Instances where diesel particulate matter emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds could occur during construction and operation of the proposed Project. Impacts for this alternative would be similar.

While not explicit, it is possible that the 1996 Master Plan could allow for facilities to support equestrian users in portions of the project area. Therefore, impacts from potential odors associated with equestrian facilities under the proposed Project would be similar under this alternative and could be potentially significant without mitigation measures.

Therefore, for the reasons discussed above, construction- and operations-related air quality impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would be significant.

5.4.1.3 Biological Resources

Alternative A would avoid or reduce impacts on biological resources compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.3, *Biological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant impacts on biological resources from construction and operations, but these would be reduced to less-than-significant levels with mitigation measures. This alternative would reduce or eliminate some of the direct and indirect biological impacts related to construction or operations of in-channel improvements associated with the proposed Project, such as those aligned with KOP Categories 2, 4, and 5, because disturbance to the channel under the 1996 Master Plan would be limited to the construction of bridges.

Similar to the proposed Project, this alternative could result in substantial adverse effects on candidate, sensitive, or special-status species of plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds from construction as a result of direct removal of plant species, natural communities, and wildlife habitats. Indirect construction impacts could also occur, such as dust, erosion, chemical spills, trash and debris, and introduction and spread of invasive species. Operations impacts would occur due to maintenance activities, and use by humans and domestic animals, which would include walking, biking, and equestrian uses.

However, these impacts would be reduced, and in some cases eliminated, particularly where in-channel improvements would no longer occur in soft-bottom portions of the river channel. As described under the proposed Project, impacts on special-status plants due to the construction of in-channel improvements may be more intense than other improvements associated with the *2020 LA River Master Plan* because many of the in-channel modifications may be more invasive in nature during construction compared to activities outside of the channel. Therefore, because this alternative does not include in-channel design components, impacts on in-channel plants, invertebrates, fish, mammals, amphibians, and birds would be particularly reduced.

Conversely, omitting some of the in-channel design components, such as flood management functions, deployment of barriers, and maintenance of terraced of banks, planting trays, and dams, could reduce the beneficial aspects of the proposed Project. For instance, this alternative would reduce the opportunities for management of invasive species, maintenance and planting of vegetated areas within the channel, and provision of space for native vegetation communities and habitat for wildlife. Additionally, this alternative would not involve the potential removal of concrete

to allow for the beneficial establishment of riparian vegetation and a higher diversity of plants and animals such as under the proposed Project.

As described for the proposed Project, riparian habitats and other sensitive natural communities are present within Frames 1, 2, and 6 through 9 of the study area. Permanent and temporary direct and indirect impacts could occur on these sensitive natural communities under this alternative, similar to the proposed Project. Temporary direct impacts could include incidental disturbances within and adjacent to construction areas and clearing and grubbing for equipment staging and temporary construction access routes. Sensitive natural communities that are currently present within the top of levee and/or landside portion of the LA River ROW and could be potentially directly affected by construction. Temporary indirect impacts on riparian habitat, essential fish habitat, Habitat Areas of Particular Concern, or other sensitive natural communities adjacent to the project areas may be caused by construction activities (e.g., soil compaction, introduction of invasive species, dust, increased fire risk, chemical spills, sedimentation), which could lead to the degradation of native habitats and floodplains. Operational impacts like recreation, maintenance, fertilizer runoff, pet droppings, and increased trash would continue to occur under this alternative, which could degrade riparian habitat and other sensitive natural communities in the LA River ROW. Areas within the channel could experience impacts of a lesser degree or may even avoid them (e.g., if a later activity under this alternative is sited far from the channel) under this alternative as compared to the proposed Project because there is limited disturbance within the channel.

While this alternative could also result in direct impacts on wetlands or other potential jurisdictional aquatic resources, similar to the proposed Project, the avoidance of in-channel design components under this alternative may reduce direct impacts on wetlands and aquatic resources. However, direct impacts could still occur throughout the planning area through permanent and temporary construction activities if areas that are temporarily disturbed are not successfully restored, resulting in a diminished level of biological functions and values. These effects could be both short and long term in nature during the course of construction in or near these features. Permanent and temporary disturbances from construction activities could also result in indirect impacts on wetlands and/or potentially jurisdictional aquatic resources present in the area surrounding the project site from the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrological conditions. Any wetlands and/or potentially jurisdictional aquatic resources could be affected by operation and maintenance activities, such as vegetation removal and trimming and facility repairs, as well as public activity that results in litter, pet droppings, and introduction of invasive species.

Conversely, some of the design components associated with the proposed Project that could potentially have beneficial permanent direct effects on wetlands and/or potentially jurisdictional aquatic resources would not occur under Alternative A. These include the planting of riparian and wetland habitats, improvements to hydrology or channel substrate, enhancement of existing conditions, and creation of additional or improved wetlands or jurisdictional aquatic resources within the study area.

Eliminating the in-channel design components under this alternative would reduce permanent impacts from construction and operations activities such as loss of existing vegetation and habitats, habitat fragmentation, and obstructed movement ability due to constructed barriers (e.g. dams and levees), and loss of nursery habitat. As described under the proposed Project, without mitigation, the construction of in-channel design components could result in potentially significant impacts associated with the permanent and temporary loss of habitats and nursery sites, imposed habitat

fragmentation, and disruption and/or obstruction of connectivity. Operation of some of these design components were found to potentially have deleterious effects on fish and wildlife connectivity and reproduction such as loss of habitat and habitat access due to potentially obstructive check dams and deployable barriers, levees, armored channels/vertical walls, added concrete, and bridge pier modifications.

Furthermore, some of the design components under the proposed Project that could potentially have permanent beneficial effects for wildlife connectivity and nursery sites would not occur under this alternative. These features include naturalized side channels, habitat restoration, additional riparian and wetland habitats, small planting trays, parks, wildlife ramps, daylighted storm drains, and removed concrete. Overall, this alternative may result in fewer impacts on nursery sites and wildlife movement corridors.

Similar to the proposed Project, this alternative could conflict with local tree policies and ordinances under the County Tree Ordinance and city jurisdictions. Proposed activities may be located in areas that contain protected trees, including riparian habitats, as well as urban areas. These impacts may be slightly reduced by eliminating in-channel tree removal and/or trimming.

Similar to the proposed Project, this alternative would not be subject to any habitat conservation plans (HCPs), Natural Community Conservation Plans, or other approved local, regional, or State HCPs. Therefore, impacts would be the same as those of the proposed Project.

Consequently, for the reasons discussed above, construction-related biological impacts associated with Alternative A would be less than those analyzed and disclosed for the proposed Project, but potential operational benefits and achievement of project objectives would not be realized to the same extent with this alternative.

5.4.1.4 Cultural Resources

Alternative A would result in similar impacts on cultural resources compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.4, *Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on cultural resources from construction and operations. This alternative would reduce or eliminate impacts on cultural resources that may be within the LA River channel associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5, because channel disturbance is limited to bridge projects. Additionally, because of the smaller study buffer (0.5 mile instead of 1.0 mile) from the river, this alternative could result in less impacts on cultural resources. However, overall impacts would remain significant and unavoidable.

Similar to the proposed Project, construction activities from this alternative, such as the use of backhoes, trucks, hand-held power equipment, generators, and other equipment, could result in an adverse change to significant historical and archaeological resources. New construction has the potential to cause ground disturbance, demolish historical/archaeological resources, alter character-defining features of historical/archaeological resources, and/or make changes to the setting of historical/archaeological resources. These factors may result in an adverse change to the significance of a historical or archaeological resource. Additionally, operations of the various projects that could occur under this alternative could include such impacts as ground disturbance and changes to the setting, as well as alteration or demolition of historical or archaeological resources. Operations impacts on archaeological resources could also include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and

increased potential for looting. These activities could result in the exposure, disturbance, removal, and/or potential destruction through damage or removal of existing resources and previously unrecorded archaeological resources. Such activities have the potential to cause substantial adverse change in the significance of historical/archaeological resources including damage to historical/ archaeological resources from increased foot traffic, which could affect the integrity of material.

This alternative could also result in disturbance of human remains from both construction and operations. Site disturbance, movement of construction equipment, construction staging areas, and import and export of materials all could disturb human remains, resulting in significant impacts. Increased human activity, landscape use, and channel erosion could also result in potentially significant impacts on human remains through exposure and removal from unanticipated disturbance and increased looting potential due to increased use, and could otherwise negatively affect the integrity of the resource.

While this alternative has the potential to avoid potential impacts on resources within the channel, overall the same types of impacts could occur throughout the study area as under the proposed Project. Therefore, for the reasons discussed above, construction- and operations-related cultural resources impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.5 Energy

Alternative A would result in similar energy impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.5, *Energy*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on energy from construction and operations. This alternative would reduce or eliminate impacts on energy from construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. Additionally, energy demands associated with building operations, such as museums, affordable housing, pavilions, cafés, etc. as part of the proposed Project, would not occur under this alternative. However, energy demands and consumption from other construction and operations activities that would occur in place of the in-channel improvements would result in similar effects.

Similar to the proposed Project, construction and operations of this alternative would require energy and fuels. Construction activities primarily involve onsite energy demand and consumption related to the use of transportation fuels (i.e., diesel and gasoline) for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources. Trucks and equipment used during proposed construction activities would also be required to comply with the California Air Resources Board's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Aside from reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Anti-idling regulations would limit the amount of fuel wasted in equipment and trucks that are not in operation. Emissions regulations to control pollutant and toxic air contaminant emissions would also require that engines be more efficient, which results in reduced fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. As such, construction activities would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts. Furthermore, as discussed in Section 3.7, *Greenhouse Gas Emissions*, the construction industry is moving toward cleaner fuels and

electrified equipment, which would result in fewer pollutant emissions, and the technology would provide greater efficiencies in the equipment's energy consumption over time.

Operations for this alternative would require energy for the conveyance of water for irrigation; electricity and natural gas for lighting, cooling, and appliances; and gasoline for landscaping equipment and mobile vehicle trips. Each project under this alternative would be required to minimally comply with California Title 24 standards and the CALGreen Code for energy efficiency. In addition, new construction may implement other building energy best practices. This alternative, like the proposed Project, would also likely incorporate water, environmental, and construction best practices, and would use efficient light sources and solar-power fixtures along the river wherever possible. Furthermore, because this alternative, like the proposed Project, aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, non-vehicular modes of travel would reduce the consumption of fuel from passenger vehicles.

Therefore, for the reasons discussed above, construction- and operations-related energy impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.6 Geology, Soils, and Paleontological Resources

Alternative A would result in similar geology and soils impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.6, *Geology, Soils, and Paleontological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on geology, soils, and paleontological resources from construction and operations. This alternative would reduce or eliminate impacts on geology and soils associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. For instance, geologic hazards and erosion potential that may affect in-channel design components would not occur from construction or operation of this alternative. This alternative would also not include buildings and structures, such as museums, affordable housing, pavilions, cafés, etc. that would be exposed to geology and soils hazards. Furthermore, impacts on potential paleontological resources that may occur from construction and operations within the channel from the proposed Project would not occur as a result of this alternative. However, geology and soils impacts from other construction and operations activities that would occur in place of the in-channel improvements would result in similar effects overall.

Similar to the proposed Project, construction activities would be considered too shallow and small scale to cause or exacerbate significant geologic phenomena such as fault rupture, seismic ground shaking, or liquefaction. However, because the LA River is in a seismically active area due to the various active and potentially active faults in the region, seismic events from one or more of these regional active or potentially active faults could result in strong ground shaking in the LA River area, thereby affecting some project features. Such strong seismic shaking could also result in landslides where landslide-prone areas exist along the LA River as discussed in Section 3.6, *Geology, Soils, and Paleontological Resources*. Construction and operations of this alternative would require evaluation if they occur in geologic hazard zones areas. Additionally, all individual design components would be required to adhere to all building code and permitting requirements and, if deemed necessary, undergo geotechnical investigations. This would reduce potential impacts associated with geologic hazards to less-than-significant levels for short-term (construction) and long-term activities (i.e., operations) associated with this alternative.

Operations impacts from this alternative would also be similar to those of the proposed Project. As this alternative would attract a similar number of visitors as the proposed Project, this alternative could also expose visitors to strong seismic shaking, fault rupture, and secondary seismic phenomena such as liquefaction and landslides. However, as mentioned above, any development occurring in fault, liquefaction, and landslide zones would require evaluation and countermeasures implemented in design and construction. All individual project features would be implemented following proper engineering methods and building code requirements. Operations activities would not cause or exacerbate major geological phenomena such as strong seismic shaking or fault rupture, or any secondary phenomena such as liquefaction or landslides.

Similar to the proposed Project, this alternative would require obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) Statewide Construction General Permit, minimizing the amount of erosion during construction. Erosion management would be implemented during construction and after construction is complete to reduce potential impacts associated with erosion to less-than-significant levels for short-term (construction) and long-term activities (operations).

As with the proposed Project, this alternative would not involve septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

Impacts on paleontological resources for this alternative would be similar to those identified for the proposed Project. Construction would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in an adverse effect on significant paleontological resources. Potential impacts from operation of the components of this alternative could result in significant impacts on sensitive geologic deposits with the potential for containing undiscovered significant paleontological resources, which include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for disturbance.

While potential resources within the channel could be avoided, similar impacts could occur anywhere within the study area. Therefore, for the reasons discussed above, construction- and operations-related geology and soils impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.7 Greenhouse Gas Emissions

Alternative A would result in similar GHG emissions impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.7, *Greenhouse Gas Emissions*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts from GHGs from construction and operations. This alternative would reduce or eliminate emissions associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar GHG emissions from construction and operations activities.

Similar to the proposed Project, construction of this alternative would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. GHG emissions are measured exclusively as cumulative impacts; therefore, construction emissions are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. Operation of this

alternative would involve GHG emissions from multiple sources, including energy, mobile, area, water, wastewater, and waste. Because details about the construction and operation scenario are unknown, GHG emissions were not quantified for the proposed Project; however, it was determined that GHG emissions could potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with this alternative are also considered to result in significant impacts.

As with the proposed Project, this alternative would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limiting land use emissions. While this alternative does not involve buildings such as museums, affordable housing, pavilions, cafés, etc. like the proposed Project, landscaping equipment would be gasoline powered, which is inconsistent with the California Governor's Office of Planning and Research (2018a) guidance. In addition, daily vehicle trips would be expected to exceed the California Governor's Office of Planning and Research (2018b) daily trip screening threshold. Consequently, while emissions from the land use sector would generally be consistent with the 2017 Scoping Plan, emissions from the energy, mobile, area, water, and waste sectors would be potentially inconsistent with the 2017 Scoping Plan and applicable regulatory programs.

As discussed in Section 3.16, *Transportation*, portions of the proposed Project (such as the terraced banks and amphitheater design components) were determined to have the potential to generate a significant impact related to vehicle miles traveled (VMT). Therefore, the proposed Project was found to affect the State's ability to meet its mobile-source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. While this alternative has less-intensive design components than the proposed Project, the GHG emissions from non-mobile sectors and other components could continue to be significant and potentially conflict with applicable sector-specific reduction targets and strategies.

Operations of this alternative, like the proposed Project, would be potentially inconsistent with the 2008 Scoping Plan and First Update, Senate Bill 32, Executive Order S-3-05, 2020 Climate Change Action Plan, updated County Climate Action Plan, and OurCounty Sustainability Plan due to the reasons described above. Therefore, construction and operation of this alternative would potentially conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Therefore, for the reasons discussed above, construction- and operations-related GHG emissions impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.8 Hazards and Hazardous Materials

Alternative A would result in similar hazards and hazardous materials impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.8, *Hazards and Hazardous Materials*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts from hazards and hazardous materials from construction and operations. This alternative would reduce or eliminate hazards associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 and larger structures, such as museums, affordable housing, pavilions, cafés, etc. under the proposed Project. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar exposure to hazards and hazardous materials from construction and operations activities.

Similar to the proposed Project, this alternative is not expected to result in a significant risk associated with routine transport, use, and disposal of hazardous materials. Required compliance with applicable regulations and adherence to the requirements of the Construction General Permit would minimize potential impacts. Additionally, none of the projects to be included under this alternative are expected to result in a significant risk associated with potential upset and accident conditions, nor would they be expected to result in a significant risk associated with hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Furthermore, as discussed in Section 3.8, *Hazards and Hazardous Materials*, for the proposed Project, none of the projects to be included under the *2020 LA River Master Plan* are expected to result in a significant risk associated with being constructed on or near a Cortese List site. Therefore, this alternative would also not result in such risks.

Like the proposed Project, this alternative would not place any individual projects within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the local airports such as Long Beach, Compton/Woodley, or Hollywood Burbank airports, and would therefore not result in any risks or hazardous conditions.

This alternative would not be expected to hinder or impair an adopted emergency response or evacuation plan or route. Similar to the proposed Project, this alternative would comply with existing standard industry practices such as traffic control and signage, adherence to County and local agency criteria (as necessary), and rules and regulations pertaining to emergency response that would provide and maintain adequate emergency access.

Finally, this alternative would not be expected to result in a significant risk of exposure to wildfires. Projects under this alternative that may be within high fire hazard areas would follow all applicable fire response and prevention requirements and applicable construction standards that ensure implementation of fire prevention features, including compliance with the regulations set forth in the California Fire Code and Occupational Safety and Health Administration Safety and Health Regulations for Construction during both project planning/design and construction.

Therefore, for the reasons discussed above, construction- and operations-related hazards and hazardous materials impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.9 Hydrology and Water Quality

Overall, Alternative A would result in fewer hydrology and water quality impacts when compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.9, *Hydrology and Water Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts with mitigation on hydrology and water quality from construction and operations. This alternative would reduce or avoid hydrology and water quality impacts associated with construction of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project, which are largely in-channel improvements related to channel modifications, diversions, and floodplain reclamation. However, the potential benefits that could be realized from operations of these project design components would also not occur with this alternative.

Similar to the proposed Project, this alternative could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport, generation of pollutants, or accidental spills that could temporarily contaminate runoff, surface water, or groundwater from construction activities. However, if potential projects require the Construction General Permit,

BMPs, as required in a Stormwater Pollution Prevention Plan, would be required during construction to reduce erosion and restrict non-stormwater discharges from the construction site as well as release of hazardous materials.

Like the proposed Project, the majority of the projects under this alternative are expected to be relatively small in size, with negligible changes in impervious surface areas, compared to existing conditions. Therefore, runoff rates and volumes would be similar to existing conditions and would continue to infiltrate into the ground, filtering potential contaminants and minimizing the discharge of pollution and adverse effects on groundwater quality. However, it should be noted that some of the multi-benefit design components associated with the proposed Project would not occur under this alternative where they may have been proposed within the channel, such as storm drain daylighting, diversion channels, sediment removal, or in-channel wetlands and natural treatment systems. Therefore, this alternative would not realize the same level of benefit as the proposed Project.

All projects would comply with the NPDES Construction General Permit, Municipal Separate Storm Sewer System Permits, and other local water quality and low-impact development (LID) requirements and stormwater ordinances. County-led, -funded, or -permitted projects would also comply with the Public Works LID Standards Manual, which provides guidance for the implementation of stormwater quality control measures and the recommended design methodology to manage stormwater in the County. Therefore, implementation of this alternative would be similar to the proposed Project and would not violate any water quality standards or degrade water quality.

Unlike the proposed Project, this alternative would not include a range of flood management functions or a number of water quality benefits, such as improved infiltration and natural filtration; treatment potential; daylighting storm drains; armored channels; hardened bottom or sides of a channel, embankments, or levees that would reduce scour and erosion; and check dams. This alternative, like the proposed Project, would include new impervious areas that could reduce infiltration capacity and increase the volume of runoff into storm drains or surface waters instead of allowing groundwater recharge. This alternative would not improve water and groundwater supply reliability to the same extent as the proposed Project, as design components such as in-channel groundwater recharge spreading grounds, channel modifications such as terracing the banks and providing small planting areas, underground galleries, concrete removal, wetlands, fields, and injection and dry wells would not be implemented. Therefore, omission of these project features as part of this alternative would not result in the same benefits as the proposed Project.

Similar to the proposed Project, projects under this alternative would need to comply with local jurisdictions' LID requirements and the current California Green Building Standards Code.

In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

This alternative would not include project features that address one of the objectives to reduce flood risk and improve resiliency. Many of the project features associated with maintaining existing flood conveyance capacity or improving capacity in deficient reaches would not occur under this alternative. Runoff rates and volumes are expected to increase compared to existing conditions due

to changes in impervious surface areas. While implementation of LID and BMPs would reduce runoff through increased infiltration and provide substantial water quality improvements through contaminant filtration and biological uptake, flood risk reduction benefits may not be realized to the same extent with this alternative without in-channel refurbishment.

Therefore, while this alternative would not realize the same level of operations-related benefit to long-term flood capacity and water quality as the proposed Project, this alternative would reduce construction-related impacts on hydrology and water quality because design components within the channel would be avoided. Impacts would remain less than significant for this alternative.

5.4.1.10 Land Use and Planning

This alternative would result in less land use and planning impacts compared to the proposed Project. As presented in Section 3.10, *Land Use and Planning*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on land use and planning from construction and operations. Similar to the proposed Project, this alternative would improve connectivity across the river, providing gateways and additional recreational uses and trails. These projects would reduce the effects of the physical barrier the LA River presents and would not further divide an established community; rather, this alternative, similar to the proposed Project, would result in a beneficial impact.

Notably, the proposed Project was found to result in significant construction and operations impacts with respect to division of an established community for design components associated with KOP Category 6. These off-channel design components were found to be considerably larger than the Typical Projects and other KOP category design components, entail greater levels of construction resulting in more extensive construction staging and environmental effects during construction, and potentially result in temporary or permanent road closures or other barriers to community facilities, which could physically divide a community if alternative connectivity is not provided. These types of projects, such as museums, affordable housing, pavilions, cafés, etc. that would occur under the proposed Project, would not occur under this alternative, which would reduce or avoid this impact associated with the proposed Project.

Similar to the proposed Project, this alternative would involve heavy equipment for construction and involve roadway closures, which could result in temporary incompatibility with adjacent uses or significant impacts associated with inconsistencies with applicable land use plans, policies, or regulations. Some projects could result in out-of-scale development inconsistent or incompatible with existing land uses, which would result in potentially significant construction impacts.

Operations of this alternative would provide beneficial recreational uses and result in increased access to the river and connectivity to adjacent neighborhoods. While some individual projects under this alternative could be within residential areas, these features would be consistent with land use and recreation policies that promote accessibility to trails and other open space. This alternative would therefore be compatible with residential neighborhoods, would not intrude into existing neighborhoods or be out of scale with existing development, and would provide additional recreational opportunities that would be available to the adjacent neighborhoods. The types of projects that would occur under this alternative would also not be expected to require additional land acquisition and would generally be consistent with applicable land use designations. No incompatibilities with adjacent land uses or inconsistencies with applicable land use plans, policies, and regulations adopted for the purpose of avoiding an environmental impact would result from operations with respect to land use.

While there may be some inconsistencies with individual policies of different jurisdictions, Alternative A, like the proposed Project, would be generally consistent with the overarching themes of these land use policies. This alternative would be designed to be consistent and compatible with adjacent land uses, provide more diversity in land uses, and provide greater access to the river from neighborhoods along the river, and would not encroach on existing residential neighborhoods. Any land use inconsistencies will have been addressed during the site selection process and there would be a less-than-significant impact during operation with regard to policy consistency.

Therefore, because the proposed Project was found to result in significant construction and operations impacts with respect to division of an established community for design components associated with KOP Category 6, construction- and operations-related land use and planning impacts associated with Alternative A would be less than those analyzed and disclosed for the proposed Project and would be reduced to less-than-significant levels.

5.4.1.11 Mineral Resources

This alternative would result in similar impacts on mineral resources from construction and operations as the proposed Project. As presented in Section 3.11, *Mineral Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on mineral resources from construction and operations. Similar to the proposed Project, this alternative would not result in the loss of availability of a significant non-fuel mineral resource, and significant impacts on non-fuel mineral resources would not occur with mitigation. While some portions of the study area are in areas identified as Mineral Resource Zone (MRZ)-2, the majority of the project area is urbanized and unlikely to allow for extraction activities. Consequently, the likelihood of this alternative resulting in the loss of non-fuel mineral resources classified MRZ-2 is minimal. However, because construction and operation could occur where geologic data indicate that significant measured or indicated resources are present, a significant impact could occur.

Like the proposed Project, the majority of the project area under this alternative does not contain regionally or statewide significant fuel mineral resources. However, some areas within or near the project study area contain oil fields with active wells. The *Los Angeles County General Plan* and local general plans require maintained access to mineral deposits for extraction and preservation of mineral resources. Compliance with the County Building Code, which does not allow development to be constructed adjacent to or within 300 feet of active, abandoned, or idle oil or gas well(s), would minimize impacts. However, because the exact locations of project sites are unknown at this time, mitigation is required to ensure impacts are less than significant.

Therefore, for the reasons discussed above, construction- and operations-related mineral resource impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.12 Noise

Alternative A would result in similar noise impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.12, *Noise*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on noise from construction and operations. This alternative would reduce or eliminate noise and vibration associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project. However, this alternative involves construction and operation of a similar

number of total projects as the proposed Project, thereby resulting in similar overall noise impacts from construction and operations activities.

Similar to the proposed Project, projects under this alternative would comply with jurisdictional requirements for both construction and operations incumbent within the municipal codes, general plans, and planning documents as they relate to noise. However, with the uncertainty as to the location and extent of projects associated with this alternative, it is possible that impacts cannot be reduced to less-than-significant levels.

Like the proposed Project, vibration impacts from this alternative would be potentially significant. As with the proposed Project, construction and operations details are unknown so vibration has not been quantified. However, individual projects would comply with jurisdictional thresholds and requirements incumbent within the municipal codes, general plans, and planning documents as they relate to vibration. Nevertheless, the vibrational impacts considered together could potentially result in significant impacts by exceeding thresholds established by the jurisdictions.

This alternative would not involve projects that are within an airport land use plan or within 2 miles of an airport. Therefore, impacts from the implementation of this alternative would not result in significant noise impacts from airport facilities.

Therefore, for the reasons discussed above, construction- and operations-related noise impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.13 Population and Housing

Alternative A would result in similar impacts on population and housing as the proposed *2020 LA River Master Plan*. As presented in Section 3.13, *Population and Housing*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on population and housing from construction and operations.

Similar to the proposed Project, construction of this alternative would not result in a substantial population increase. The temporary and specialized nature of construction work, as well as the large available construction workforce in the Los Angeles region, would not lead to a substantial population increase. Operations of this alternative would also result in similar conclusions regarding population increase, as the projects are intended to provide recreational and ecological uses and to serve the local community without substantially increase population growth.

While projects associated with implementation of this alternative could include displacement of individuals or families experiencing homelessness, local jurisdictions would relocate individuals and families experiencing homelessness and encampments would be removed prior to construction activities. These activities would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. This alternative would not include affordable housing like the proposed Project.

Therefore, for the reasons discussed above, construction- and operations-related population and housing impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.14 Public Services

Alternative A would result in similar impacts on public services as the proposed *2020 LA River Master Plan*. As presented in Section 3.14, *Public Services*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on public services from construction and operations.

Similar to the proposed Project, this alternative may result in localized road closures and detours that could increase response times for emergency services. Even with mitigation, because the size, extent, and location of the projects are unknown, impacts would be potentially significant for police and fire services. Similarly for operations, this alternative would result in comparable increases in the number of visitors, which could increase the number of incidents requiring police response. These demands could affect police provider service ratios and response times and result in a need for additional law enforcement staff. Like the proposed Project, this alternative is not expected to result in a significant increase in the use of and demand for other park facilities, or in a significant increase in population that would substantially increase school enrollment or library service.

Therefore, for the reasons discussed above, construction- and operations-related impacts on public services associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.15 Recreation

Alternative A would result in similar impacts on recreation as the proposed *2020 LA River Master Plan*. As presented in Section 3.15, *Recreation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on recreation from construction and operations. This alternative would reduce or eliminate recreation impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves a similar number of total projects as the proposed Project, thereby resulting in similar overall recreation impacts from construction and operations activities. Conversely, some of the beneficial effects offered from KOP Categories 2, 4, and 5 design components as part of the proposed Project would not occur under this alternative.

Similar to the proposed Project, construction of this alternative could result in an increased use of nearby existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River and existing recreational facilities is disrupted. Dependent on the location and project proponent, staging areas could be located on local jurisdiction properties and the staging areas could be large in size, depending on the extent and nature of projects and the equipment involved. Additionally, the future projects could have substantially long construction durations with intensive construction activities, thereby causing disruption of access and use, and potentially leading to longer temporary closures, of existing recreational facilities. Temporary closures of existing recreational facilities could occur during construction and recreational facilities near a construction site may experience noise, dust, diminished access, and other nuisance impacts during construction. This could result in an increased use of existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River Trail is disrupted. Therefore, construction activities under this alternative could increase the use of nearby existing neighborhood and regional parks or other recreational facilities for an extended period such that substantial physical deterioration of the facility would occur or be accelerated.

Like the proposed Project, operation of this alternative would implement multi-benefit projects that would serve a range of functions and uses, which would increase the amount of recreational resources available in the study area. Therefore, operation of this alternative would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur. However, elimination of improvements such as those aligned with KOP Categories 2, 4, and 5 would not realize the same recreational benefits as the proposed Project. For instance, the range of functions, such as flood management, recreational, and ecological uses such as amphitheaters, small planting trays, parks, wildlife ramps, and wetland terraces, would not occur under this alternative. While these features would not attract a large number of users, the omission of these design components would not have a meaningful effect on the increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur. Therefore, impacts would be similar to those of the proposed Project.

Like the proposed Project, construction and operations activities under this alternative could have impacts on various environmental resources such as biological resources, cultural resources, and hydrology and water quality. The impact discussions for the respective resources above demonstrate that construction and operation of recreational resources under this alternative could have an adverse physical effect on the environment.

Therefore, for the reasons discussed above, construction- and operations-related impacts on recreation associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.16 Transportation

Alternative A would result in similar impacts on transportation as the proposed *2020 LA River Master Plan*. As presented in Section 3.16, *Transportation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on transportation/traffic from operations. This alternative would reduce or eliminate transportation/ traffic impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall transportation/traffic impacts from construction and operations activities.

Similar to the proposed Project, traffic and circulation impacts from this alternative are not expected to be of a magnitude such that they would result in a conflict with any programs, plans, or policies addressing the circulation system, or transit, roadway, bicycle, or pedestrian facilities. However, some design components could involve intermittent lane and sidewalk closures during construction, which could impede vehicle, pedestrian, equestrian, and bicycle circulation. Therefore, construction impacts would be potentially significant without mitigation.

This alternative, like the proposed Project, would provide expanded bicycle, pedestrian, and micro-mobility user networks, expansion of access to open spaces, and improved regional and local transit connectivity. This alternative would allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Increasing the active transportation mode share and the ability to replace long-distance vehicle commute trips with an active transportation trip will reduce VMT, consistent with State and regional policy initiatives, including Senate Bill 743 and the Southern California Association of Governments' (SCAG's) Regional Transportation Plan (RTP). It is also

consistent with RTP Goal 6, which seeks to protect the environment and health of SCAG region residents by improving air quality and encouraging active transportation.

This alternative would also support the vision for the County's 2012 *Bicycle Master Plan* to encourage and make bicycling more comfortable with design components that cater to cyclists. The proposed 51-mile continuous off-street path for active transportation trips would also provide a safe corridor for active transportation trips free of risk from injury or death by collision with a motor vehicle.

Implementation of this alternative would still allow the County to achieve many of the goals and policies from the *Los Angeles County General Plan* Mobility Element. Similarly, implementation of this alternative would be consistent with active transportation-related goals, policies, and actions of the other jurisdictions through which the river flows. As such, this alternative would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Like the proposed Project, construction of this alternative may result in short-term increases in VMT. Per County Guidelines, construction impacts related to increases in VMT, if they occur, are not considered significant under CEQA and are therefore considered to be less than significant. Operation of this alternative would result in potentially significant increases in VMT, similar to the proposed Project. Each individual project's potential to result in a significant transportation impact will need to be evaluated by the project proponent when the project's exact location, configuration, and scale are known, and cannot be determined based on the current level of project specificity.

Construction of this alternative may result in short-term roadway effects, for example localized increases in delay and traffic queuing that stems from lane closures, which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and at adjacent land uses (e.g., due to driveways affected by lane closures). Similar to the proposed Project, mitigation would reduce the effects of this impact.

Operations impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications may include safety, operational, or capacity impacts. River access points would be placed approximately every half mile, but specific locations are unknown at this time. It is also unknown whether any existing geometric design hazards would need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries under this alternative. However, all access points would be required to be designed according to criteria of the County, including the Trails Manual adopted in 2011, and, where applicable, of the local agency in which they are located. Furthermore, alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with approval of the County or the relevant local agency. Given the access point design standards and emergency vehicle access requirements, implementation of this alternative would not substantially increase hazards or conflicts or result in inadequate emergency access. Furthermore, implementation of this alternative would remediate or improve existing substandard conditions and would therefore contribute to overall safety improvements along the entire river corridor.

Consequently, for the reasons discussed above, construction- and operations-related transportation/traffic impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.17 Tribal Cultural Resources

Alternative A would result in similar impacts on TCRs as the proposed *2020 LA River Master Plan*. As presented in Section 3.17, *Tribal Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on TCRs from construction and operations. This alternative would reduce or eliminate TCR impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall TCR impacts from construction and operations activities.

Similar to the proposed Project, this alternative could result in significant impacts on TCRs through proposed ground disturbance, which could include site clearing and excavation that may result in significant impacts with adverse effects on surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be TCRs. Impacts on TCRs could also be indirect and would include potential significant changes to the setting or viewshed of a TCR, which could include construction of new structures, recreational facilities, and design components that could indirectly affect the integrity of the resource. Operational elements, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users in new facilities near a potentially significant TCR could directly affect TCRs, either through unanticipated destruction of *in situ* TCRs or destruction or removal from looting, or otherwise negatively affect the integrity of the resource.

Therefore, for the reasons discussed above, construction- and operations-related TCR impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.18 Utilities/Service Systems

Alternative A would result in similar impacts on utilities/service systems as compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.18, *Utilities/Service Systems*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on utilities/service systems from operations. This alternative would reduce or eliminate utilities/service systems impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall utilities/service systems impacts from construction and operations activities.

Similar to the proposed Project, this alternative could require the expansion or construction of new facilities from insufficiencies in utilities, which could, in turn, result in significant environmental impacts. Additionally, water shortages could occur where demand would exceed supply and insufficiencies in wastewater capacity could occur from larger project components, also leading to potentially significant environmental impacts from the expansion or construction of new water and wastewater infrastructure.

Unlike the proposed Project, this alternative would not realize the same benefits to water supply from the implementation of diversion projects that could improve local water supply reliability. These projects that would capture and treat flows before they reach the river were found to help expand water supply opportunities in the watershed and along the river corridor, and would also

improve water quality. This diverted water was also intended to be used to enhance habitat, support recreation, or supply water for municipal and industrial uses. Similarly, floodplain reclamation, such as recreation fields and other recreational uses, were found to potentially contribute to groundwater recharge. Therefore, fewer benefits would occur under this alternative.

Solid waste is not expected to be generated in excess of State or local standards or the capacity of local infrastructure, and waste-reduction techniques would be incorporated to include reuse and diversion of materials in the waste stream from landfill disposal during both construction and operations. Therefore, this alternative would not impair the attainment of solid waste reduction goals.

Therefore, for the reasons discussed above, construction- and operations-related utilities/service systems impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.19 Wildfire Hazards

Alternative A would result in similar impacts on wildfire as the proposed *2020 LA River Master Plan*. As presented in Section 3.19, *Wildfire*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on wildfire from construction and operations. This alternative would reduce or eliminate wildfire impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall wildfire impacts from construction and operations activities.

Similar to the proposed Project, this alternative has a potential to result in a significant impact related to impairment of an adopted emergency response plan or emergency evacuation plan due to construction staging, temporary lane closures, and construction-related traffic delays or obstructions. However, new development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants. Therefore, operations would not be expected to impair emergency access.

This alternative also has the potential to involve construction in areas designated as Very High Fire Hazard Severity Zones (FHSZs), which could exacerbate wildfire risks from construction equipment and introduction of potential ignition sources. Wildfire management guidelines and fuel modification plans would need to be adhered to during construction activities in vulnerable areas. Similarly, operations could introduce additional visitors and staff to areas within Very High FHSZ designations, which could expose additional people to hazardous conditions. The addition of more people and structures to an area designated a Very High FHSZ could exacerbate existing wildfire risks by increasing the possibility of human-caused wildfires.

Like the proposed Project, this alternative may involve installation or maintenance of infrastructure that could exacerbate fire risk, such as structural hardening, water supply and flow, hydrant and standpipe spacing, signage, fire department access, and overhead or underground electric utilities. Operations of project features under this alternative within or adjacent to Very High FHSZs would require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other significant impacts on the environment.

Finally, this alternative would involve construction adjacent to or in Very High FHSZs as well as areas prone to flood, landslide, or slope instability and would have the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change. The operation of new facilities within these areas could introduce visitors, staff, and structures into an area highly susceptible to landslides or slope instability after a wildfire event, thereby exacerbating the existing risk of post-fire hazard by exposing additional people to this existing hazard.

Therefore, for the reasons discussed above, construction- and operations-related wildfire impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2 Environmental Evaluation of Alternative B

5.4.2.1 Aesthetics

Alternative B would result in similar aesthetic impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.1, *Aesthetics*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would improve visual quality across and along the river, providing amenities and additional recreational uses and trails. These features would contribute to enhanced viewing opportunities for users to experience the vistas, result in increased scenic quality, and be consistent with zoning or design regulations governing scenic quality. However, Alternative B, like the proposed Project, could result in significant and unavoidable impacts from implementation of KOP Category 6, which includes design components that could be multiple stories high or involve large massing, which could obstruct or block scenic vistas and views.

This alternative would reduce or omit some of the components associated with KOP Category 2 that contribute to the aesthetic benefits. These include features such as removal of concrete to return the channel to a naturalized condition, creation of places for people and habitat within the river channel, terraced banks or channel texturing/grooving/smoothing, and recreational and ecological uses (plantings, parks, wetland terraces) within the channel. While the aesthetic benefits may not be realized to the same degree with this alternative, Alternative B would generally help improve the visual and aesthetic condition within the *2020 LA River Master Plan* area.

More specifically, this alternative would not add or omit project features that would alter the proposed Project's impact conclusions related to aesthetics. For instance, views of construction activities under this alternative, while temporary, could obstruct views of scenic resources. Additionally, adverse operational effects on scenic vistas from larger-scale and taller design components (such as the design components included under KOP Category 6) could occur from obstructing scenic vistas from public views. The Design Guidelines would help visually integrate the new uses and features with existing adjacent uses. However, temporary construction could introduce incompatible visual elements with the surrounding visual environment. Like the proposed Project, implementation of Mitigation Measures AES-1, LU-1, REC-1, and AES-2 would be required for this alternative. Even with implementation of mitigation measures, scenic vista impacts would still remain significant and unavoidable.

As with the proposed Project, this alternative would not involve longer-term operational effects and would be consistent with regulations that pertain to ensuring compatible uses for all development, ensuring high-quality design and architectural elements, avoiding out-of-scale development, and protecting existing residential neighborhoods from encroachment by incompatible uses. Like the

proposed Project, implementation of Mitigation Measures AES-1, LU-1, and REC-1 would reduce these impacts on visual character or quality from this alternative to less-than-significant levels.

Similarly, this alternative would not change the conclusions to light and glare relative to the proposed Project, as no changes to lighting would occur with this alternative. Like the proposed Project, implementation of Mitigation Measures AES-3a and AES-3b would reduce the light and glare impacts from this alternative to less-than-significant levels.

Therefore, for the reasons discussed above, aesthetic impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project because this alternative would introduce new buildings into the landscape that could obstruct scenic views, such as museums, affordable housing, pavilions, cafés, etc. Consequently, like the proposed Project, this alternative would result in significant and unavoidable impacts with the implementation of mitigation measures.

5.4.2.2 Air Quality

Alternative B would result in similar air quality impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.2, *Air Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant pollutant emissions associated with construction activities, as well as long-term operations.

This alternative would reduce or eliminate emissions from construction or operations of improvements associated with the proposed Project that occur within the LA River channel. For instance, emissions related to construction or operation of KOP Category 2 would not occur, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/ smoothing, and installation of access ramps. However, emissions from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative would not result in unplanned population growth in the County and would therefore be consistent with the region's Air Quality Management Plan.

Construction of this alternative would generate similar air pollutant emissions as the proposed Project from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating activities would release volatile organic compounds from off-gassing. Similar to the proposed Project, regional and localized emissions associated with Alternative B (KOP Categories 1 and 3 through 6) would potentially exceed significance thresholds. Similarly, operation-related emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions associated with landscaping would potentially exceed SCAQMD regional or localized thresholds. Removing KOP Category 2 design components would not materially reduce the construction or operations emissions associated with this alternative. Instances where diesel particulate matter emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds could occur during construction and operation of this alternative. Like the proposed Project, implementation of Mitigation Measures AQ-1, GHG-2, AQ-2, GHG-1a, TRA-1B, AQ-3, and AQ-4 would be required for this alternative. Even with implementation of mitigation measures, impacts from an increase in criteria pollutants would remain significant and unavoidable.

Impacts from potential odors associated with equestrian facilities in KOP Category 1 would not change under this alternative and could be potentially significant without mitigation measures. Like the proposed Project, implementation of Mitigation Measure AQ-5 would be required for this alternative and would reduce significant impacts from odors to less-than-significant levels.

Therefore, for the reasons discussed above, air quality impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project. Consequently, like the proposed Project, this alternative would result in significant and unavoidable air quality impacts with the implementation of mitigation measures.

5.4.2.3 Biological Resources

Alternative B would avoid or reduce impacts on biological resources compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.3, *Biological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant impacts on biological resources from construction and operations activities, which would be reduced to less-than-significant levels with the incorporation of mitigation measures. This alternative would reduce or eliminate some of the direct and indirect biological impacts related to construction or operations of in-channel improvements associated with the proposed Project.

Similar to the proposed Project, this alternative would result in substantial adverse effects on candidate, sensitive, or special-status species of plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds from construction as a result of direct removal of plant species, natural communities, and wildlife habitats. Indirect construction impacts could also occur, such as dust, erosion, chemical spills, trash and debris, and introduction and spread of invasive species. Operations impacts would occur due to maintenance activities, and use by humans and domestic animals, which would include walking, biking, and equestrian uses. Like the proposed Project, implementation of Mitigation Measures BIO-1 through BIO-18 would be required for this alternative to reduce impacts on candidate, sensitive, or special-status species to less-than-significant levels.

However, because project sites and locations are not known for the proposed Project at this time, these impacts would be reduced, and in some cases eliminated, particularly where in-channel improvements would no longer potentially occur in soft-bottom portions of the river channel. As described under the proposed Project, impacts on special-status plants due to the construction of KOP Category 2 may be more intense than under the common elements because many of the in-channel modifications under KOP Category 2 may be more invasive in nature during construction compared to activities outside of the channel. Therefore, by eliminating KOP Category 2 under this alternative, impacts on in-channel plants, invertebrates, fish, mammals, amphibians, and birds would be particularly reduced. Impacts would remain less than significant with the implementation of the mitigation measures identified above.

Conversely, omitting some of the KOP Category 2 design components, such as flood management functions, deployment of barriers, and maintenance of terraced banks, planting trays, and dams, could reduce the beneficial aspects of the proposed Project. For instance, this alternative would reduce the opportunities for management of invasive species, maintenance and planting of vegetated areas within the channel, and provision of space for native vegetation communities and habitat for wildlife. Additionally, because this alternative does not include any in-channel disturbances or material changes, the potential for impacts to occur where soft bottom currently exists would be reduced. However, it would also not involve the potential removal of concrete or

other elements to allow for the beneficial establishment of riparian vegetation and a higher diversity of plants and animals as under the proposed Project.

As described for the proposed Project, riparian habitats and other sensitive natural communities are present within Frames 1, 2, and 6 through 9 of the study area. Permanent and temporary direct and indirect impacts could occur on these sensitive natural communities under this alternative. Temporary direct impacts could include incidental disturbances within and adjacent to construction areas and clearing and grubbing for equipment staging and temporary construction access routes. Sensitive natural communities that are currently present within the top of levee and/or landside portion of the LA River ROW and could be potentially directly affected by construction. Temporary indirect impacts on riparian habitat, essential fish habitat, Habitat Areas of Particular Concern, or other sensitive natural communities adjacent to the project areas may be caused by construction activities (e.g., soil compaction, introduction of invasive species, dust, increased fire risk, chemical spills, sedimentation), which could lead to the degradation of native habitats and floodplains. Like the proposed Project, implementation of Mitigation Measures BIO-20a and BIO-20b, as well as BIO-1, BIO-4, BIO-5, BIO-6, and BIO-9, would be required for this alternative to reduce impacts on riparian habitat and other sensitive natural communities to less-than-significant levels.

Operational impacts like recreation, maintenance, fertilizer runoff, pet droppings, and increased trash would continue to occur under this alternative, which could degrade riparian habitat and other sensitive natural communities in the LA River ROW. Like the proposed Project, implementation of Mitigation Measures BIO-9 and BIO-18 would be required for this alternative to reduce operations impacts on riparian habitat and sensitive natural communities to less-than-significant levels. Areas within the channel could experience impacts of a lesser degree or may even avoid them (e.g., if a later activity under this alternative is sited far from the channel) under this alternative as compared to the proposed Project.

While this alternative would also result in direct impacts on wetlands or other potential jurisdictional aquatic resources, by omitting in-channel design components, direct impacts on wetlands and aquatic resources would be reduced under this alternative, as many later activities described for KOP Category 2 depend on the presence of a water feature, wetland, or jurisdictional aquatic resource. However, direct impacts could occur through permanent and temporary construction activities if areas that are temporarily disturbed are not successfully restored, resulting in a diminished level of biological functions and values. These effects could be both short and long term in nature during the course of construction in or near these features. Permanent and temporary disturbances from construction activities could also result in indirect impacts on wetlands and/or potentially jurisdictional aquatic resources present in the area surrounding the project site from the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrological conditions. Like the proposed Project, implementation of Mitigation Measures BIO-1 and BIO-21a through e would be required for this alternative to reduce impacts on wetlands to less-than-significant levels.

Any wetlands and/or potentially jurisdictional aquatic resources could be affected by operation and maintenance activities, such as vegetation removal and trimming and facility repairs, as well as public activity that results in litter, pet droppings, and introduction of invasive species. Like the proposed Project, implementation of Mitigation Measures BIO-22a and b would be required for this alternative to reduce impacts on wetlands to less-than-significant levels.

Additionally, some of the design components under KOP Category 2 that could potentially have beneficial permanent direct effects on wetlands and/or potentially jurisdictional aquatic resources would not occur under Alternative B. These include the planting of riparian and wetland habitats, improvements to hydrology or channel substrate, enhancement of existing conditions, and creation of additional or improved wetlands or jurisdictional aquatic resources within the study area.

As described under the proposed Project, the construction of KOP Categories 2 and 4 could result in potentially significant impacts associated with the permanent and temporary loss of habitats and nursery sites, imposed habitat fragmentation, and disruption and/or obstruction of connectivity. Operation of some of the design components under KOP Category 2 could potentially have deleterious effects on fish and wildlife connectivity and reproduction such as loss of habitat and habitat access due to potentially obstructive check dams and deployable barriers, levees, armored channels/vertical walls, added concrete, and bridge pier modifications. Eliminating KOP Category 2 and other in-channel features under this alternative would reduce permanent impacts from construction and operations activities such as loss of existing vegetation and habitats, habitat fragmentation, obstructed movement ability due to constructed barriers (e.g., dams and levees), and loss of nursery habitat. However, like the proposed Project, implementation of Mitigation Measures BIO-9 through BIO-19, and BIO-23 would be required for this alternative to reduce impacts on migratory species, corridors, or nursery sites to less-than-significant levels for other areas and design components.

Conversely, some of the design components under KOP Category 2 that could potentially have permanent beneficial effects for wildlife connectivity and nursery sites would not occur under this alternative. These features include naturalized side channels, habitat restoration, additional riparian and wetland habitats, planting trays, parks, wildlife ramps, daylighted storm drains, and removed concrete. Overall, this alternative would result in lesser impacts on nursery sites and wildlife movement corridors.

Similar to the proposed Project, this alternative could conflict with local tree policies and ordinances under the County Tree Ordinance and city jurisdictions. Proposed activities may be located in areas that contain protected trees, including riparian habitats, as well as urban areas. These impacts may be slightly reduced by eliminating in-channel tree removal and/or trimming. However, like the proposed Project, implementation of Mitigation Measure BIO-24 would be required for this alternative to reduce impacts from conflicts with local policies protecting biological resources to less-than-significant levels for other areas and design components.

Similar to the proposed Project, this alternative would not be subject to any HCPs, Natural Community Conservation Plans, or other approved local, regional, or State HCPs. Therefore, impacts would be the same as those of the proposed Project.

Consequently, for the reasons discussed above, biological impacts associated with Alternative B would be less than those analyzed and disclosed for the proposed Project. Therefore, like the proposed Project, this alternative would result in less-than-significant impacts on biological resources.

5.4.2.4 Cultural Resources

Alternative B would result in similar cultural resources impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.4, *Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant impacts on cultural

resources from construction and operations. This alternative would reduce or eliminate impacts on cultural resources that may be within the LA River channel. For instance, in-channel resources would not be affected by construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, impacts on cultural resources from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects that would remain significant and unavoidable.

Similar to the proposed Project, construction activities from this alternative have the potential to cause ground disturbance, demolish historical resources, alter character-defining features of historical resources, and/or make changes to the setting of historical resources. These factors may result in an adverse change to the significance of a historical resource. Like the proposed Project, implementation of Mitigation Measures CR-1a, CR-1b, CR-2b, and CR-2c would be required for this alternative. Even with the implementation of these mitigation measures, construction impacts on historical resources would remain significant and unavoidable with this alternative.

Additionally, operations of the various projects that could occur under this alternative could include such impacts as damage to historical resources and increased foot traffic that could affect the integrity of material. Like the proposed Project, implementation of Mitigation Measures CR-3a, CR-3b, and CR-3c would be required for this alternative. Even with the implementation of these mitigation measures, operational impacts on historical resources would remain significant and unavoidable with this alternative.

Similar to the proposed Project, construction activities from this alternative, such as the use of backhoes, trucks, hand-held power equipment, generators, and other equipment, could result in an adverse change to significant archaeological resources. New construction has the potential to cause ground disturbance, demolish archaeological resources, alter character-defining features of archaeological resources, and/or make changes to the setting of archaeological resources. Like the proposed Project, implementation of Mitigation Measures CR-1a and b, CR-4a, CR-4b, CR-4c, and CR-5 would be required for this alternative. Even with the implementation of these mitigation measures, construction impacts on archaeological resources would remain significant and unavoidable with this alternative.

Operations impacts on archaeological resources could also include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for looting. These activities could result in the exposure, disturbance, removal, and/or potential destruction through damage or removal of existing resources and previously unrecorded archaeological resources. Like the proposed Project, implementation of Mitigation Measures CR-6 and CR-5 would be required for this alternative. Even with the implementation of these mitigation measures, operational impacts on archaeological resources would remain significant and unavoidable with this alternative.

This alternative could also result in disturbance of human remains from both construction and operations. Site disturbance, movement of construction equipment, construction staging areas, and import and export of materials all could disturb human remains, resulting in significant impacts. Like the proposed Project, implementation of Mitigation Measure CR-7 would be required for this alternative. Even with the implementation of this mitigation measure, impacts on human remain would remain significant and unavoidable with this alternative.

Therefore, for the reasons discussed above, cultural resources impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project. Consequently, like the proposed Project, this alternative would result in significant and unavoidable impacts on cultural resources even with the implementation of mitigation measures.

5.4.2.5 Energy

Alternative B would result in similar energy impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.5, *Energy*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on energy from construction and operations. This alternative would reduce or eliminate impacts on energy from construction and operations associated with activities that would occur within the LA River channel. For instance, energy and fuels associated with in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, energy demands and consumption from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative would require energy and fuels for construction and operations of the common elements and other KOP categories. Construction activities primarily involve onsite energy demand and consumption related to the use of transportation fuels (i.e., diesel and gasoline) for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources. Trucks and equipment used during proposed construction activities would also be required to comply with the California Air Resources Board's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Aside from reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Anti-idling regulations would limit the amount of fuel wasted in equipment and trucks that are not in operation. Emissions regulations to control pollutant and toxic air contaminant emissions would also require that engines be more efficient, which results in reduced fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. As such, construction activities associated with Common Elements Typical Project would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts. Furthermore, as discussed in Section 3.7, *Greenhouse Gas Emissions*, the construction industry is moving toward cleaner fuels and electrified equipment, which would result in fewer pollutant emissions, and the technology would provide greater efficiencies in the equipment's energy consumption over time.

Operations for this alternative would require energy for the conveyance of water for irrigation, restrooms, and café uses; electricity and natural gas for lighting, cooling, and appliances; and gasoline for landscaping equipment and mobile vehicle trips. Each project site would comply with California Title 24 standards and the CALGreen Code for energy efficiency; in addition, new construction would be required to implement building energy best practices from the following standards: U.S. Department of Energy Better Buildings Initiative, ENERGY STAR, Dark Sky, Cradle-to-Cradle, and Green Globes codes. The proposed Project would also incorporate water, environmental, and construction best practices, and would use light-emitting diodes or a more efficient light source and solar-power light fixtures along the river wherever possible. Additionally, because this alternative, like the proposed Project, aims to connect to other trails and paths along the length of

the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, non-vehicular modes of travel would reduce the consumption of fuel from passenger vehicles.

Therefore, for the reasons discussed above, energy impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would be less than significant.

5.4.2.6 Geology, Soils, and Paleontological Resources

Alternative B would result in similar geology and soils impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.6, *Geology, Soils, and Paleontological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on geology, soils, and paleontological resources from construction and operations. This alternative would reduce or eliminate impacts on geology and soils from construction and operations associated with activities that would occur within the LA River channel. For instance, geologic hazards that may affect in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. Additionally, impacts on potential paleontological resources that may occur from construction and operations within the channel from the proposed Project would not occur as a result of this alternative. However, geology and soils impacts from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, construction activities would be considered too shallow and small scale to cause or exacerbate significant geologic phenomena such as fault rupture, seismic ground shaking, or liquefaction. However, because the LA River is in a seismically active area due to the various active and potentially active faults in the region, seismic events from one or more of these regional active or potentially active faults could result in strong ground shaking in the LA River area, thereby affecting some project features. Such strong seismic shaking could also result in landslides where landslide-prone areas exist along the LA River as discussed in Section 3.6, *Geology, Soils, and Paleontological Resources*. Construction and operations of this alternative would require evaluation if they occur in geologic hazard zones areas. Additionally, all individual design components would be required to adhere to all building code and permitting requirements and, if deemed necessary, undergo geotechnical investigations. This would reduce potential impacts associated with geologic hazards to less-than-significant levels for short-term (construction) and long-term activities (i.e., operations) associated with this alternative. Like the proposed Project, implementation of Mitigation Measure GEO-1 would be required for this alternative, which would reduce impacts related to risk of loss, injury, or death from fault rupture, seismic ground shaking, seismic-related ground failure, and landslides to less-than-significant levels.

Operational impacts from this alternative would also be similar to those of the proposed Project. As this alternative would attract the same number of visitors as the proposed Project, this alternative could also expose visitors to strong seismic shaking, fault rupture, and secondary seismic phenomena such as liquefaction and landslides. However, as mentioned above, any development occurring in fault, liquefaction, and landslide zones would require evaluation and countermeasures implemented in design and construction. All individual project features would be implemented following proper engineering methods and building code requirements. Operations activities would not cause or exacerbate major geological phenomena such as strong seismic shaking or fault

rupture, or any secondary phenomena such as liquefaction or landslides, and impacts would remain less than significant.

Similar to the proposed Project, this alternative would require obtaining coverage under the NPDES Construction General Permit, minimizing the amount of erosion during construction. Erosion management would be implemented during construction and after construction is complete to reduce potential impacts associated with erosion to less-than-significant levels for short-term (construction) and long-term activities (operations).

Similar to the proposed Project, construction and operations could be affected by unstable soils in the project area. Like the proposed Project, implementation of Mitigation Measure GEO-1 would be required for this alternative, which would reduce impacts from unstable soils to less-than-significant levels.

Similar to the proposed Project, construction and operations could be affected by expansive soils in the project area. Like the proposed Project, implementation of Mitigation Measure GEO-1 would be required for this alternative, which would reduce impacts from expansive soils to less-than-significant levels.

As with the proposed Project, this alternative would not involve septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

Impacts on paleontological resources for this alternative would be reduced from those identified for the proposed Project due to no in-channel disturbance activities occurring under Alternative B. However, construction would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in an adverse effect on significant paleontological resources. Like the proposed Project, implementation of Mitigation Measures GEO-2 and GEO-3 would be required for this alternative, which would reduce impacts on paleontological resources to less-than-significant levels.

Potential impacts from operation of the components of this alternative could result in significant impacts on sensitive geologic deposits with the potential for containing undiscovered significant paleontological resources, which include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for disturbance.

Like the proposed Project, implementation of Mitigation Measure GEO-4 would be required for this alternative, which would reduce impacts on paleontological resources to less-than-significant levels.

Therefore, for the reasons discussed above, geology and soils impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would be less than significant.

5.4.2.7 Greenhouse Gas Emissions

Alternative B would result in similar GHG emissions impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.7, *Greenhouse Gas Emissions*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts from GHGs from construction and operations. Although this alternative would reduce or eliminate impacts from GHG emissions from construction and operations associated with activities that would occur within the LA River channel, it would have similar impacts as the proposed Project

considering that the same number of projects would be implemented under this alternative as under the proposed Project.

Similar to the proposed Project, construction of this alternative would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. GHG emissions are measured exclusively as cumulative impacts; therefore, construction emissions are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. Operation of this alternative would involve GHG emissions from multiple sources, including energy, mobile, area, water, wastewater, and waste. Because details about the construction and operation scenario are unknown, GHG emissions were not quantified for the proposed Project; however, it was determined that GHG emissions could potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with this alternative are also considered to result in significant impacts. Like the proposed Project, implementation of Mitigation Measures GHG-1a, GHG-1b, and TRA-1b would be required for this alternative. Even with the implementation of these mitigation measures, impacts from the generation of GHGs would remain significant and unavoidable with this alternative.

As with the proposed Project, this alternative would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limiting land use emissions. However, it is anticipated that buildings would use natural gas and landscaping equipment would be gasoline powered, both of which are inconsistent with the California Governor's Office of Planning and Research (2018a) guidance. In addition, daily vehicle trips would exceed the California Governor's Office of Planning and Research's (2018b) daily trip screening threshold. Consequently, while emissions from the land use sector would generally be consistent with the 2017 Scoping Plan, emissions from the energy, mobile, area, water, and waste sectors would be potentially inconsistent with the 2017 Scoping Plan and applicable regulatory programs.

As discussed in Section 3.16, *Transportation*, the terraced banks design component of KOP Category 2 was determined to have the potential to generate a significant VMT impact because although it would serve a variety of flood management or ecological uses, none of which would result in a significant transportation impact, it may also be used to develop amphitheaters for public performances or parks. Site-specific details regarding site programming and acreage will be required to determine the potential for the public-serving uses of the terraced banks to be eligible for screening or to result in a VMT impact. Therefore, KOP Category 2 was found to affect the State's ability to meet its mobile-source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The GHG emissions from non-mobile sectors could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, construction and operation emissions associated with KOP Category 2 may have a potentially significant impact on the environment. Because KOP Category 2 components would be removed under this alternative, a considerable reduction in GHG emissions would occur compared to the proposed Project.

However, other components of this alternative that are similar to the proposed Project would still result in significant GHG emissions during construction and operations. Operations of this alternative, like the proposed Project, would be potentially inconsistent with the 2008 Scoping Plan and First Update, Senate Bill 32, Executive Order S-3-05, 2020 Climate Change Action Plan, updated County Climate Action Plan, and OurCounty Sustainability Plan due to the reasons described above. Therefore, construction and operation of this alternative would potentially conflict with or obstruct

implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Like the proposed Project, implementation of Mitigation Measures GHG-1a, GHG-2, and TRA-1b would be required for this alternative. Even with the implementation of these mitigation measures, impacts from conflict with plans, policies, or regulations to reduce GHGs would remain significant and unavoidable with this alternative.

While this alternative has the potential to result in similar impacts as the proposed Project for most of the common elements and KOP categories, potential impacts on GHG emissions from implementation of the terraced bank design component of KOP Category 2 that could affect the State's ability to meet its mobile source GHG reduction targets and be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan would be avoided. However, impacts from GHGs would remain significant and unavoidable for this alternative.

5.4.2.8 Hazards and Hazardous Materials

Alternative B would result in similar hazards and hazardous materials impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.8, *Hazards and Hazardous Materials*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts from hazards and hazardous materials from construction and operations. This alternative would reduce or eliminate impacts from hazards and hazardous materials from construction and operations associated with activities that would occur within the LA River channel. For instance, hazards and hazardous materials that may affect construction or operation of in-channel design components would not occur from KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, hazards and hazardous materials impacts from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative is not expected to result in a significant risk associated with routine transport, use, and disposal of hazardous materials. Required compliance with applicable regulations and adherence to the requirements of the Construction General Permit would minimize potential impacts.

Like the proposed Project, this alternative could result in a significant risk associated with potential upset and accident conditions due to construction near unknown hazardous sites. Similar to the proposed Project, implementation of Mitigation Measure HAZ-1 would be required to reduce impacts from potential hazards from the release of hazardous materials during construction to less-than-significant levels.

Similarly, this alternative could involve potential construction impacts from hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Like the proposed Project, implementation of Mitigation Measure HAZ-1 would be required to reduce impacts from potential hazards during construction near schools to less-than-significant levels.

Furthermore, projects could result in a significant risk associated with being constructed on or near a Cortese List site. Like the proposed Project, implementation of Mitigation Measure HAZ-1 would be required to reduce impacts from construction on or near a Cortese list site to less-than-significant levels.

Like the proposed Project, this alternative would not place any individual projects within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the local airports such as Long Beach, Compton/Woodley, or Hollywood Burbank airports, and would therefore not result in any risks or hazardous conditions.

This alternative would not be expected to hinder or impair an adopted emergency response or evacuation plan or route. Similar to the proposed Project, this alternative would comply with existing standard industry practices such as traffic control and signage, adherence to County and local agency criteria (as necessary), and rules and regulations pertaining to emergency response that would provide and maintain adequate emergency access.

This alternative could potentially result in a significant risk of exposure to wildfires. Projects under this alternative that may be within high fire hazard areas would follow all applicable fire response and prevention requirements and applicable construction standards that ensure implementation of fire prevention features, including compliance with the regulations set forth in the California Fire Code and Occupational Safety and Health Administration Safety and Health Regulations for Construction during both project planning/design and construction. Like the proposed Project, implementation of Mitigation Measure WF-2 would be required to reduce impacts from construction, and implementation of Mitigation Measure WF-3 would be required to reduce impacts from operations of projects within or near fire hazard areas to less-than-significant levels.

While this alternative has the potential to result in the same types of impacts as the proposed Project for most of the common elements and KOP categories, potential impacts from hazards and hazardous materials from design components within the channel would be avoided. Overall, for the reasons discussed above, hazards and hazardous materials impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would be less than significant.

5.4.2.9 Hydrology and Water Quality

Alternative B would result in fewer hydrology and water quality impacts when compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.9, *Hydrology and Water Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on hydrology and water quality from construction and operations. This alternative would reduce or eliminate impacts on hydrology and water quality from construction associated with activities that would occur within the LA River channel. For instance, hydrology and water quality impacts that occur from in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, the potential benefits that could be realized from these project design features would also not occur with this alternative.

Similar to the proposed Project, this alternative could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport, generation of pollutants, or accidental spills that could temporarily contaminate runoff, surface water, or groundwater from construction activities. However, BMPs, as required in a Stormwater Pollution Prevention Plan, would be required during construction to reduce erosion and restrict non-stormwater discharges from the construction site as well as release of hazardous materials.

Like the proposed Project, the majority of the projects are expected to be extra-small and small in size, with negligible changes in impervious surface areas compared to existing conditions. Therefore, runoff rates and volumes would be similar to existing conditions and would continue to infiltrate into the ground, filtering potential contaminants and minimizing the discharge of pollution and adverse effects on groundwater quality. Nevertheless, implementation of Mitigation Measures HYDRO-1a and b would be required to reduce operational impacts from the alteration of existing drainage patterns that could potentially result in increased erosion, flooding, or excessive runoff to less-than-significant levels.

In addition, medium, large, and extra-large projects would include multi-benefit design components included in the *2020 LA River Master Plan*, such as water treatment facilities, natural treatment systems, vegetated buffers, and wetlands. These multi-benefit design components also provide water quality benefits. However, it should be noted that some of the multi-benefit design components would not occur under this alternative where they may have been proposed within the channel, such as storm drain daylighting, sediment removal, or in-channel wetlands and natural treatment systems. Therefore, this alternative would not realize the same level of benefit as the proposed Project.

In addition, recommended stormwater BMPs would be implemented such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches. Stormwater BMPs would capture, convey, and control pollutant discharge. Implementation of stormwater treatment areas, landscape features, and open space areas would allow water to percolate into the ground, thereby treating stormwater runoff through biological uptake and reducing the discharge of pollution to the storm drain system. Furthermore, all projects would comply with the NPDES Construction General Permit, Municipal Separate Storm Sewer System Permits, and other local water quality and LID requirements and stormwater ordinances. County-led, -funded, or -permitted projects would also comply with the Public Works LID Standards Manual, which provides guidance for the implementation of stormwater quality control measures and the recommended design methodology to manage stormwater in the County. Therefore, implementation of this alternative would not violate any water quality standards or degrade water quality.

As described in Section 3.9, *Hydrology and Water Quality*, KOP Category 2 design components could provide a range of flood management functions as well as provide water quality benefits, such as improved infiltration, treatment potential, and improved natural filtration. Other design components include armored channels; hardened bottom or sides of a channel, embankments, or levees that would reduce scour and erosion; and check dams, which manage flows and reduce velocity and erosion and aerate water, thereby improving water quality. Daylighting would involve the replacement of underground drainage pipes with a channel that is above ground, which, when combined with planting, would create a habitat and water quality benefits. This alternative, like the proposed Project, would include new impervious areas that could reduce infiltration capacity and increase the volume of runoff into storm drains or surface waters instead of allowing groundwater recharge. This alternative would not improve water and groundwater supply reliability to the same extent as the proposed Project, as design components such as in-channel groundwater recharge spreading grounds, channel modifications such as terracing the banks and providing small planting areas, underground galleries, concrete removal, wetlands, fields, and injection and dry wells would not be implemented within the channel. Therefore, omission of these project features as part of this alternative would not result in the same benefits as the proposed Project.

Other components of the proposed Project that would occur or be encouraged under this alternative would include other multi-benefit design components, including stormwater BMPs such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches. These stormwater BMPs as well as other landscape features and open space areas would allow for groundwater infiltration, allowing water to percolate into the ground, thereby providing increased benefits for groundwater recharge. In addition, projects would comply with local jurisdictions' LID requirements, County water sources, conservation standards, and the current California Green Building Standards Code. Recycled or reclaimed water would be used for irrigation, where possible. For native planting, irrigation systems would only be for utilized for plant establishment and drought-period watering, as recommended in the *2020 LA River Master Plan* and required by the applicable regulatory requirements.

In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

This alternative would not include project features that address one of the objectives to reduce flood risk and improve resiliency. Many of the project features associated with maintaining existing flood conveyance capacity or improving capacity in deficient reaches would not occur under this alternative. Runoff rates and volumes are expected to increase compared to existing conditions due to changes in impervious surface areas. While implementation of LID, BMPs, and distributed storage would reduce runoff through increased infiltration or temporary storage and provide substantial water quality improvements through contaminant filtration and biological uptake, flood risk reduction benefits may not be realized to the same extent with this alternative without in-channel refurbishment. Other bypass tunnel options and other off-channel improvements may be necessary to offset the reduction in flood capacity from this alternative.

While this alternative has the potential to result in similar impacts as those of the proposed Project for most of the common elements and KOP categories, potential impacts on hydrology and water quality from design components within the channel would be avoided. Therefore, this alternative would result in less impacts on hydrology and water quality compared to the proposed Project and impacts would remain less than significant. However, this alternative would also not realize the same level of benefit to long-term flood capacity and water quality as the proposed Project.

5.4.2.10 Land Use and Planning

This alternative would result in similar land use and planning impacts as the proposed Project. As presented in Section 3.10, *Land Use and Planning*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on land use and planning from construction and operations.

Similar to the proposed Project, this alternative would improve connectivity across the river, providing gateways and additional recreational uses and trails. These projects would reduce the effects of the physical barrier the LA River presents and would not further divide an established community; rather, this alternative would result in a beneficial impact with the exception of design components under KOP Category 6. Like the proposed Project, design components under KOP Category 6 could result in significant impacts with respect to division of an established community.

Construction activities associated with projects under this alternative could result in staging for construction equipment within LA River ROW (excluding the channel). Staging and construction worker parking would be managed based on the location of subsequent projects. Temporary off-channel impacts due to road closures or detours during construction could also continue to occur. Implementation of Mitigation Measures LU-1 and LU-2 would be required during construction. However, even with implementation of these mitigation measures, impacts from this alternative would remain significant and unavoidable, similar to the proposed Project.

Operations of design components under KOP Category 6 could occur under this alternative similar to the proposed Project, which could result in permanent road closures or other barriers such as walls that could physically divide a community if alternative connectivity is not provided. Implementation of Mitigation Measures LU-2 and LU-3 would be required for operations to reduce impacts to less-than-significant levels.

Because KOP Category 2 contains some project features that would provide new and enhanced access to the LA River and opportunities for recreation and community engagement, omission of these projects under this alternative would not realize the same benefits as the proposed Project. Nevertheless, beneficial effects are still expected under this alternative with respect to improving conditions associated with physical division of existing communities.

Similar to the proposed Project, this alternative would result in temporary incompatibility with adjacent uses or significant impacts associated with inconsistencies with applicable land use plans, policies, or regulations during construction for KOP Category 6 design components. These inconsistencies would result in potential impacts. Implementation of Mitigation Measures LU-1 and LU-2 would be required during construction. However, even with implementation of these mitigation measures, impacts from this alternative would remain significant and unavoidable, similar to the proposed Project.

Inconsistencies with applicable land use policies could occur from operations, such as if a project would conflict with planned land uses on adjacent parcels, be incompatible with adjacent land uses, or result in out-of-scale development. These inconsistencies would result in potential impacts primarily from KOP Category 6 design components. Implementation of Mitigation Measure LU-4 would be required for this alternative. Even with implementation of this mitigation measure, impacts due to conflicts with plans, policies, or regulations from this alternative would remain significant and unavoidable, similar to the proposed Project.

Therefore, for the reasons discussed above, land use and planning impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project, and impacts would remain significant and unavoidable.

5.4.2.11 Mineral Resources

This alternative would result in similar impacts on mineral resources from construction or operations as the proposed Project. As presented in Section 3.11, *Mineral Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on mineral resources from construction and operations. Similar to the proposed Project, this alternative would not result in the loss of availability of a significant non-fuel mineral resource, and significant impacts on non-fuel mineral resources would not occur with mitigation. While some portions of the study area are in areas identified as MRZ-2, the majority of the project area is urbanized and unlikely to allow for extraction activities along the LA River.

Consequently, the likelihood of this alternative resulting in the loss of non-fuel mineral resources classified MRZ-2 is minimal. However, because construction and operation could occur where geologic data indicate that significant measured or indicated resources are present, a significant impact could occur. Mitigation is required to ensure impacts are less than significant.

Like the proposed Project, the majority of the project area does not contain regionally or statewide significant fuel mineral resources. However, some areas within or near the project study area contain oil fields with active wells. The *Los Angeles County General Plan* and local general plans require maintained access to mineral deposits for extraction and preservation of mineral resources. Compliance with the County Building Code, which does not allow development to be constructed adjacent to or within 300 feet of active, abandoned, or idle oil or gas well(s), would minimize impacts. However, because the exact locations of project sites are unknown at this time, mitigation is required to ensure impacts are less than significant.

Therefore, for the reasons discussed above, mineral resource impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.2.12 Noise

This alternative would have similar noise impacts as the proposed Project. As presented in Section 3.12, *Noise*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on noise from construction and operations. While this alternative would reduce or eliminate impacts on noise from construction or operations associated with activities that would occur within the LA River channel, such as impacts that occur from in-channel design components, noise from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, projects under this alternative would comply with jurisdictional thresholds and requirements for both construction and operations incumbent within the municipal codes, general plans, and planning documents as they relate to noise. However, potential impacts could occur in some jurisdictions from construction. Implementation of Mitigation Measures NOI-1, NOI-2, and NOI-3 would be required to reduce impacts from increases in ambient noise levels in excess of standards to less-than-significant levels.

Furthermore, operations of projects under this alternative, similar to the *2020 LA River Master Plan*, would result in potential exceedances of noise standards. Implementation of Mitigation Measures NOI-4 and NOI-5 would reduce impacts from operations. However, with the uncertainty as to the location and extent of projects associated with this alternative, it is possible that impacts cannot be reduced to less-than-significant levels, and impacts would remain significant and unavoidable for this alternative.

Like the proposed Project, vibration impacts from this alternative would be potentially significant. As with the proposed Project, construction and operations details are unknown so vibration has not been quantified. However, individual projects would comply with jurisdictional thresholds and requirements incumbent within the municipal codes, general plans, and planning documents as they relate to vibration. Nevertheless, the vibrational impacts considered together could potentially result in significant impacts by exceeding thresholds established by the jurisdictions. Implementation of Mitigation Measures NOI-6, NOI-7, and NOI-8 would reduce these impacts. However, with the uncertainty as to the location and extent of projects associated with this

alternative, it is possible that impacts cannot be reduced to less-than-significant levels, and vibration impacts would remain significant and unavoidable for this alternative.

This alternative would not involve projects that are within an airport land use plan or within 2 miles of an airport. Therefore, impacts from the implementation of this alternative would not result in significant noise impacts from airport facilities.

Therefore, for the reasons discussed above, noise impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.13 Population and Housing

Alternative B would result in similar impacts on population and housing as the proposed *2020 LA River Master Plan*. As presented in Section 3.13, *Population and Housing*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on population and housing from construction and operations.

Similar to the proposed Project, construction of this alternative would not result in a substantial population increase. The temporary and specialized nature of construction work, as well as the large available construction workforce in the Los Angeles region, would not lead to a substantial population increase. Operations of this alternative would also result in similar conclusions regarding population increase, as the projects are intended to provide recreational and ecological uses and to serve the local community without substantially increasing population growth.

Like the proposed Project, this alternative would include the potential for affordable housing, which could increase the population. However, the local jurisdictions and unincorporated County areas within the study area all have regional housing needs for very low-income, low-income, and moderate-income housing. Inclusion of affordable housing would not induce population, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness.

Although projects associated with implementation of this alternative could include displacement of individuals or families experiencing homelessness, local jurisdictions would relocate individuals and families experiencing homelessness and encampments would be removed prior to construction activities. These activities would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. In addition, development of affordable housing units would not displace a substantial number of existing people or housing, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness.

Therefore, for the reasons discussed above, population and housing impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.2.14 Public Services

Alternative B would result in similar impacts on public services as the proposed *2020 LA River Master Plan*. As presented in Section 3.14, *Public Services*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on public services from construction and operations.

Similar to the proposed Project, this alternative may result in localized road closures and detours that could increase response times for emergency services. Because the size, extent, and location of the projects are unknown, impacts would be potentially significant for police and fire services. Eliminating the KOP Category 2 project features would not change the impacts associated with the proposed Project for this alternative. Like the proposed Project, implementation of Mitigation Measure LU-1 would be required. Even with implementation of this mitigation measure, impacts on police and fire from construction would remain significant and unavoidable.

Similarly for operations, this alternative would result in the same or comparable increases in the number of visitors and residents, which could increase the number of incidents requiring police response. These demands could affect police provider service ratios and response times and result in a need for additional law enforcement staff. Like the proposed Project, this alternative is not expected to result in a significant increase in the use of and demand for other park facilities, or in a significant increase in population that would substantially increase school enrollment or library service. Like the proposed Project, implementation of Mitigation Measure PS-1 would be required. Even with implementation of this mitigation measure, impacts on police and fire from operations would remain significant and unavoidable.

Therefore, for the reasons discussed above, impacts on public services associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.15 Recreation

Alternative B would result in similar impacts on recreation as the proposed *2020 LA River Master Plan*. As presented in Section 3.15, *Recreation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on recreation from construction and operations.

This alternative would reduce or eliminate impacts on recreation from construction or operations associated with activities that would occur within the LA River channel. For instance, recreation impacts from in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, impacts on recreation from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects. Conversely, beneficial effects from KOP Category 2 design components on recreation would also not occur under this alternative.

Similar to the proposed Project, construction of this alternative could result in an increased use of nearby existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River and existing recreational facilities is disrupted. Dependent on the location and project proponent, staging areas could be located on local jurisdiction properties and the staging areas could be large in size, depending on the extent and nature of projects and the equipment involved. Additionally, the future projects could have substantially long construction durations with intensive construction activities, thereby causing disruption of access and use, and potentially leading to longer temporary closures, of existing recreational facilities. Temporary closures of existing recreational facilities could occur during construction and recreational facilities near a construction site may experience noise, dust, diminished access, and other nuisance impacts during construction. This could result in an increased use of existing neighborhood parks, regional parks, or other

recreational facilities if access to the LA River Trail is disrupted. Therefore, construction activities under this alternative could increase the use of nearby existing neighborhood and regional parks or other recreational facilities for an extended period such that substantial physical deterioration of the facility would occur or be accelerated. Implementation of Mitigation Measure REC-1 would reduce impacts from construction to less-than-significant levels.

Like the proposed Project, operation of this alternative would implement multi-benefit projects that would serve a range of functions and uses, which would increase the amount of recreational resources available in the study area. Therefore, operation of this alternative would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur. However, elimination of KOP Category 2 components and other in-channel features would not realize the same benefits as the proposed Project. For instance, the range of functions, such as flood management, recreational, and ecological uses such as amphitheaters, small planting trays, parks, wildlife ramps, and wetland terraces, would not occur under this alternative. While these features would not attract a large number of users, the omission of KOP Category 2 design components would not have a significant effect on the increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Like the proposed Project, construction and operations activities under this alternative could have impacts on various environmental resources such as biological resources, cultural resources, and hydrology and water quality. The impact discussions for the respective resources above demonstrate that construction and operation of recreational resources under this alternative could have an adverse physical effect on the environment. However, with the elimination of KOP Category 2 design components, some construction impacts such as those on biological resources, cultural resources, geology and soils, hydrology and water quality, and transportation would be reduced with this alternative.

Therefore, for the reasons discussed above, impacts on recreation associated with Alternative B would be similar to those of the proposed Project and would remain less than significant.

5.4.2.16 Transportation

Alternative B would result in similar impacts on transportation as the proposed *2020 LA River Master Plan*. As presented in Section 3.16, *Transportation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on transportation/traffic from operations.

This alternative would reduce or eliminate impacts on transportation/traffic from construction or operations associated with activities that would occur within the LA River channel. For instance, transportation/traffic impacts that occur from in-channel design components would not occur from construction or operations of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, transportation/traffic impacts from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, traffic and circulation impacts from this alternative are not expected to be of a magnitude such that they would result in a conflict with any programs, plans, or policies

addressing the circulation system, or transit, roadway, bicycle, or pedestrian facilities. However, some design components could involve intermittent lane and sidewalk closures during construction, which could impede vehicle, pedestrian, equestrian, and bicycle circulation. Therefore, construction impacts would be potentially significant without mitigation. Implementation of Mitigation Measure LU-1 would reduce conflicts with transportation programs during construction to less-than-significant levels.

This alternative, like the proposed Project, would provide expanded bicycle, pedestrian, and micro-mobility user networks, expansion of access to open spaces, and improved regional and local transit connectivity. This alternative would allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Increasing the active transportation mode share and the ability to replace long-distance vehicle commute trips with an active transportation trip will reduce VMT, consistent with State and regional policy initiatives, including Senate Bill 743 and SCAG's RTP. It is also consistent with RTP Goal 6, which seeks to protect the environment and health of SCAG region residents by improving air quality and encouraging active transportation.

This alternative would also support the vision for the County's 2012 *Bicycle Master Plan* to encourage and make bicycling more comfortable with the robust suite of project features that cater to cyclists, such as pavilions and benches for rest and shade, bicycle racks to lock up a bicycle, bathrooms to meet bodily needs, and cafés for refreshment. The proposed 51-mile continuous off-street path for active transportation trips would also provide a safe corridor for active transportation trips free of risk from injury or death by collision with a motor vehicle.

Implementation of this alternative would still allow the County to achieve many of the goals and policies from the *Los Angeles County General Plan* Mobility Element. Similarly, implementation of this alternative would be consistent with active transportation-related goals, policies, and actions of the other 17 jurisdictions through which the river flows. As such, this alternative would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Like the proposed Project, construction of this alternative may result in short-term increases in VMT. Per County Guidelines, construction impacts related to increases in VMT, if they occur, are not considered significant under CEQA and are therefore considered to be less than significant. Nevertheless, implementation of Mitigation Measure LU-1 would reduce VMT during construction to less-than-significant levels.

Operation of this alternative would result in potential significant increases in VMT, similar to the proposed Project. Each individual project's potential to result in a significant transportation impact will need to be evaluated by the project proponent when the project's exact location, configuration, and scale are known, and cannot be determined based on the current level of project specificity. Like the proposed Project, implementation of Mitigation Measures TRA-1a and TRA-1b would be required. Even with implementation of these mitigation measures, operational impacts from VMT would remain significant and unavoidable.

Construction of this alternative may result in short-term roadway effects, for example localized increases in delay and traffic queuing that stems from lane closures, which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and at adjacent land uses (e.g., due to driveways affected by lane closures). Similar to the proposed Project, mitigation would reduce the effects of this impact.

Implementation of Mitigation Measure LU-1 would reduce transportation hazards during construction to less-than-significant levels.

Operations impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications may include safety, operational, or capacity impacts. River access points would be placed approximately every half mile, but specific locations are unknown at this time. It is also unknown whether any existing geometric design hazards would need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries under this alternative. However, all access points would be required to be designed according to criteria of the County, including the Trails Manual adopted in 2011, and, where applicable, of the local agency in which they are located. Furthermore, alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with approval of the County or the relevant local agency. Given the access point design standards and emergency vehicle access requirements, implementation of this alternative would not substantially increase hazards or conflicts or result in inadequate emergency access. Furthermore, implementation of this alternative would remediate or improve existing substandard conditions and would therefore contribute to overall safety improvements along the entire river corridor.

Consequently, for the reasons discussed above, transportation/traffic impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.17 Tribal Cultural Resources

Alternative B would result in similar impacts on TCRs as the proposed *2020 LA River Master Plan*. As presented in Section 3.17, *Tribal Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on TCRs from construction and operations.

This alternative would reduce or eliminate impacts on TCRs from construction or operations associated with activities that would occur within the LA River channel. For instance, TCR impacts that occur from in-channel design components would not occur from construction or operations of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, TCR impacts from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative could result in significant impacts on TCRs through proposed ground disturbance, which could include site clearing and excavation that may result in significant impacts with adverse effects on surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be TCRs. Impacts on TCRs could also be indirect and would include potential significant changes to the setting or viewshed of a TCR, which could include construction of new structures, recreational facilities, and design components that could indirectly affect the integrity of the resource. Implementation of Mitigation Measures CR-1a and b, CR-4a, CR-4b, CR-4c, CR-4d, CR-5, and TCR-1 would reduce impacts. Even with the implementation of these mitigation measures, impacts on TCRs from construction would remain significant and unavoidable.

Operational elements, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users in new facilities near a potentially significant TCR could directly affect TCRs, either through unanticipated destruction of *in situ* TCRs or destruction or removal from looting, or otherwise negatively affect the integrity of the resource. Implementation of Mitigation Measures TCR-3 and TCR-4 would reduce impacts during operations. Even with the implementation of these mitigation measures, impacts on TCRs from operations would remain significant and unavoidable.

Therefore, for the reasons discussed above, TCR impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.18 Utilities/Service Systems

Alternative B would result in similar impacts on utilities/service systems as the proposed *2020 LA River Master Plan*. As presented in Section 3.18, *Utilities/Service Systems*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on utilities/service systems from operations.

This alternative would eliminate construction and operations of design components that would occur within the LA River channel, including terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. These features do not generate a significant demand on utilities that could result in expansion leading to significant environmental effects. Therefore, there is no measurable change in the impacts compared to the proposed Project.

Similar to the proposed Project, this alternative could require the expansion or construction of new facilities from insufficiencies in utilities, which could, in turn, result in significant environmental impacts. Implementation of Mitigation Measure UTIL-1 would reduce impacts during operations. Even with the implementation of this mitigation measure, impacts from the construction or relocation of utilities that could cause significant environmental effects would remain significant and unavoidable.

Like the proposed Project, this alternative could result in a beneficial impact on water supply for KOP Categories 4 and 5. Operation of diversion projects could improve local water supply reliability. Subsequent projects that strategically capture and treat flows before they reach the river would help expand water supply opportunities in the watershed and along the river corridor and would also improve water quality. Diverted water could be used to enhance habitat, support recreation, or supply water for municipal and industrial uses. Similarly, floodplain reclamation could include recreation fields and other recreational uses, which could be designed to contribute to groundwater recharge. However, design components under KOP Category 6 could result in increased demand for water, which would be a potentially significant impact with regard to sufficient water supply. Implementation of Mitigation Measure UTIL-2 would be required for this alternative. Even with this mitigation measure, impacts from operations of this alternative on water supplies would remain significant and unavoidable.

Insufficiencies in wastewater capacity could occur from larger project components, also leading to potentially significant environmental impacts from the expansion or construction of new wastewater infrastructure. KOP Category 6 could result in a wide variety of projects, many of which

would generate wastewater. Because the location, size, and extent of these projects are unknown, it cannot be quantified how much wastewater would be generated by an individual design component under KOP Category 6. Implementation of Mitigation Measure UTIL-1 would be required for this alternative. Even with this mitigation measure, impacts from operations of this alternative on wastewater treatment capacities would remain significant and unavoidable.

Design components under KOP Category 6 could result in substantial generation of solid waste during construction depending on site location. Implementation of Mitigation Measure UTIL-3 would reduce impacts from construction. Even with this mitigation measure, impacts from construction of this alternative from solid waste would remain significant and unavoidable.

Operation of the larger design components envisioned for KOP Category 6 could result in substantial amounts of solid waste unless requirements are included in each project for diversion of solid waste. Implementation of Mitigation Measure UTIL-4 would reduce impacts from operations to less-than-significant levels.

Therefore, for the reasons discussed above, utilities/service systems impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.19 Wildfire

Alternative B would result in similar impacts on wildfire as the proposed *2020 LA River Master Plan*. As presented in Section 3.19, *Wildfire*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on wildfire from construction and operations.

This alternative would eliminate construction and operations of design components that would occur within the LA River channel, including terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. These features do not generate significant wildfire hazards or expose people to additional risk beyond what has been described for other project features. Therefore, there is no measurable change in the impacts compared to the proposed Project.

Similar to the proposed Project, this alternative has a potential to result in a significant impact related to impairment of an adopted emergency response plan or emergency evacuation plan due to construction staging, temporary lane closures, and construction-related traffic delays or obstructions. Implementation of Mitigation Measure WF-1 would be required for this alternative and would reduce impacts on emergency access to less-than-significant levels.

Like the proposed Project, new development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants. Therefore, operations would not be expected to impair emergency access and impacts would be less than significant.

This alternative also has the potential to involve construction in areas designated as Very High FHSZ, which could exacerbate wildfire risks from construction equipment and introduction of potential ignition sources. Wildfire management guidelines and fuel modification plans would need to be adhered to during construction activities in vulnerable areas. Implementation of Mitigation Measure

WF-2 would be required for this alternative and would reduce impacts from wildfire during construction to less-than-significant levels.

Similarly, operations could introduce additional visitors and staff to areas within Very High FHSZ designations, which could expose additional people to hazardous conditions. The addition of more people and structures to an area designated a Very High FHSZ could exacerbate existing wildfire risks by increasing the possibility of human-caused wildfires. Implementation of Mitigation Measure WF-3 would be required for this alternative. Even with this mitigation measure, operational impacts from exposure to wildfires would remain significant and unavoidable.

Like the proposed Project, this alternative may involve installation or maintenance of infrastructure that could exacerbate fire risk, such as structural hardening, water supply and flow, hydrant and standpipe spacing, signage, fire department access, and overhead or underground electric utilities. Implementation of Mitigation Measure WF-2 would be required for this alternative and would reduce impacts from wildfire during construction of infrastructure to less-than-significant levels.

Operations of project features under this alternative within or adjacent to Very High FHSZs would require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other significant impacts on the environment. Implementation of Mitigation Measure WF-3 would be required for this alternative. Even with this mitigation measure, operational impacts from exacerbation of fire risk would remain significant and unavoidable.

Finally, this alternative would involve construction adjacent to or in Very High FHSZs as well as areas prone to flood, landslide, or slope instability and would have the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change. The operation of new facilities within these areas could introduce visitors, staff, and structures into an area highly susceptible to landslides or slope instability after a wildfire event, thereby exacerbating the existing risk of post-fire hazard by exposing additional people to this existing hazard. Implementation of Mitigation Measures WF-4, GEO-1, and HYDRO-1a would reduce construction and operational impacts from exposure of people or structures to significant risks to less-than-significant levels.

Therefore, for the reasons discussed above, wildfire impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.5 Environmentally Preferred and Superior Alternative

Pursuant to State CEQA Guidelines Section 15126.6, the EIR is required to identify the environmentally superior alternative among the alternatives analyzed. As shown in Table 5-2 above, the highest score represents the environmentally superior alternative. Although the No Project Alternative (Alternative A) reduces the greatest number of significant impacts, CEQA requires that when the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The Channel Avoidance Alternative (Alternative B) reduces the second-largest number of impacts of the proposed Project associated with biological resources and hydrology and water quality.

Impacts on biological resources under Alternative B would be reduced compared to the proposed Project because of the elimination of in-channel construction activities, avoiding the largest concentration of biological resources throughout the project area. However, impacts on biological resources under Alternative B would still be significant and would require mitigation to reduce the impacts to less-than-significant levels. Impacts related to hydrology and water quality would be reduced compared to the proposed Project because Alternative B would result in less disturbance within the river channel during construction. However, impacts on hydrology and water quality under Alternative B would still be significant and would require mitigation to reduce the impacts to less-than-significant levels. Impacts on all other resources would be similar to those of the proposed Project under Alternative B.

Therefore, in accordance with State CEQA Guidelines Section 15126.6, Alternative B is considered the environmentally superior alternative, and overall impacts on environmental resources would be reduced compared to the proposed Project. However, the proposed Project would have numerous benefits on the environment that would not be realized to the same extent with Alternative B, and Alternative B would not achieve the same level of project objectives, including reducing flood risk and improving resiliency, and improving local water supply reliability.

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Chapter 7
References

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None.

7.2 Chapter 2, Project Description

None.

7.3 Chapter 3, CEQA Environmental Impact Assessment

7.3.1 Section 3.1, Aesthetics

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