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).

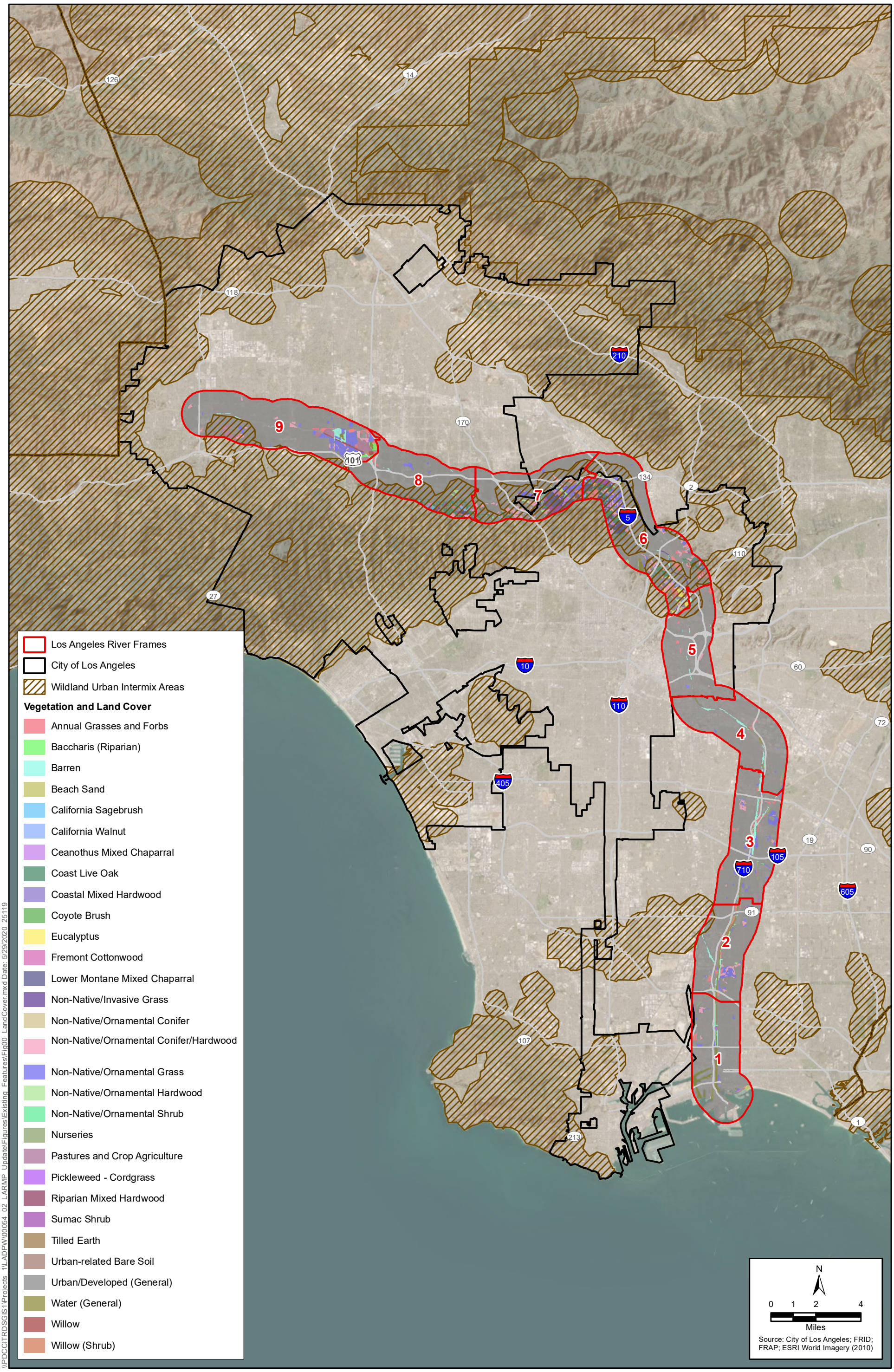
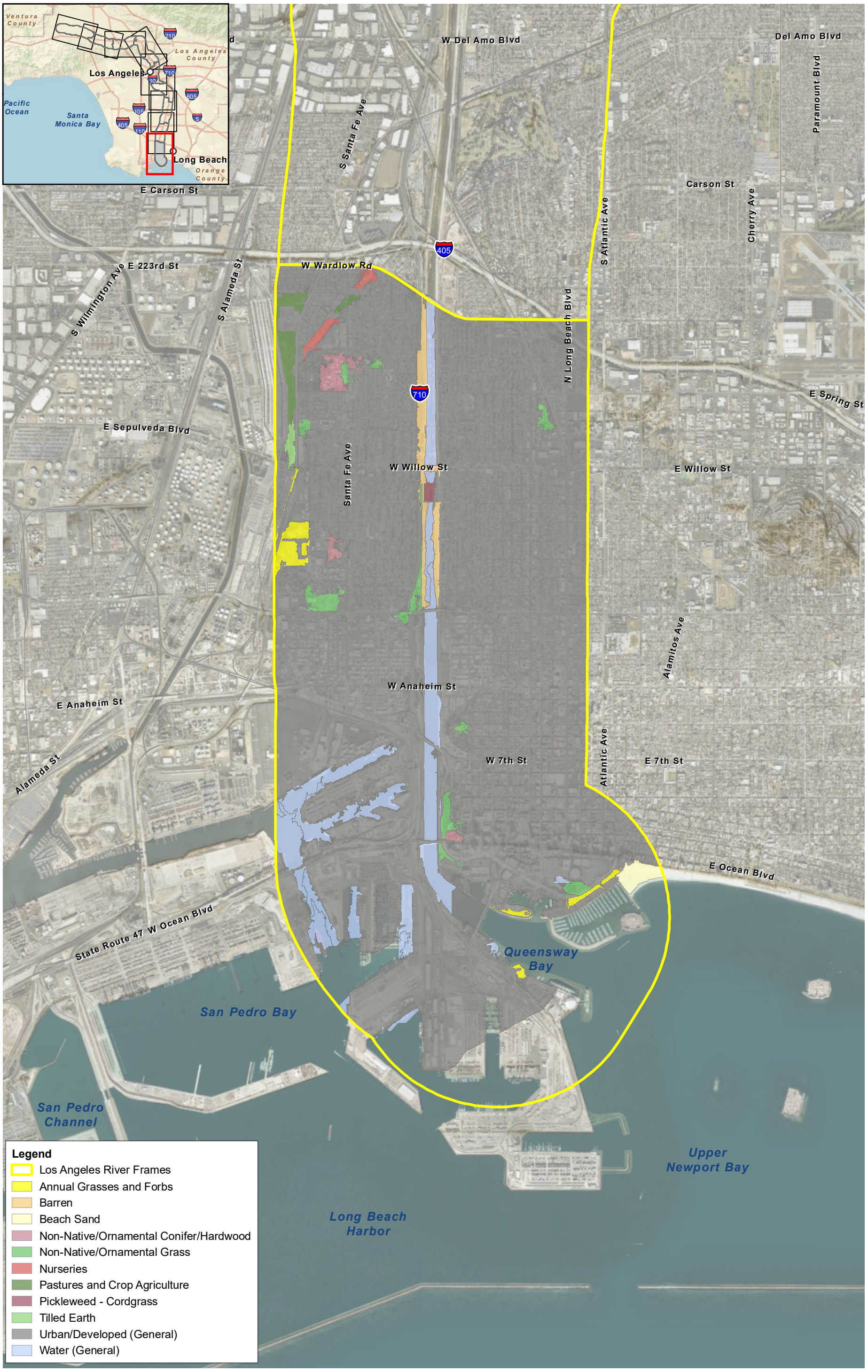


Figure 3.3-1
Land Cover and Vegetation Communities Index



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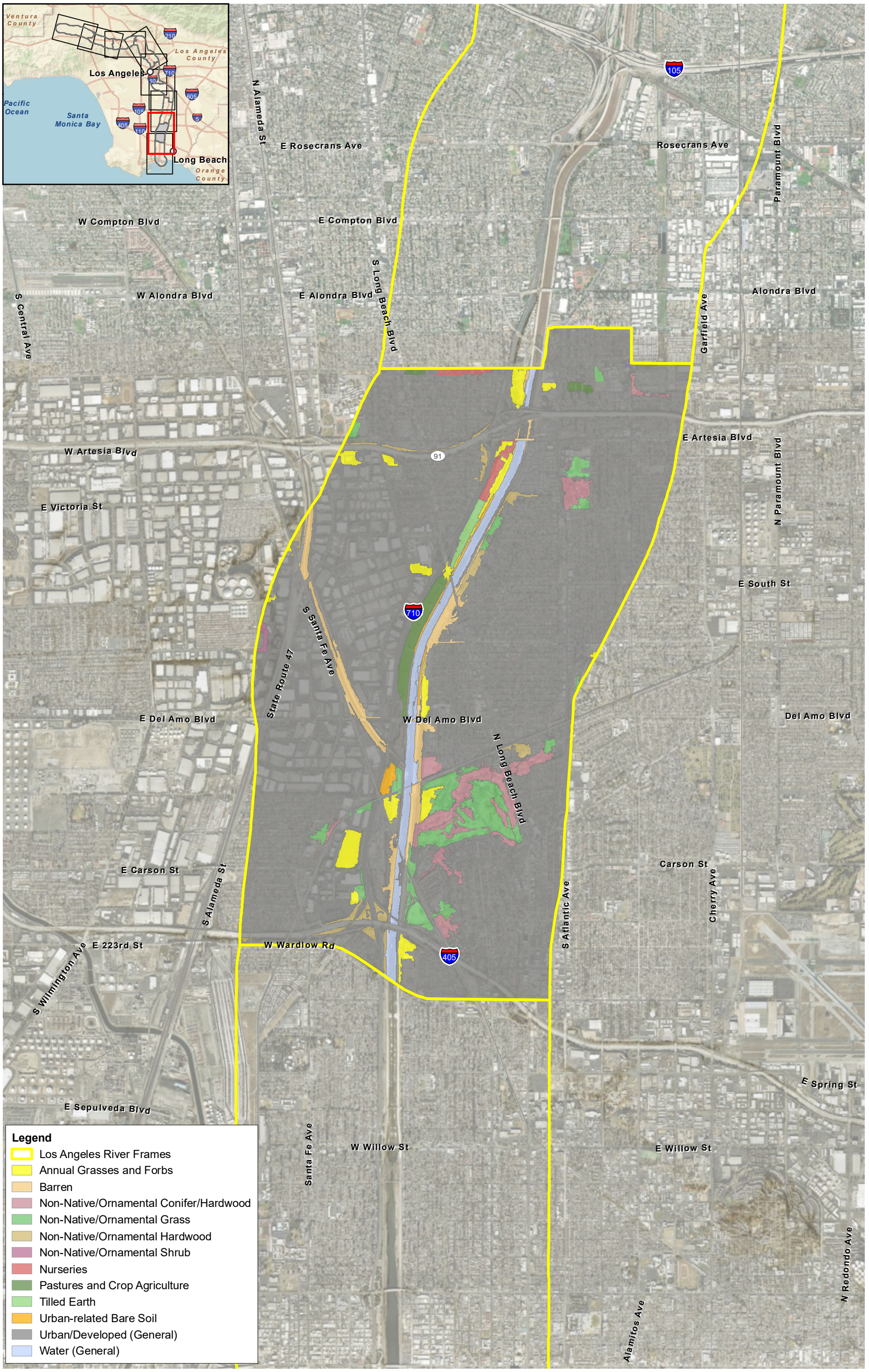
Source: CALVEG; ESRI

Figure 3.3-2
Land Cover and Vegetation Communities within Frame 1



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Source: CALVEG; ESRI

Figure 3.3-3
Land Cover and Vegetation Communities within Frame 2

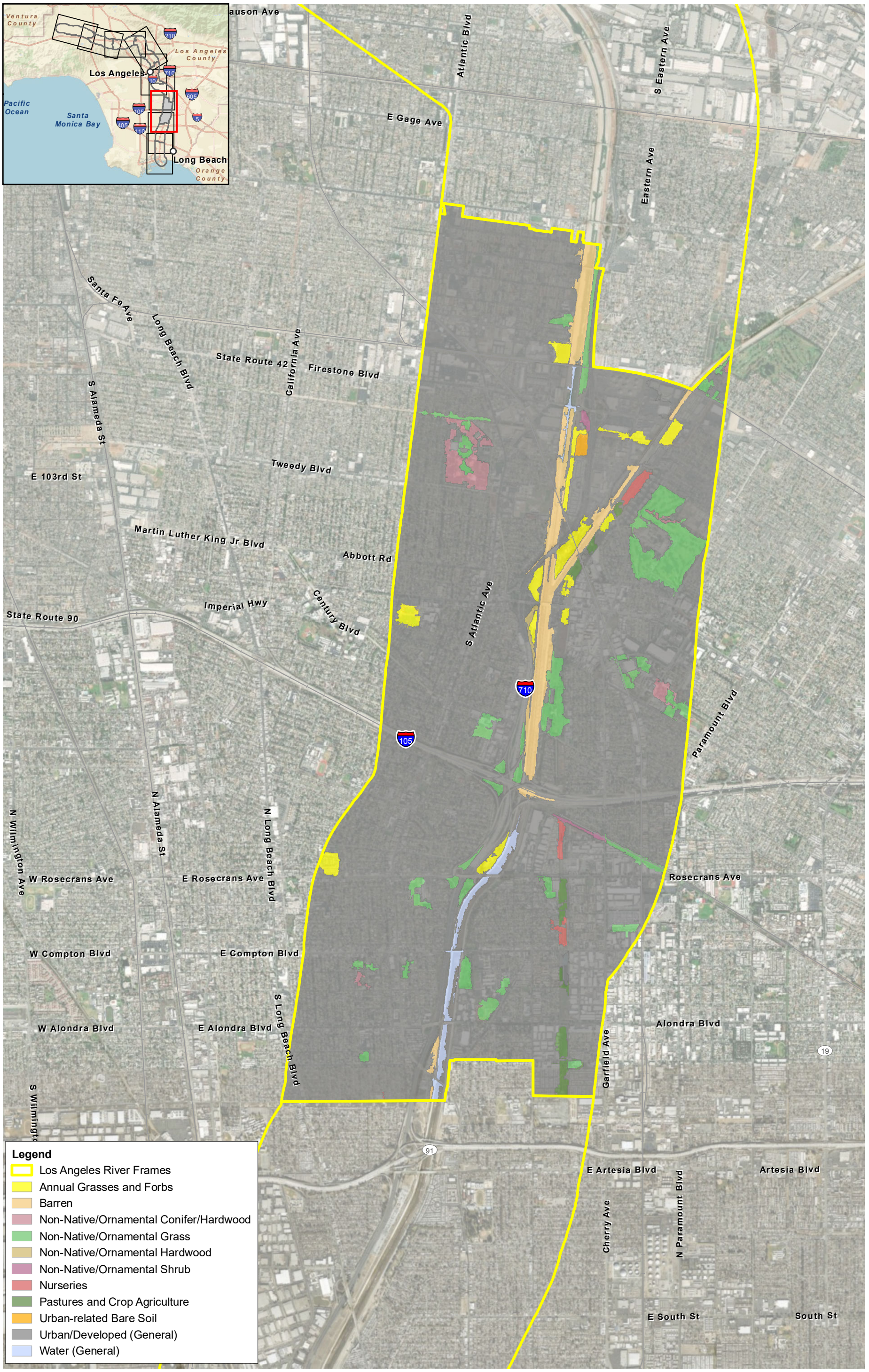

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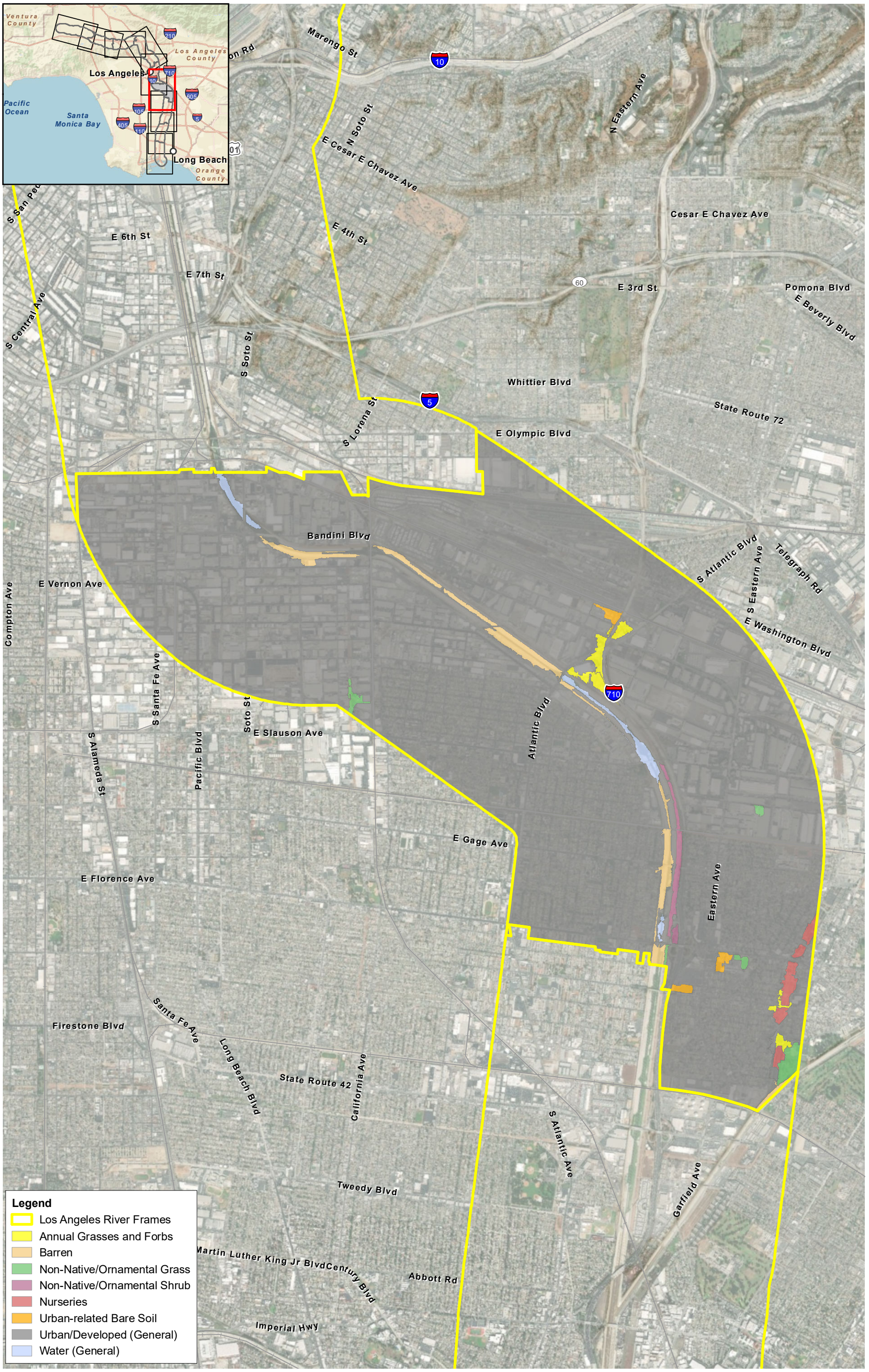
Figure 3.3-4
Land Cover and Vegetation Communities within Frame 3



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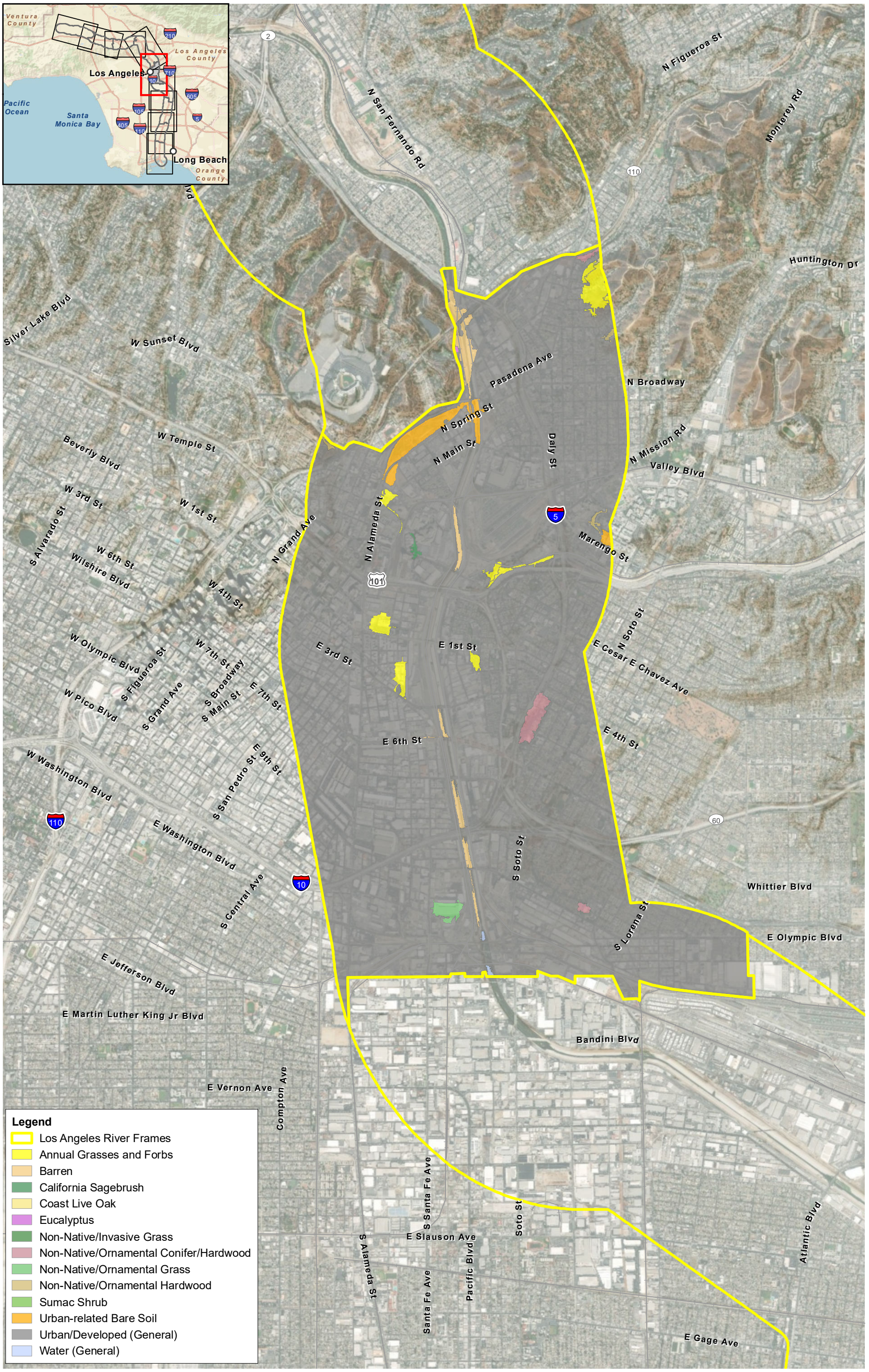
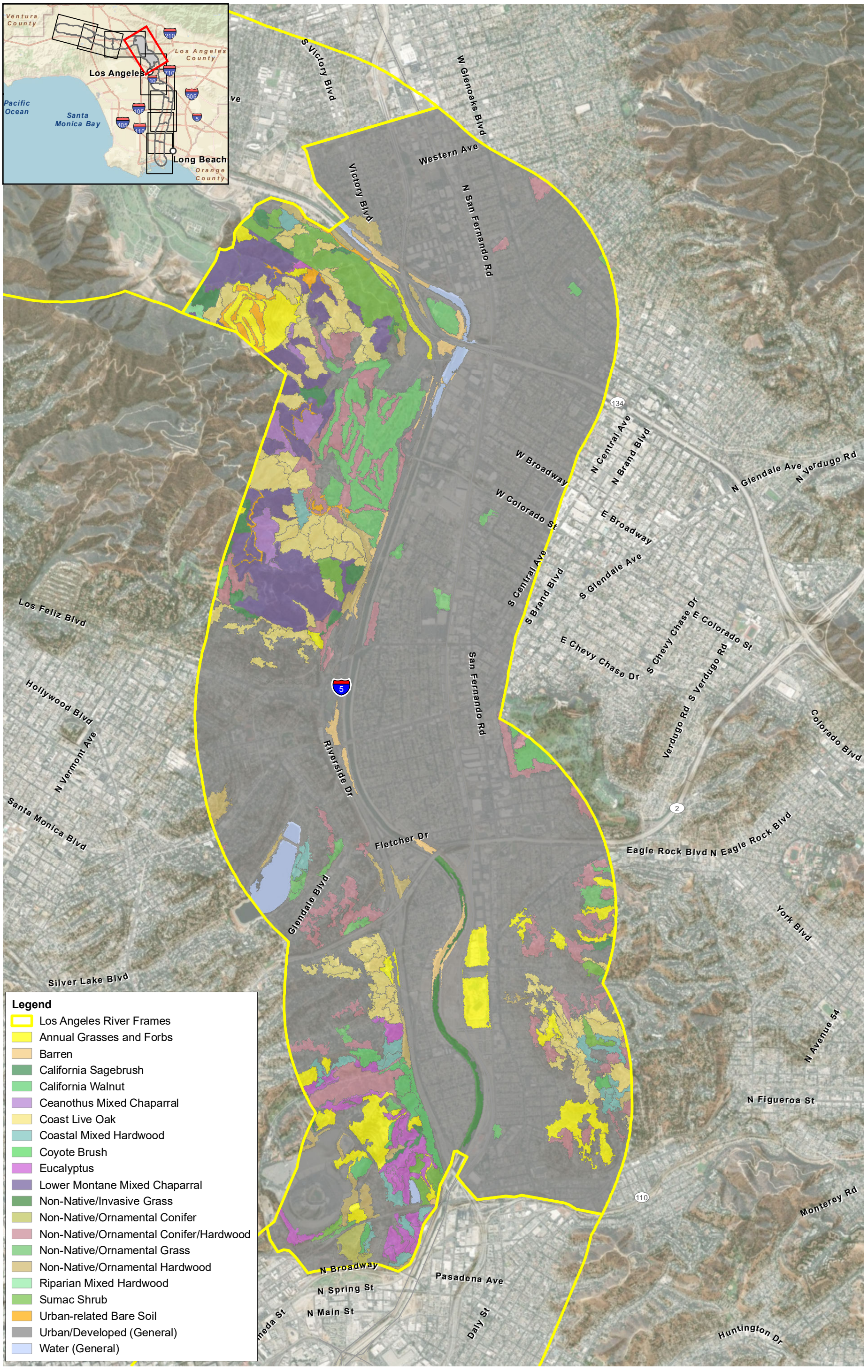
Source: CALVEG; ESRI

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

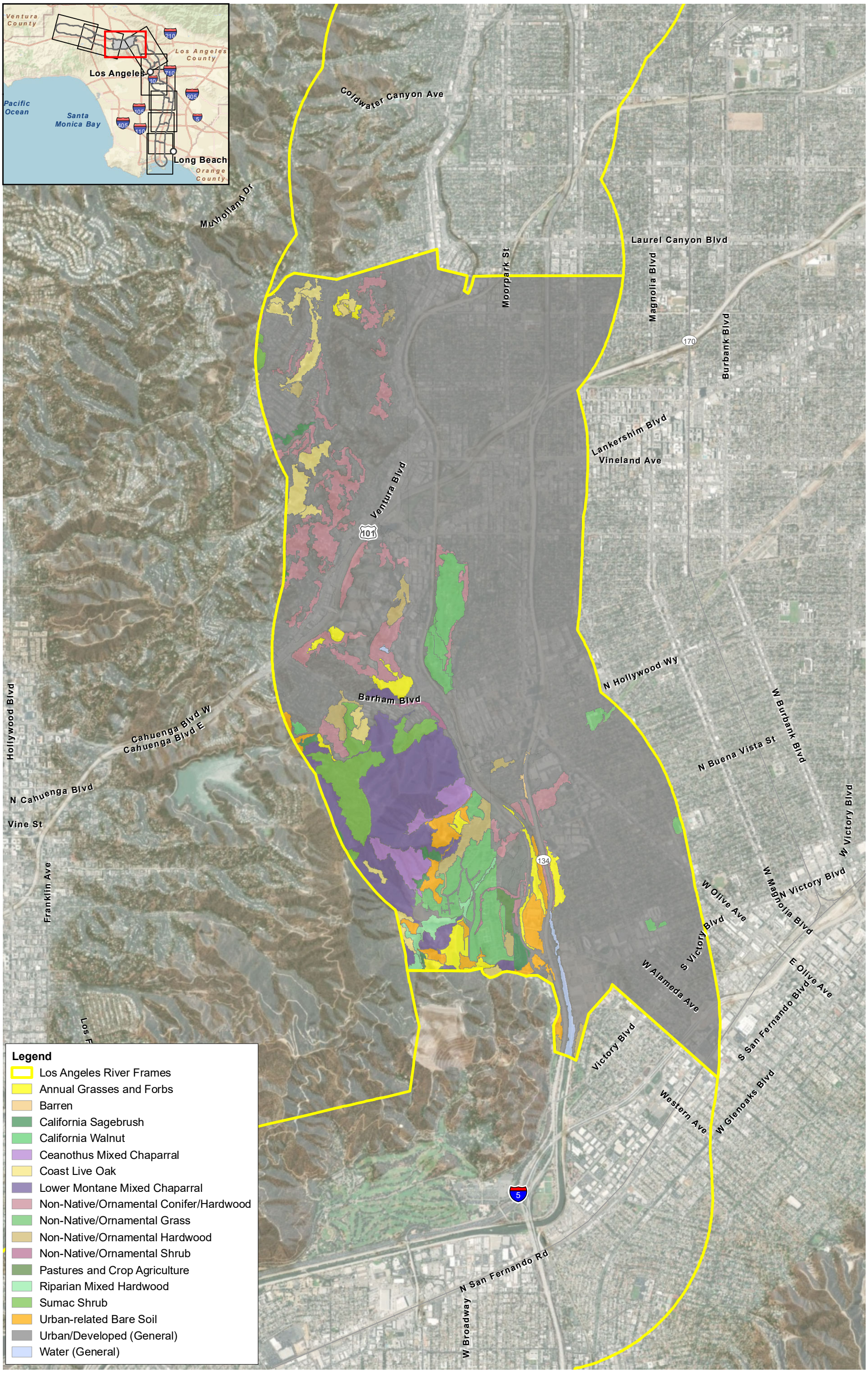


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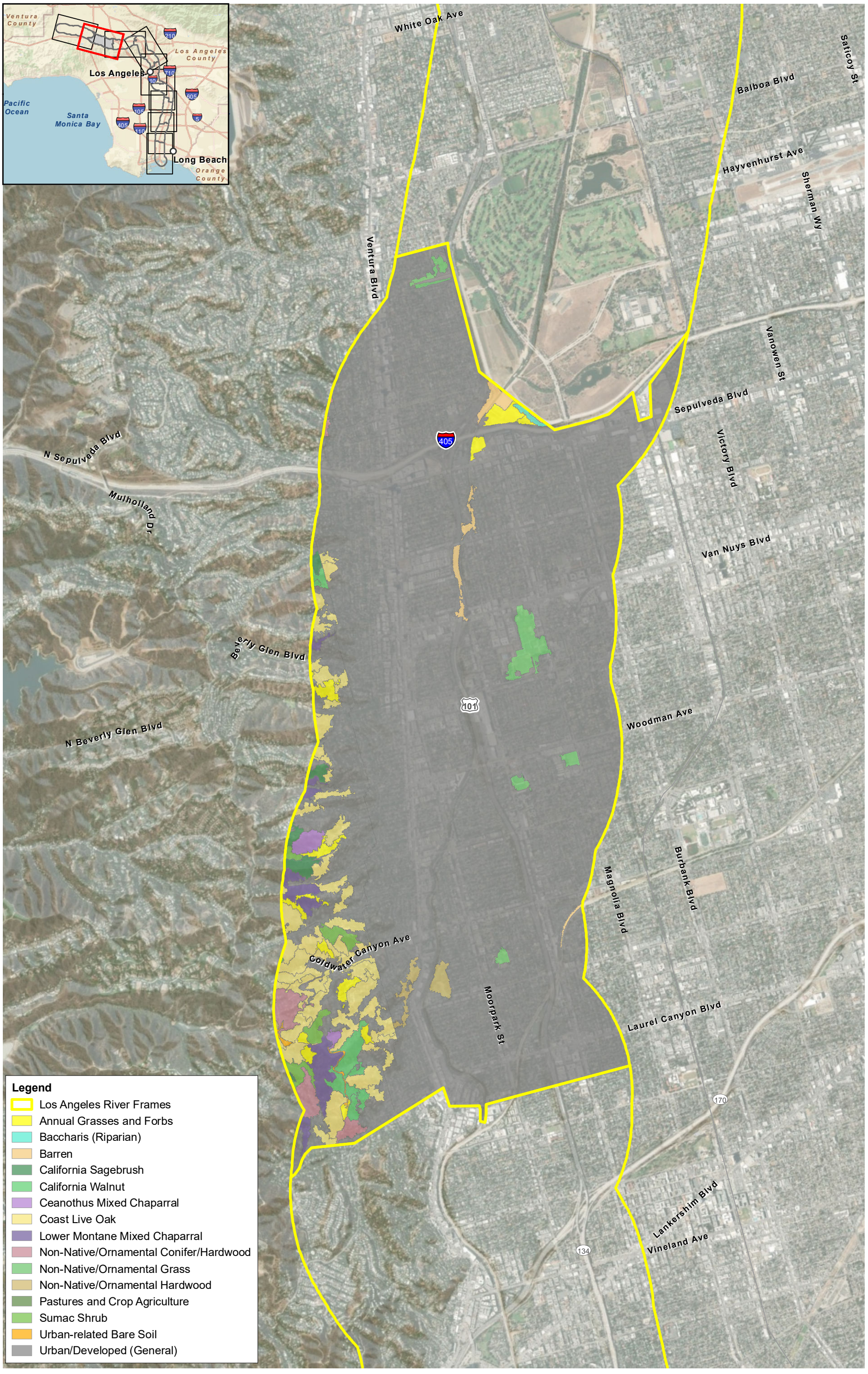
Figure 3.3-8
Land Cover and Vegetation Communities within Frame 7



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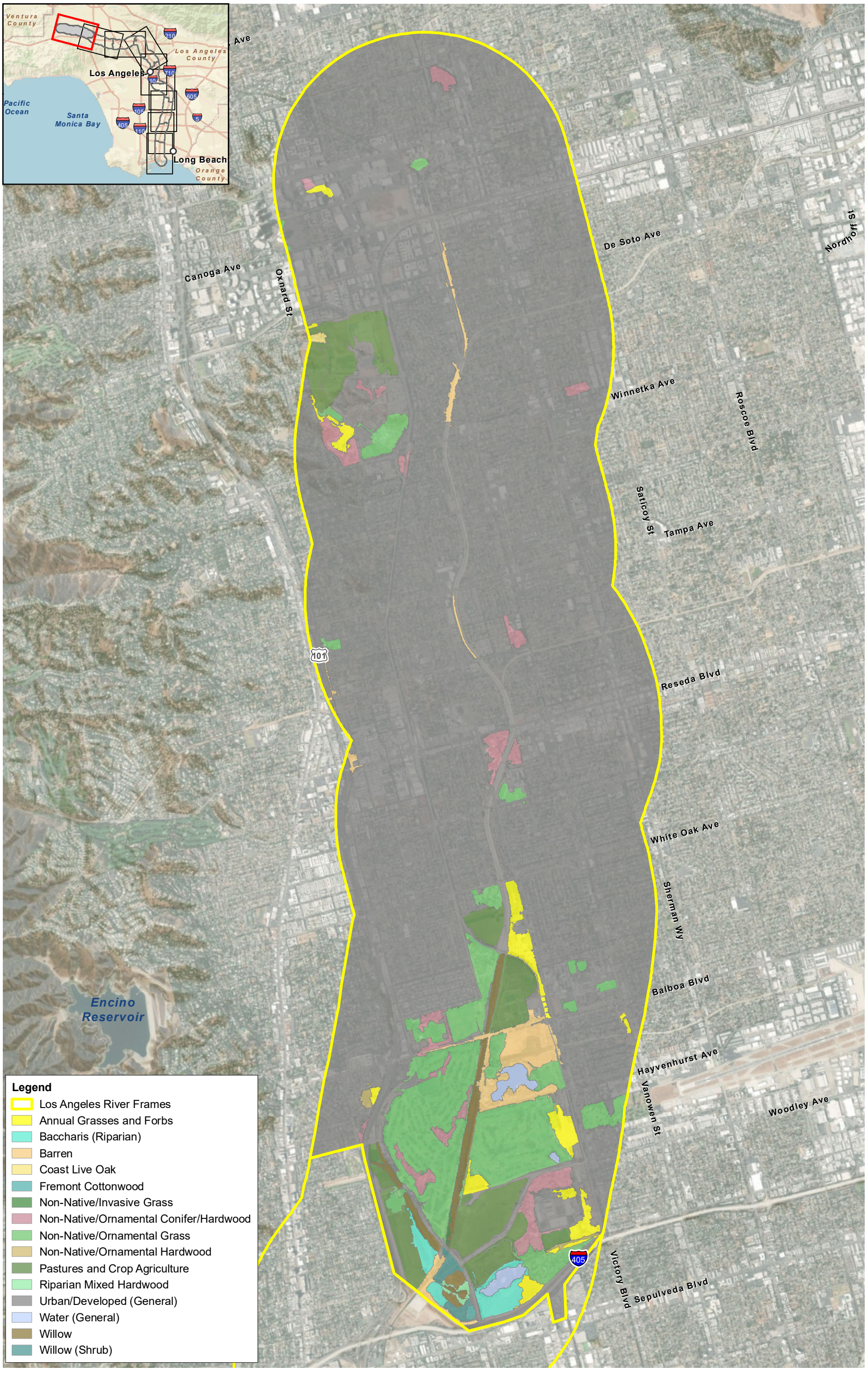
Source: CALVEG; ESRI

Figure 3.3.9
Land Cover and Vegetation Communities within Frame 8



Source: CALVEG; ESRI

Figure 3.3-10
Land Cover and Vegetation Communities within Frame 9

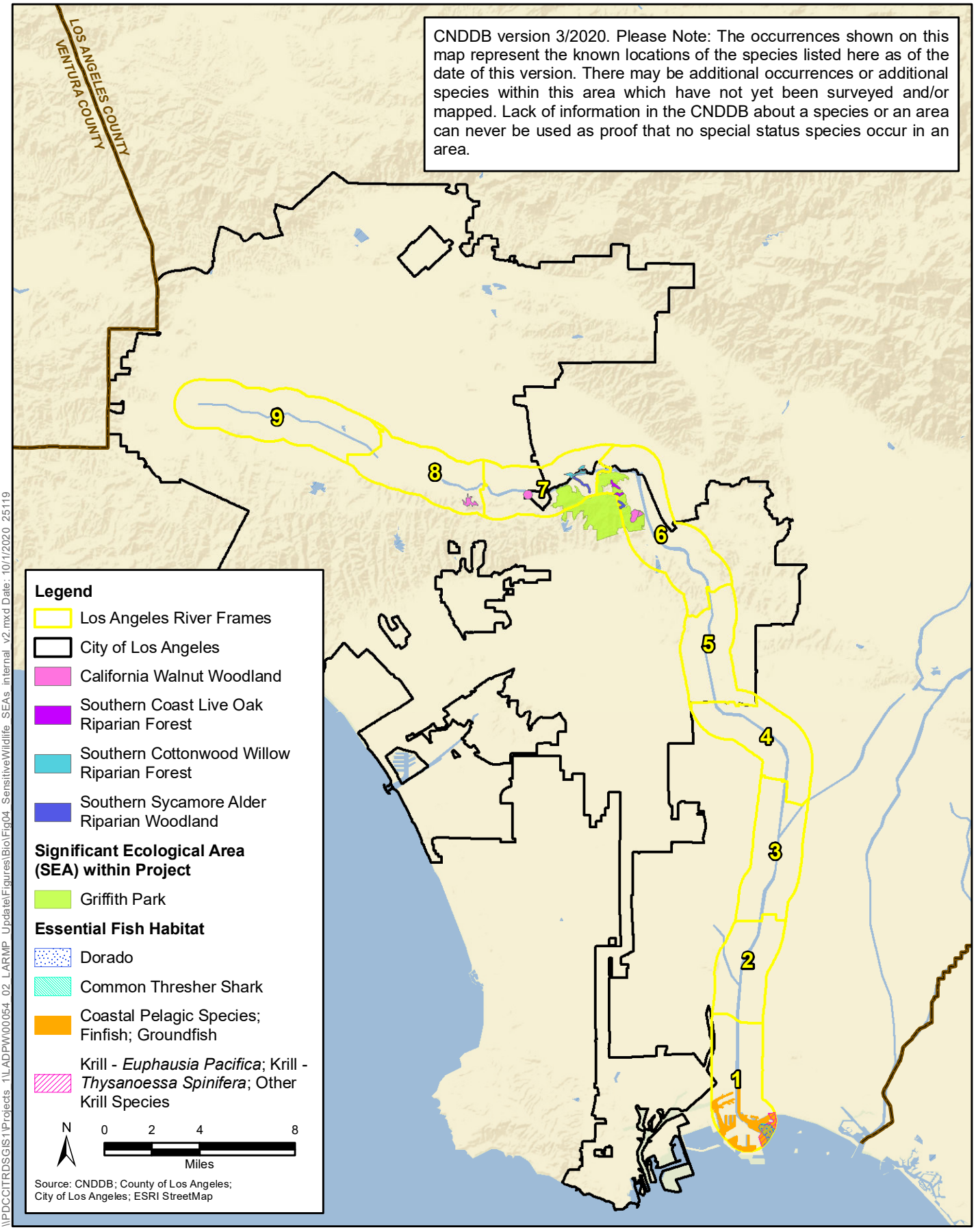


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Figure 3.3-11
CNDDB Special-Status Vegetation Communities, Significant Ecological Areas and Essential Fish Habitat

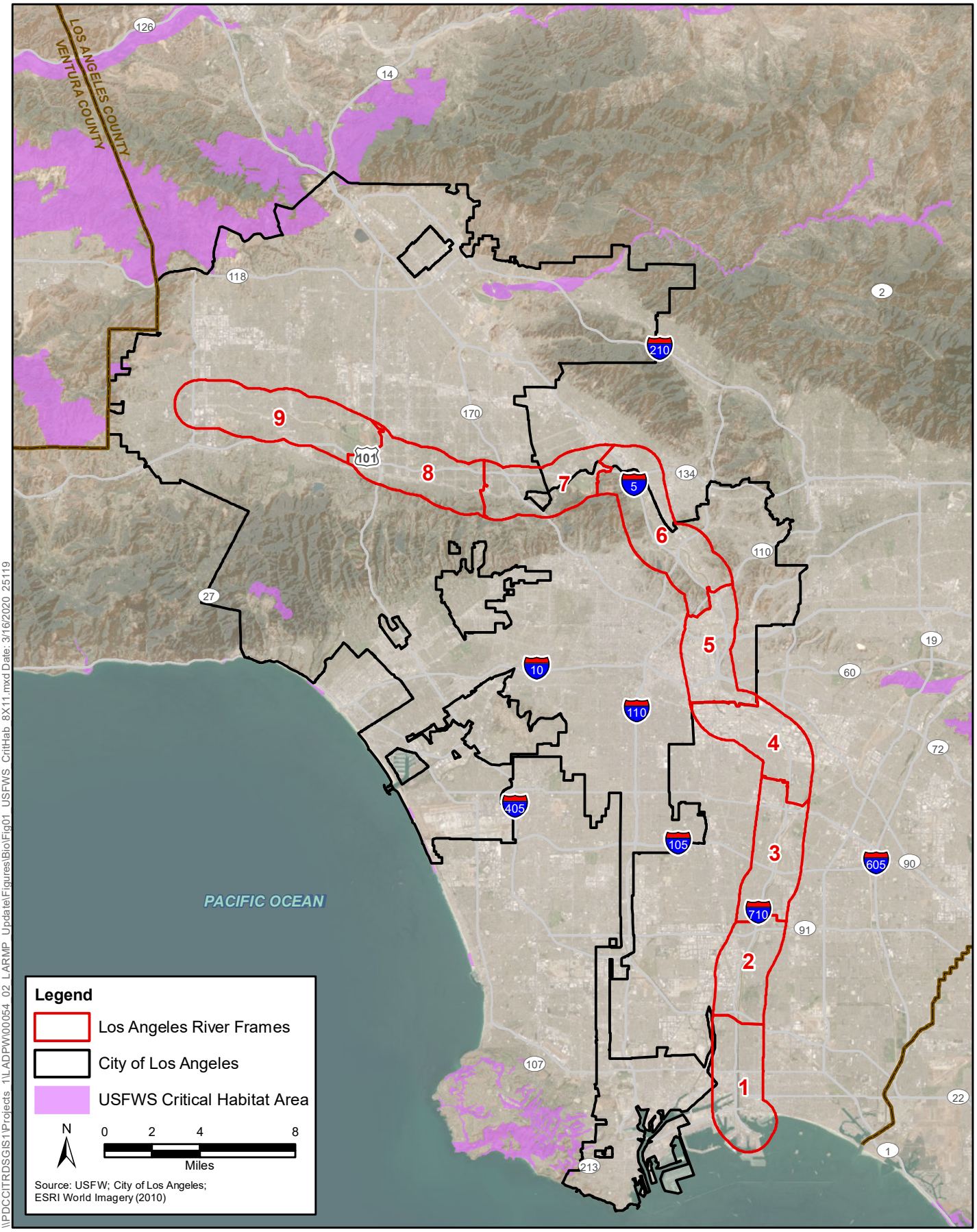

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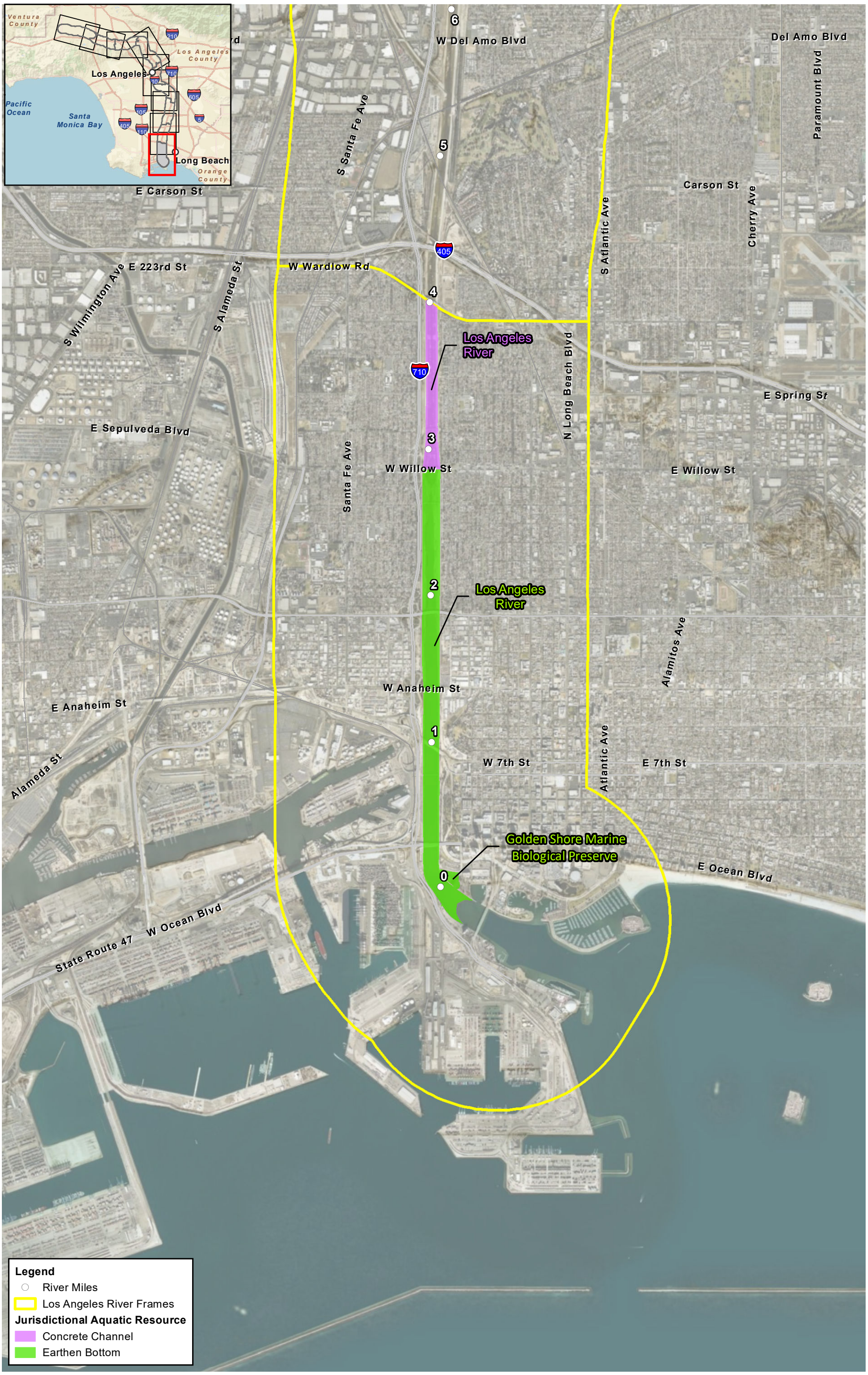
Figure 3.3-12
USFWS Critical Habitat



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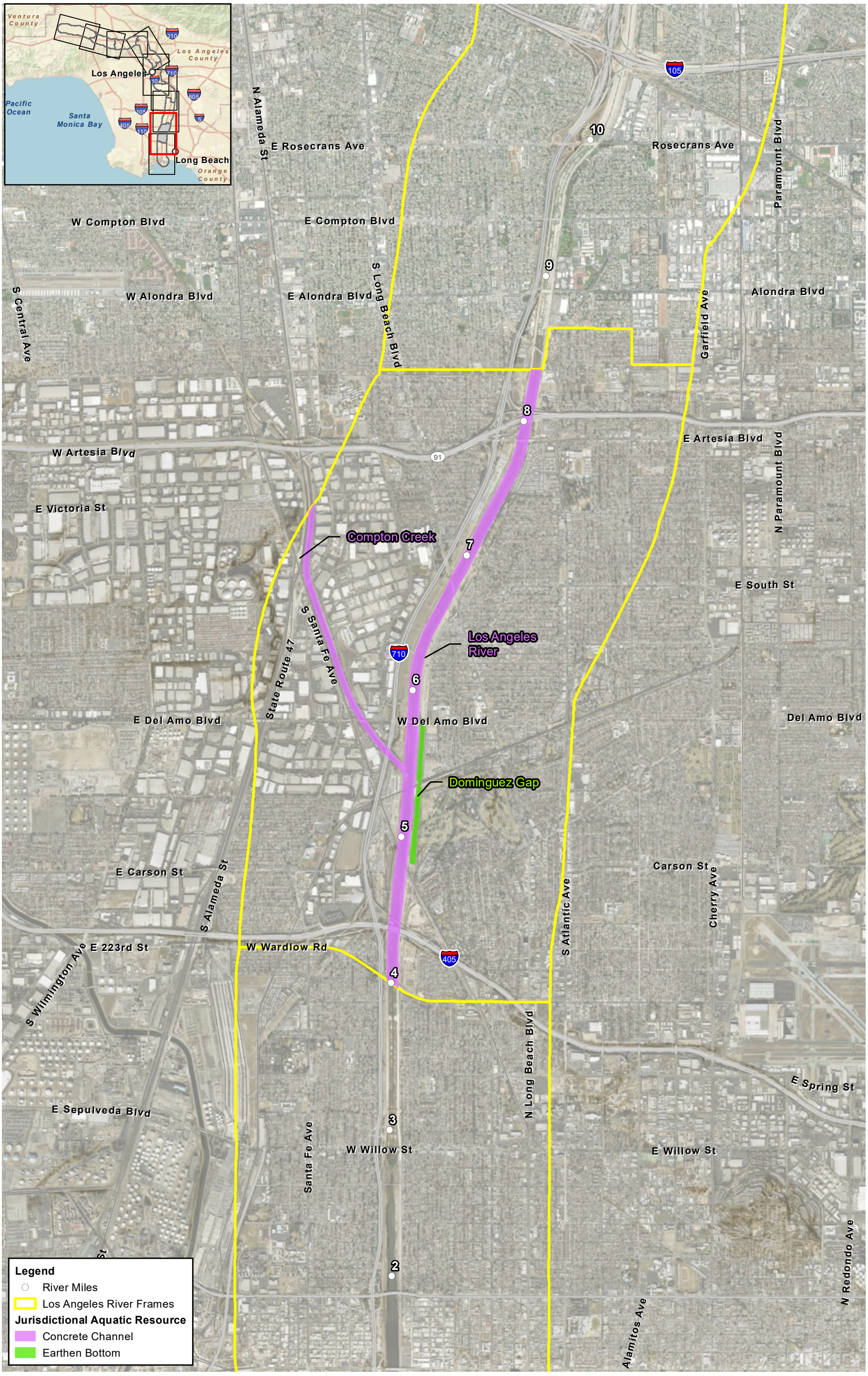
Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-13
Jurisdictional Aquatic Resources within Frame 1



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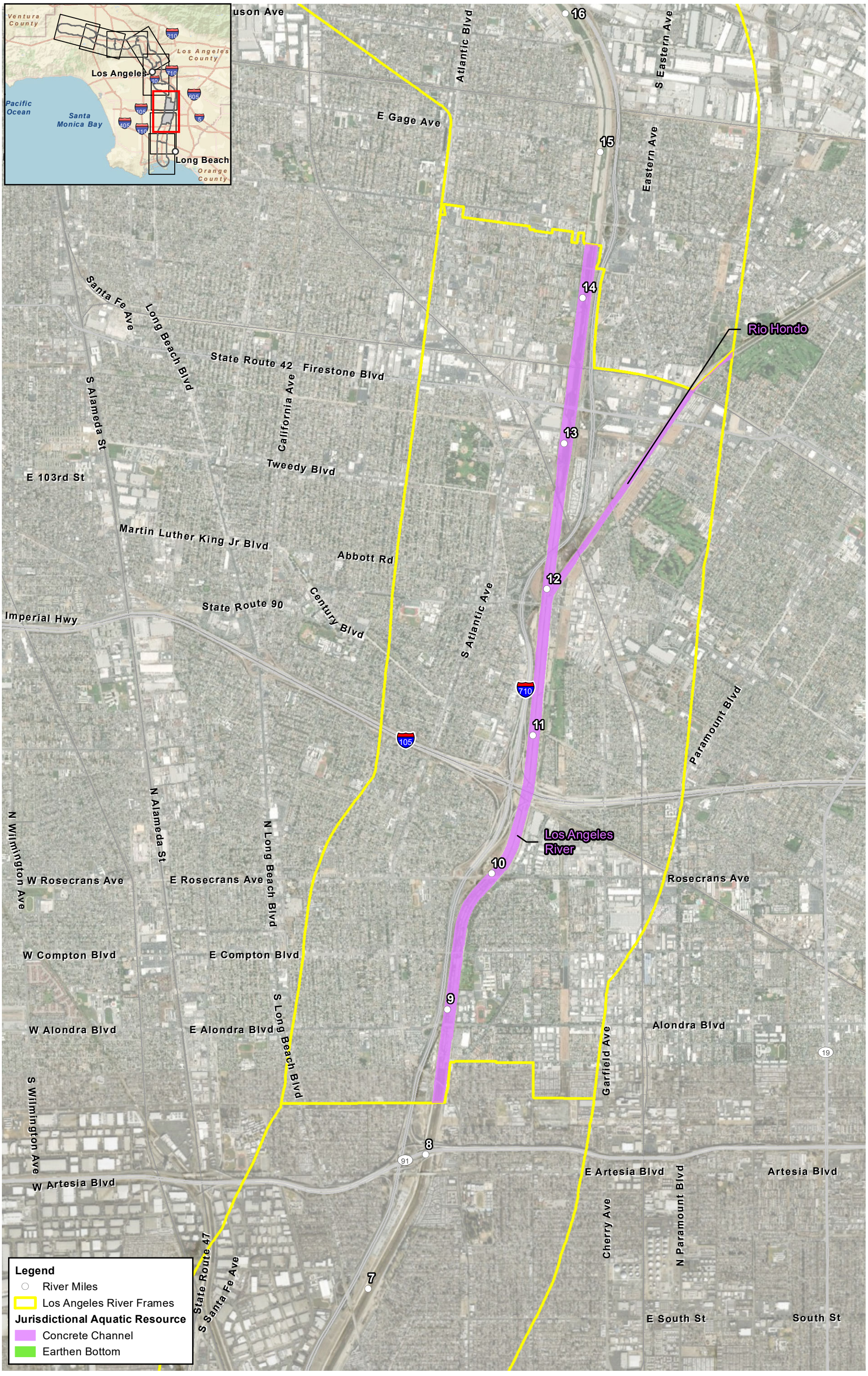
Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-14
Jurisdictional Aquatic Resources within Frame 2



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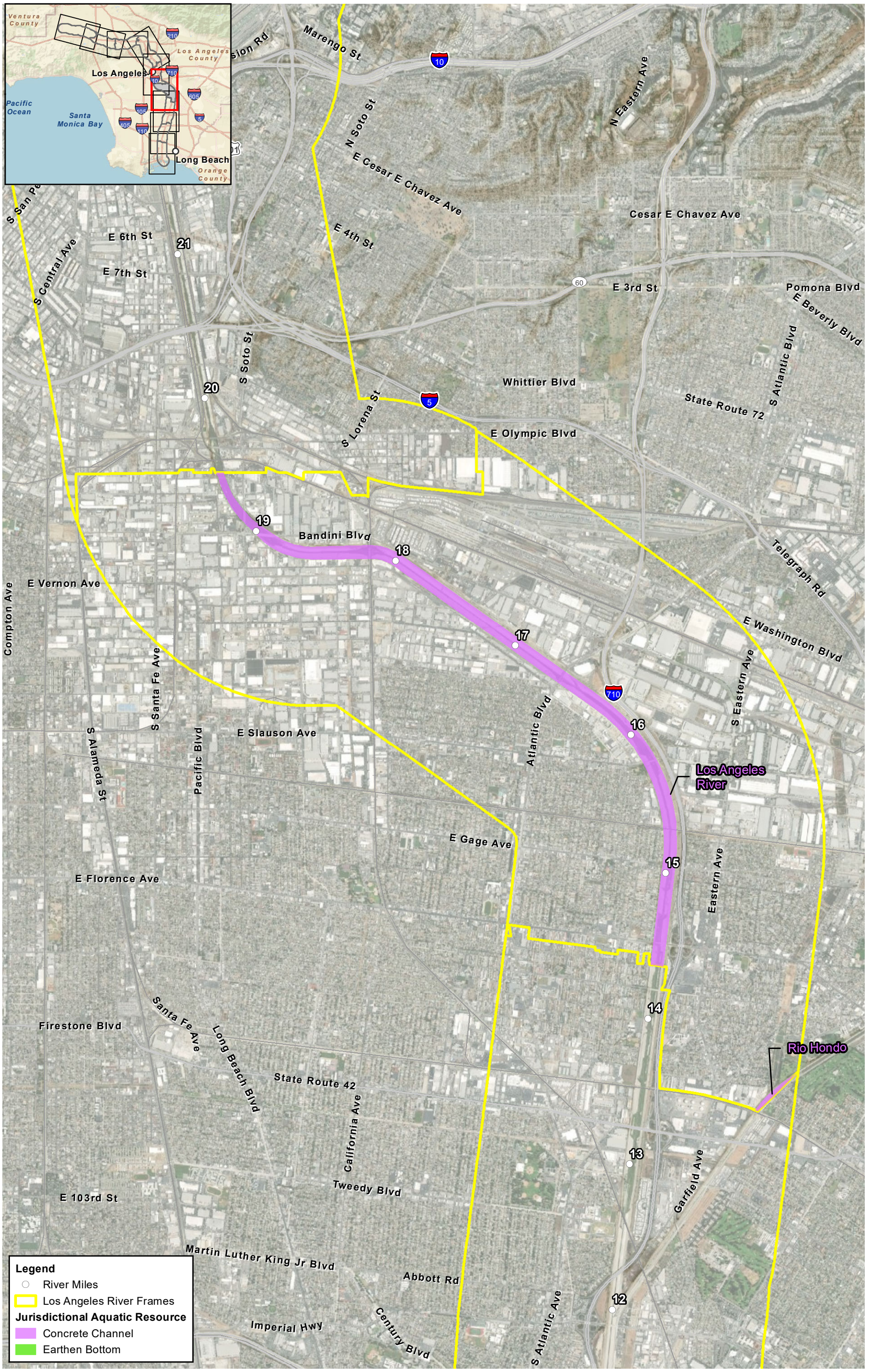
Source: NDH;
County of Los Angeles; ESRI

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

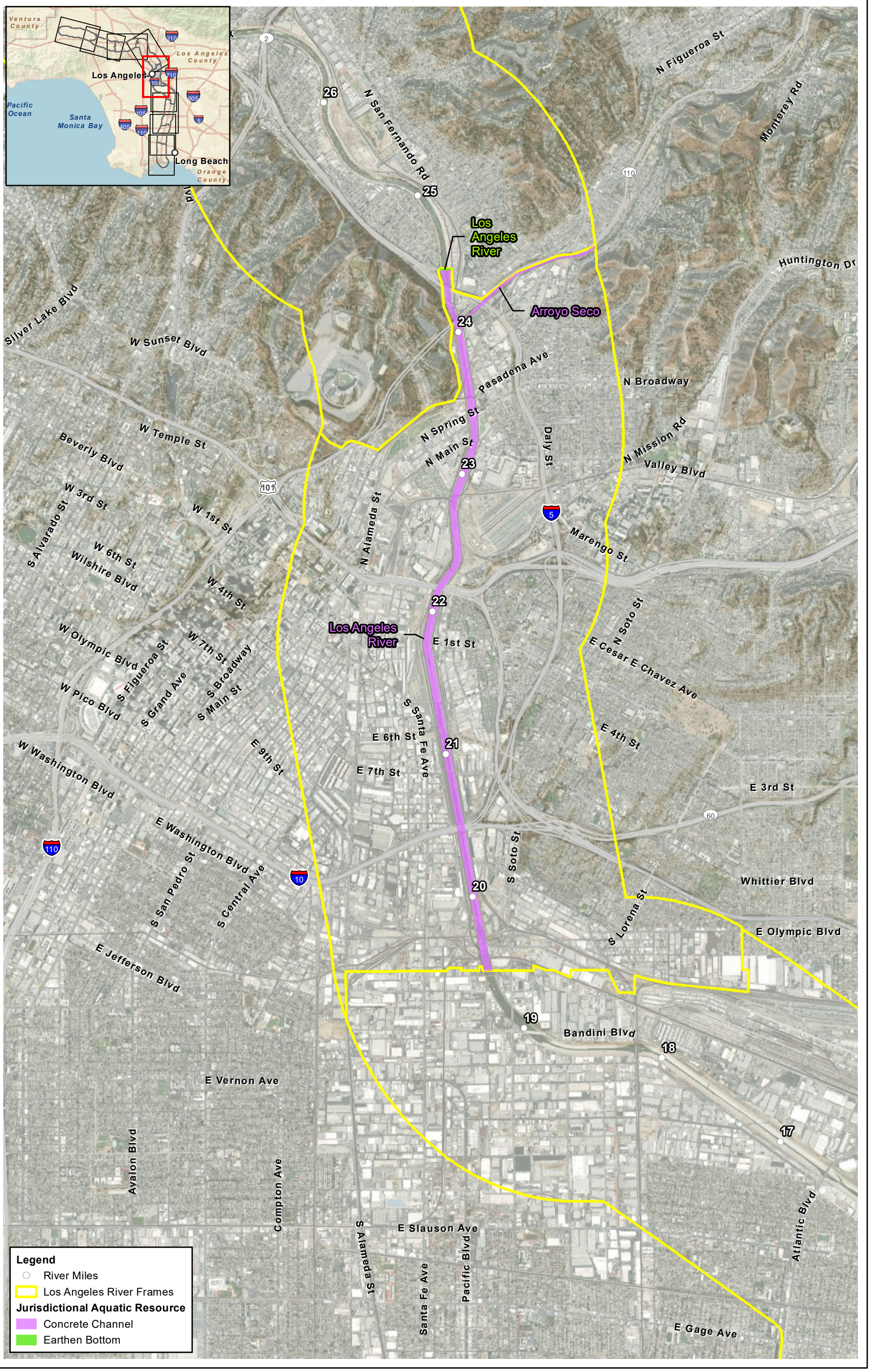


Figure 3.3-17
Jurisdictional Aquatic Resources within Frame 5

Source: NDH;
County of Los Angeles; ESRI

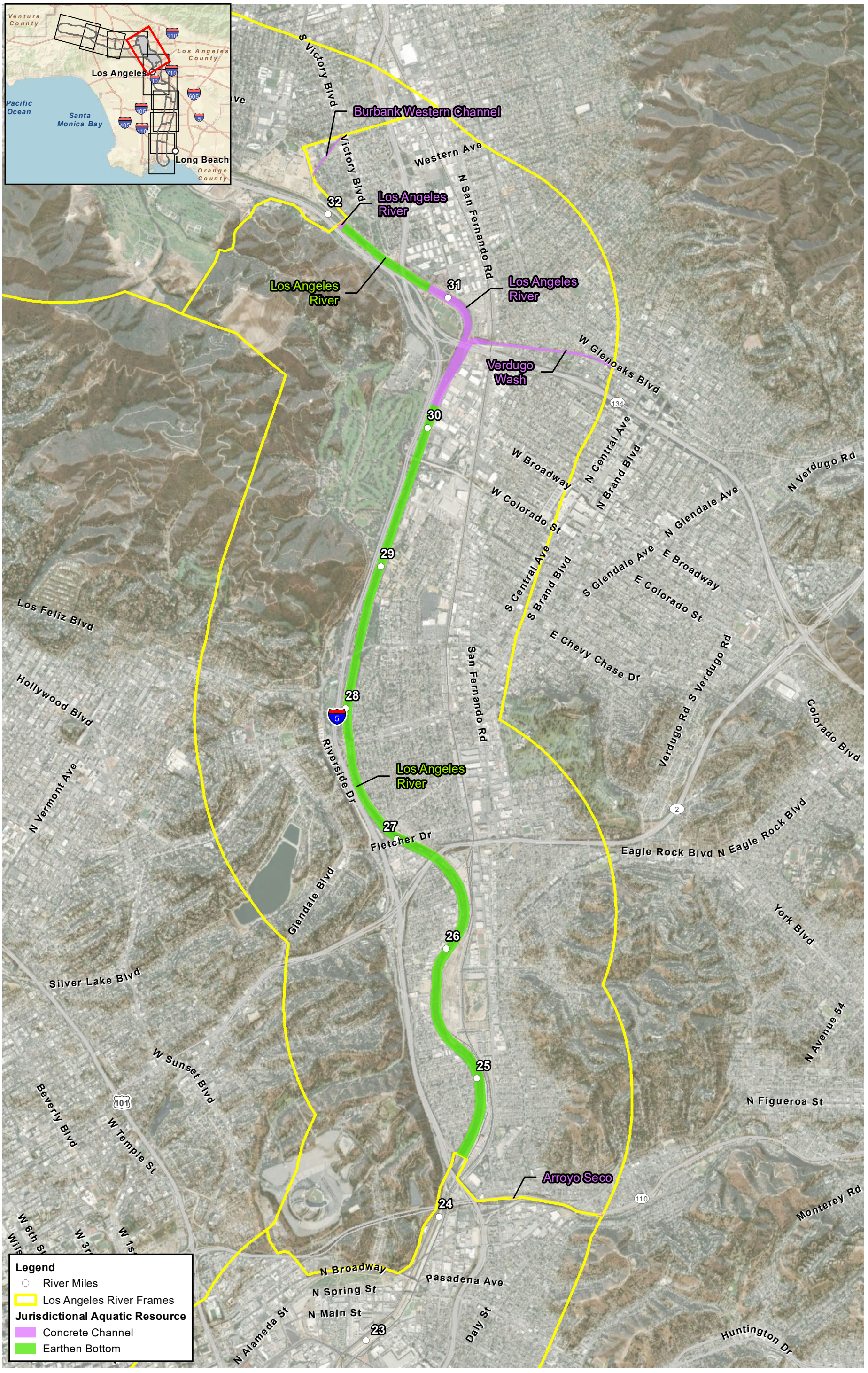
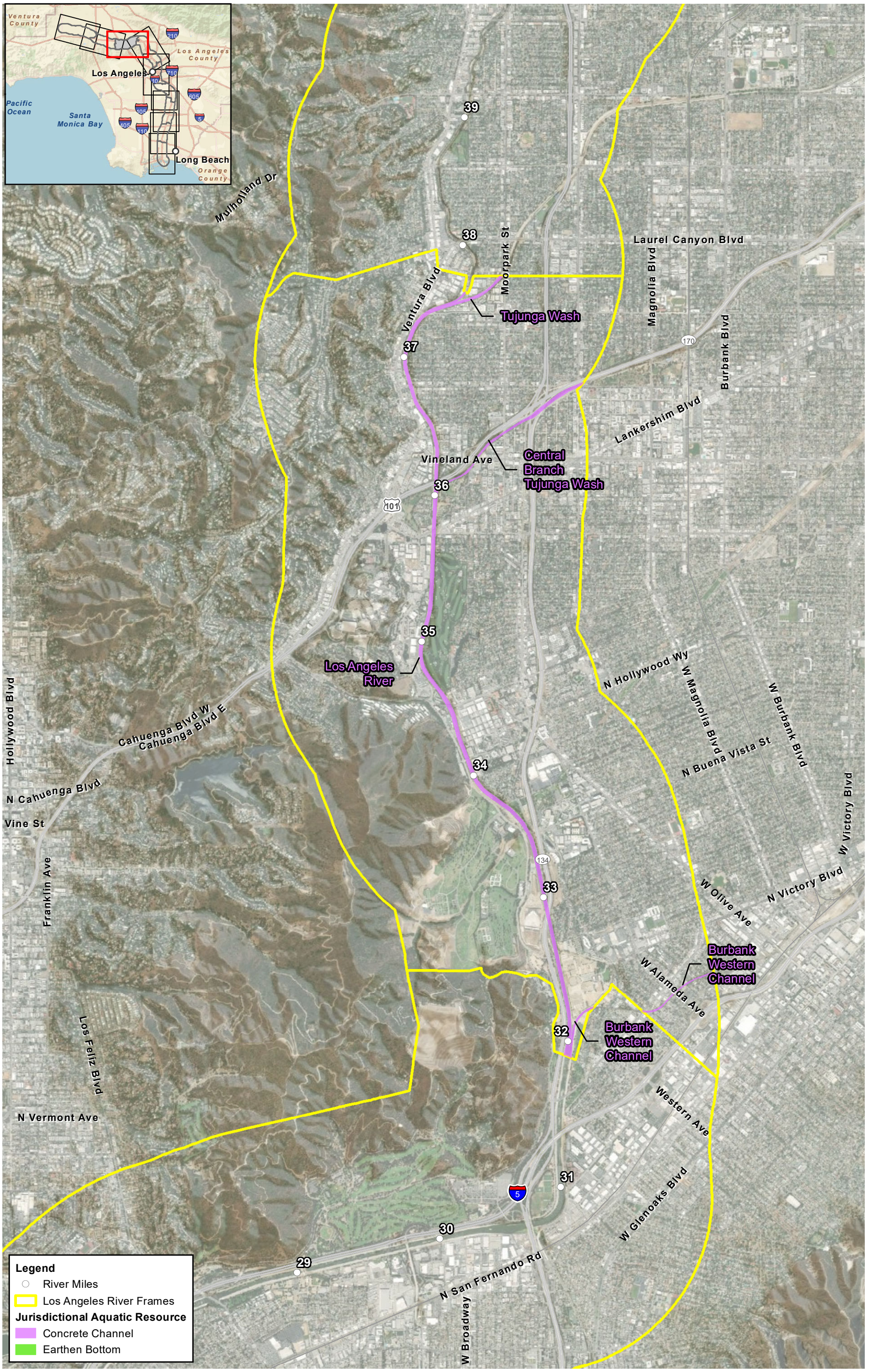


Figure 3.3-18
Jurisdictional Aquatic Resources within Frame 6

Source: NDH;
County of Los Angeles; ESRI



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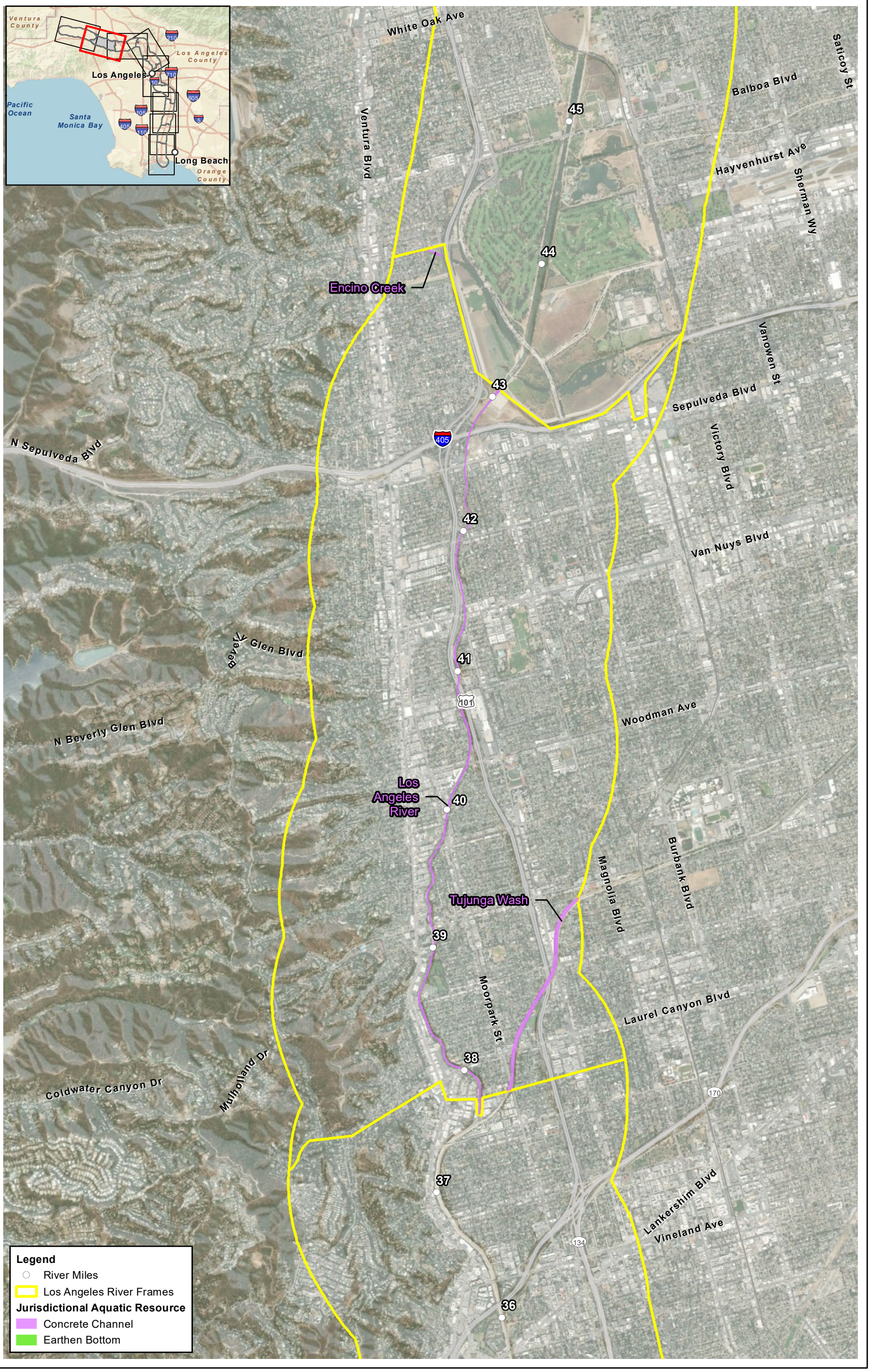
Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-19
Jurisdictional Aquatic Resources within Frame 7



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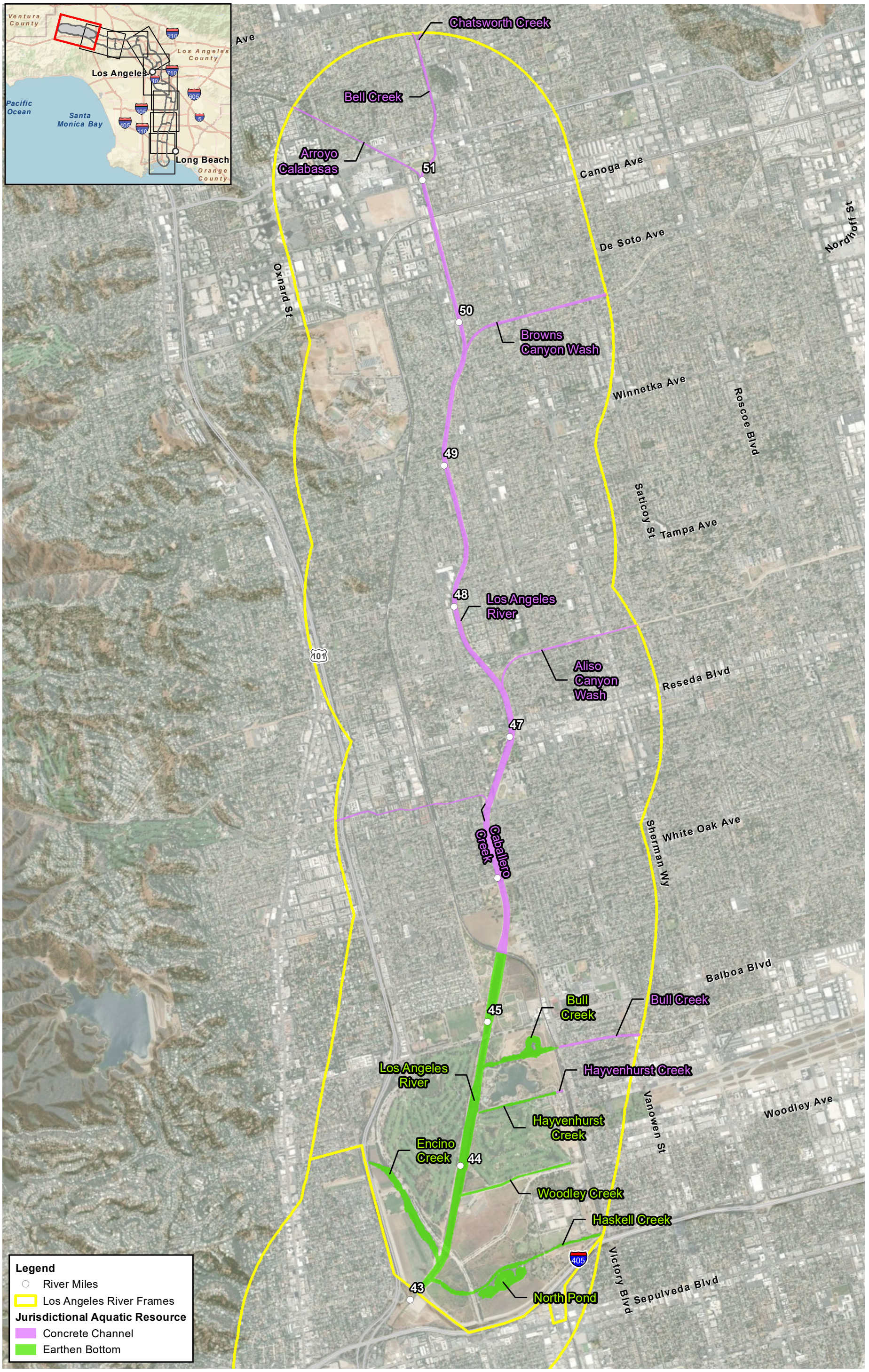
1:39,000

N

Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-20
Jurisdictional Aquatic Resources within Frame 8



Source: NDH;
County of Los Angeles; ESRI

Figure 3.3-21
Jurisdictional Aquatic Resources within Frame 9

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.

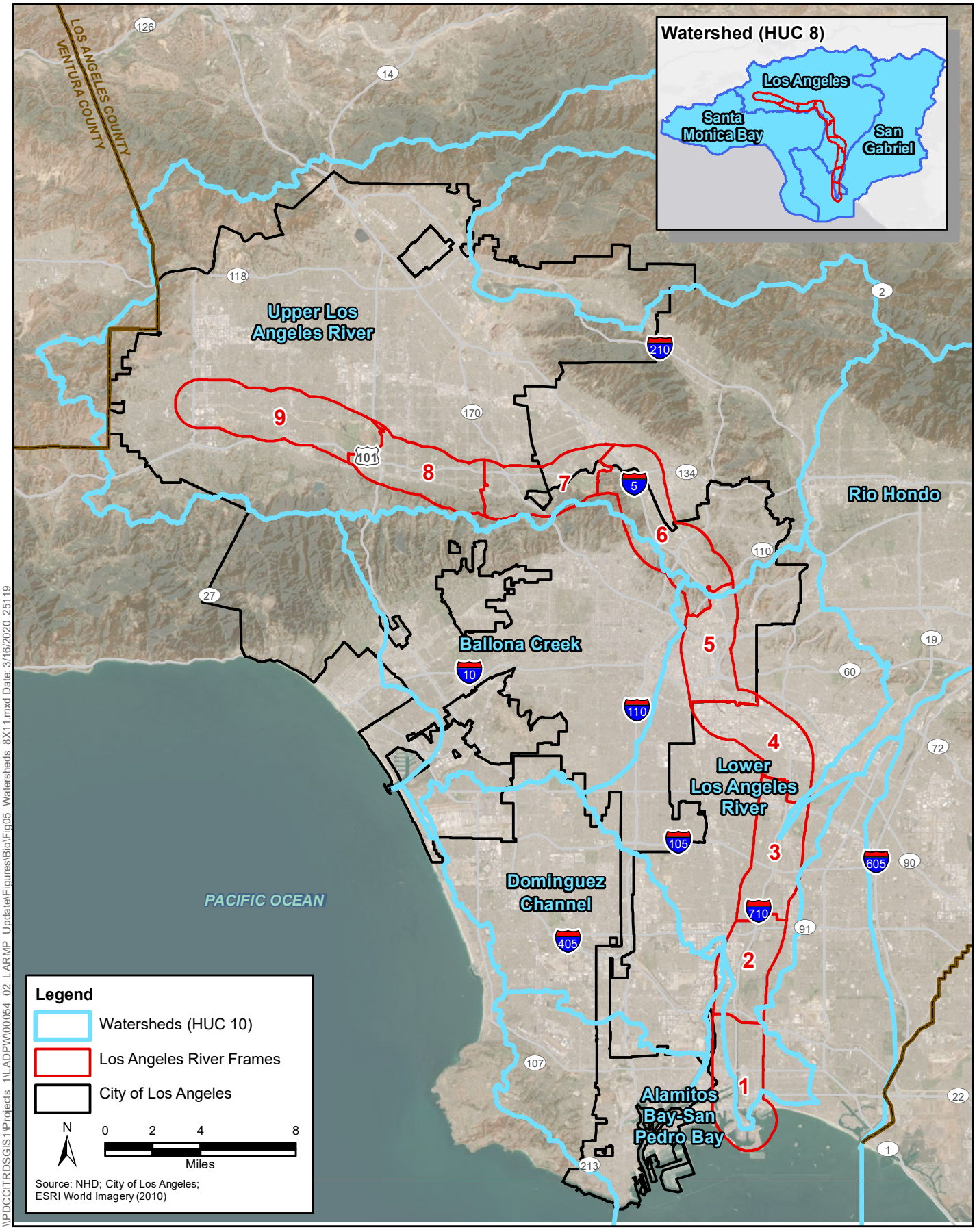


Figure 3.3-22
Watersheds

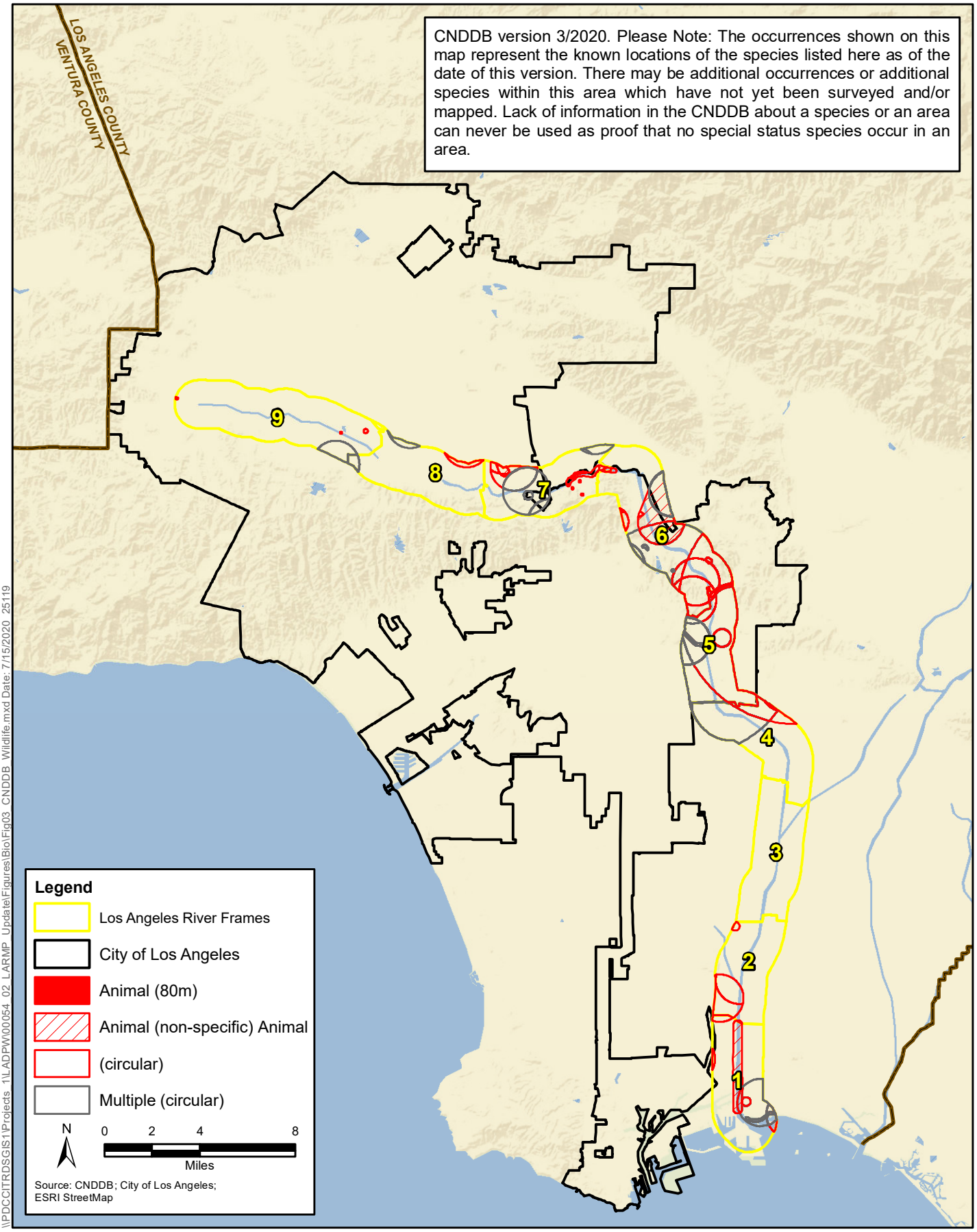


Figure 3.3-23
CNDDB Special-Status Wildlife within the LA River Biological Study Area

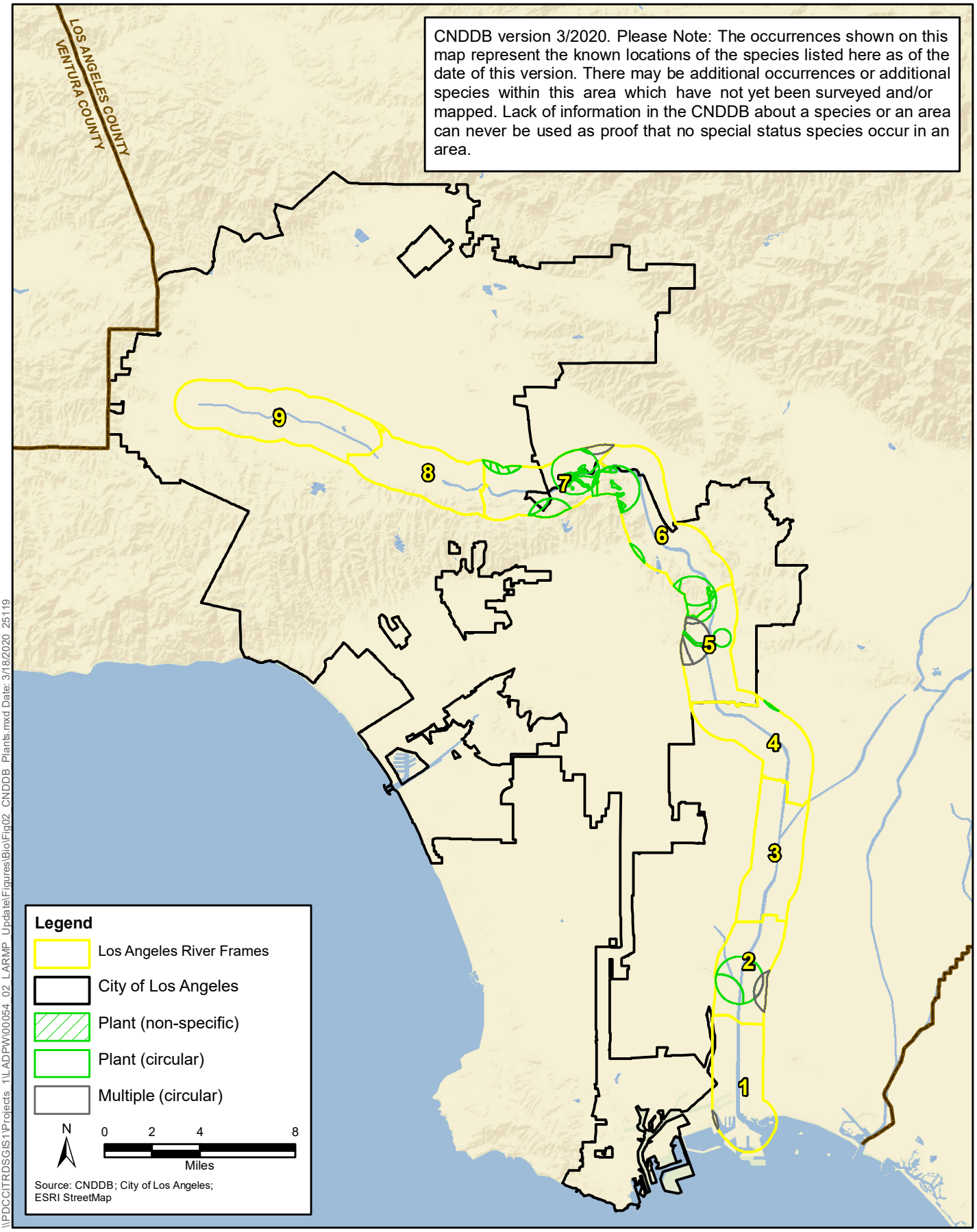
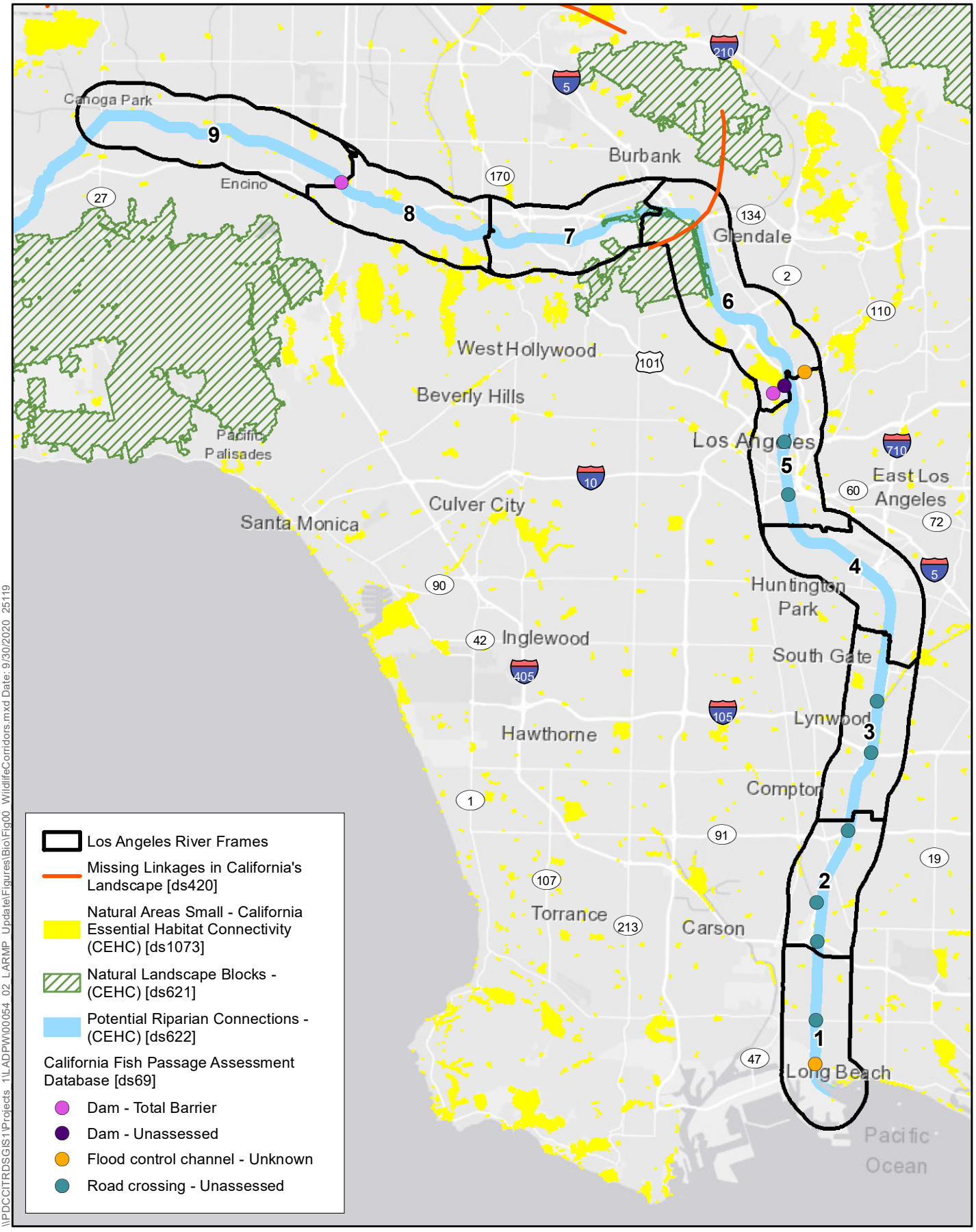


Figure 3.3-24
CNDDB Special-Status Plants within the LA River Biological Study Area

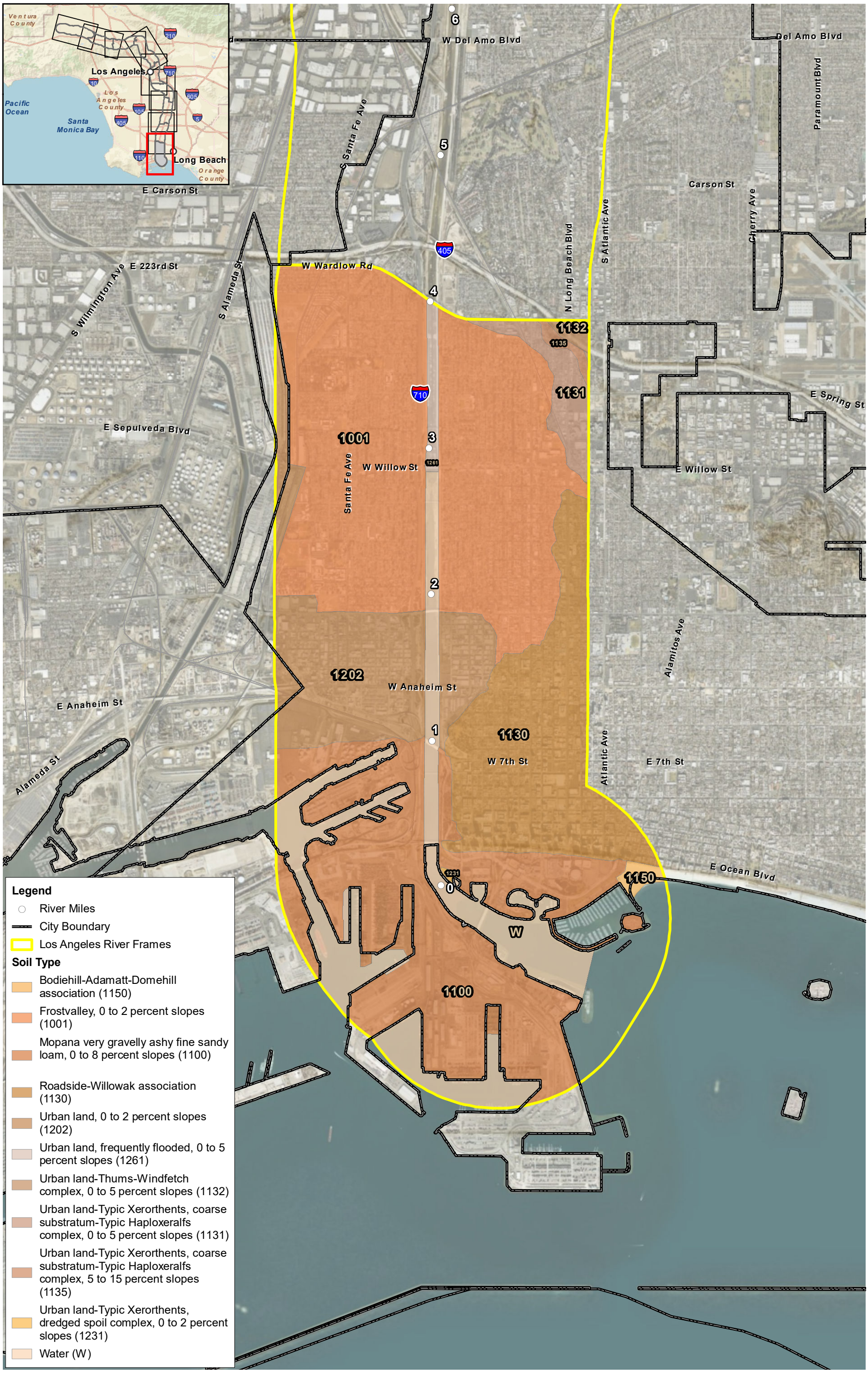


\\PDCCITRDSGIS1\Projects 1\LADPW\00054 02 LARMP UpdateFigures\Bio\Fig00 WildlifeCorridors.mxd Date: 9/30/2020 25119

Source: CDFW; Los Angeles County; ESRI StreetMap
Map Prepared: 9/30/2020

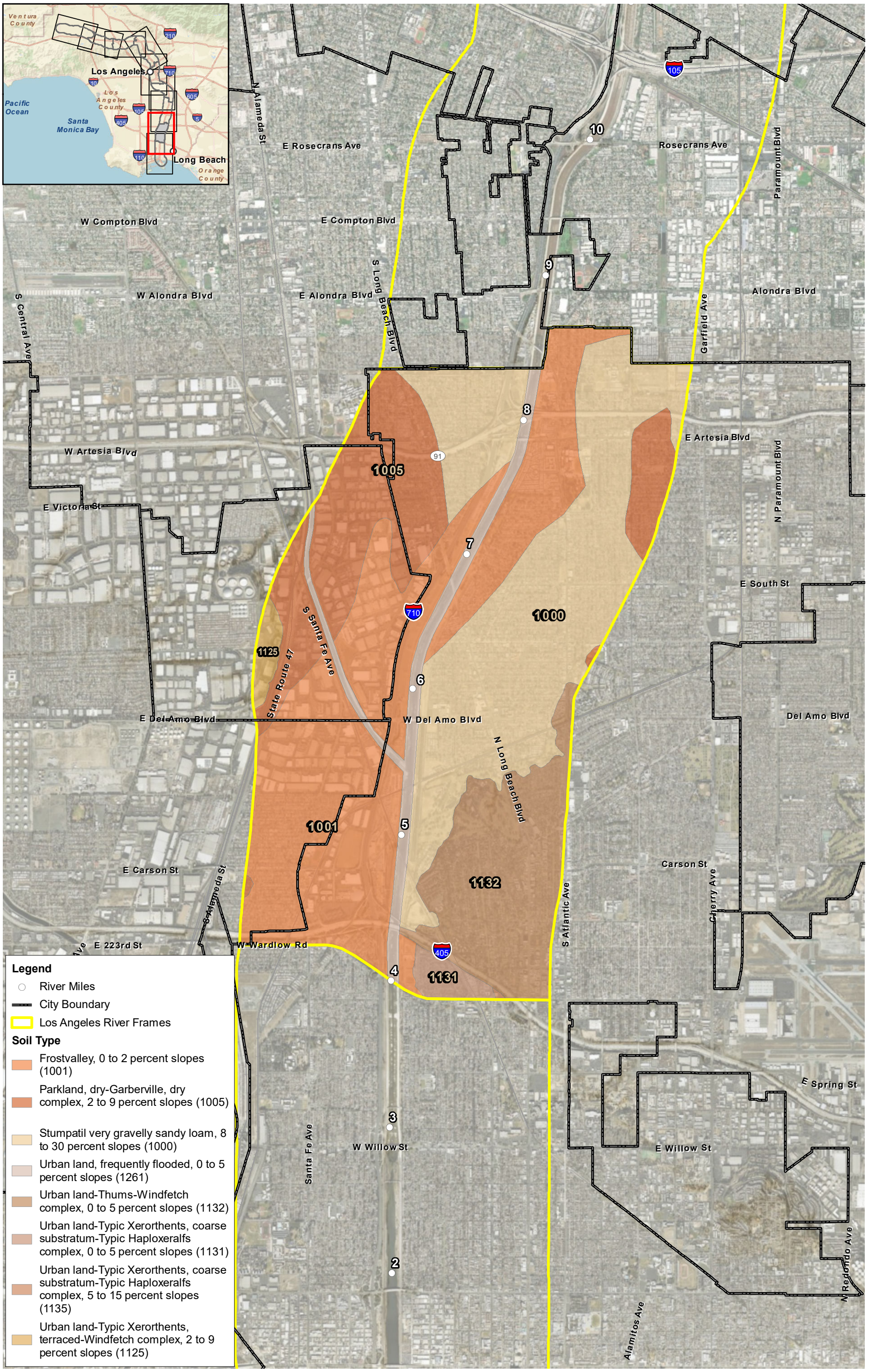
N 0 1 2 4 Miles

Figure 3.3-25
Wildlife Corridors and Linkages in the LA River Biological Study Area



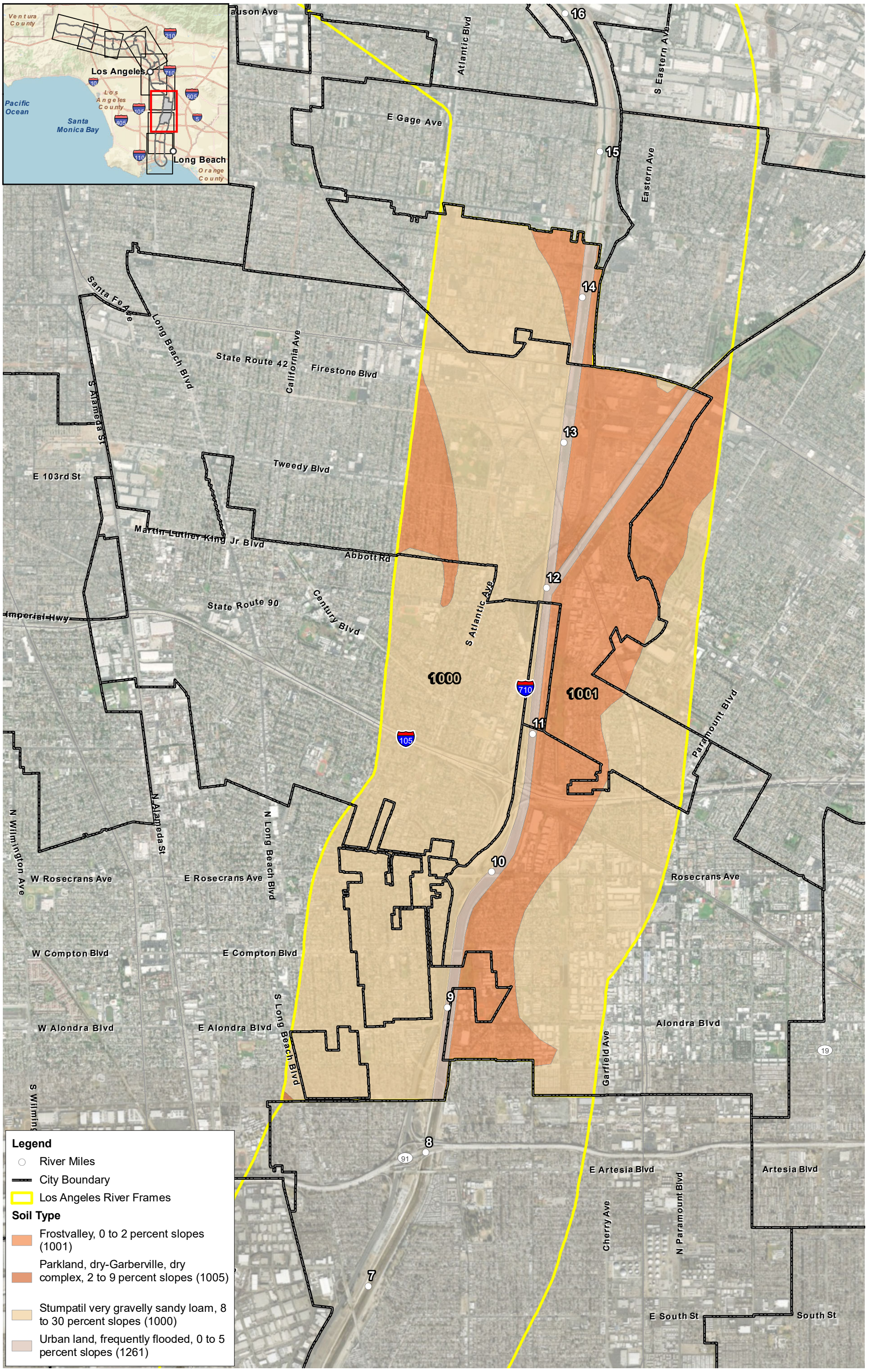
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-26
Frame 1 Soils Map



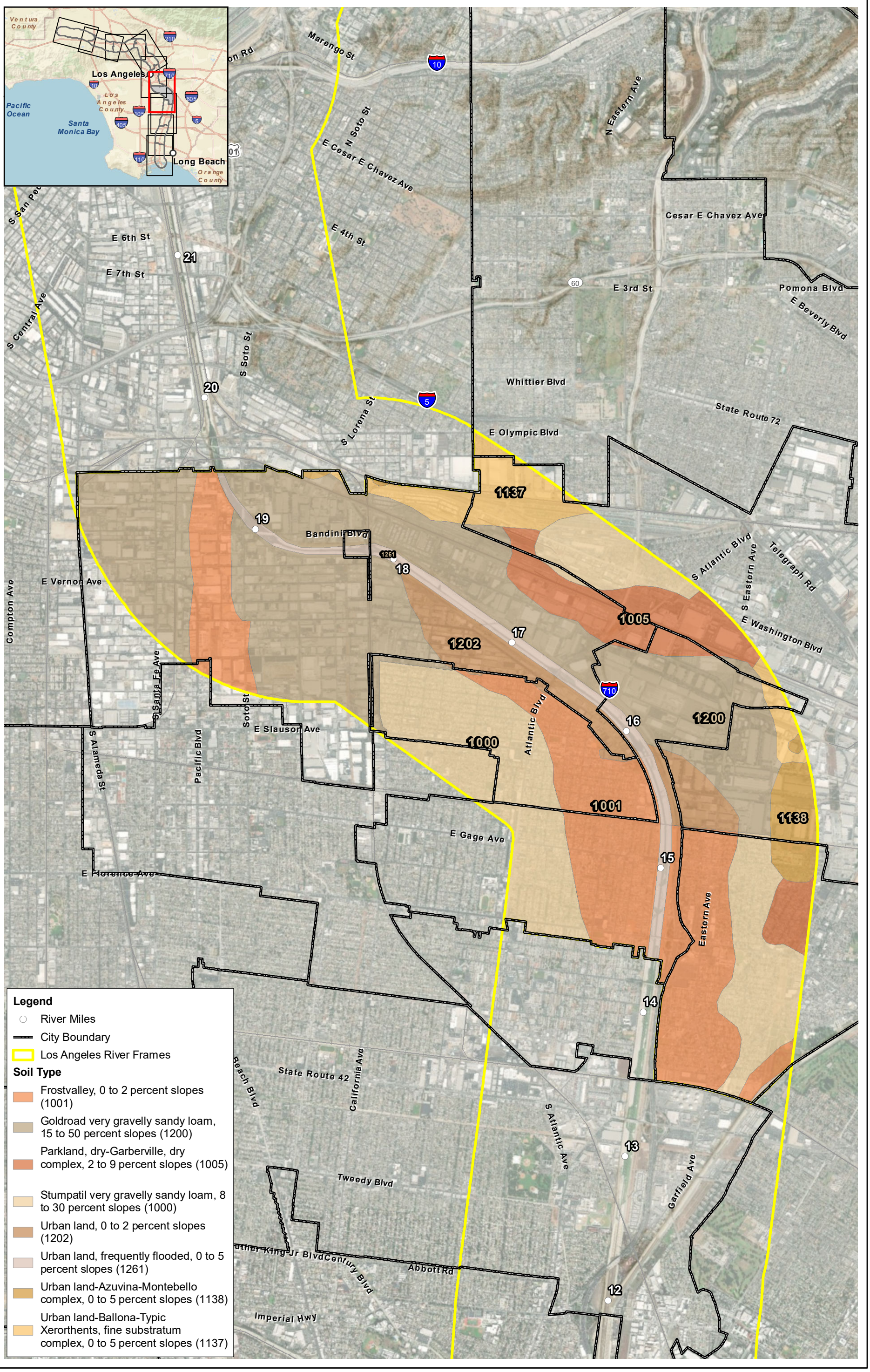
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-27
Frame 2 Soils Map



Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-28
Frame 3 Soils Map



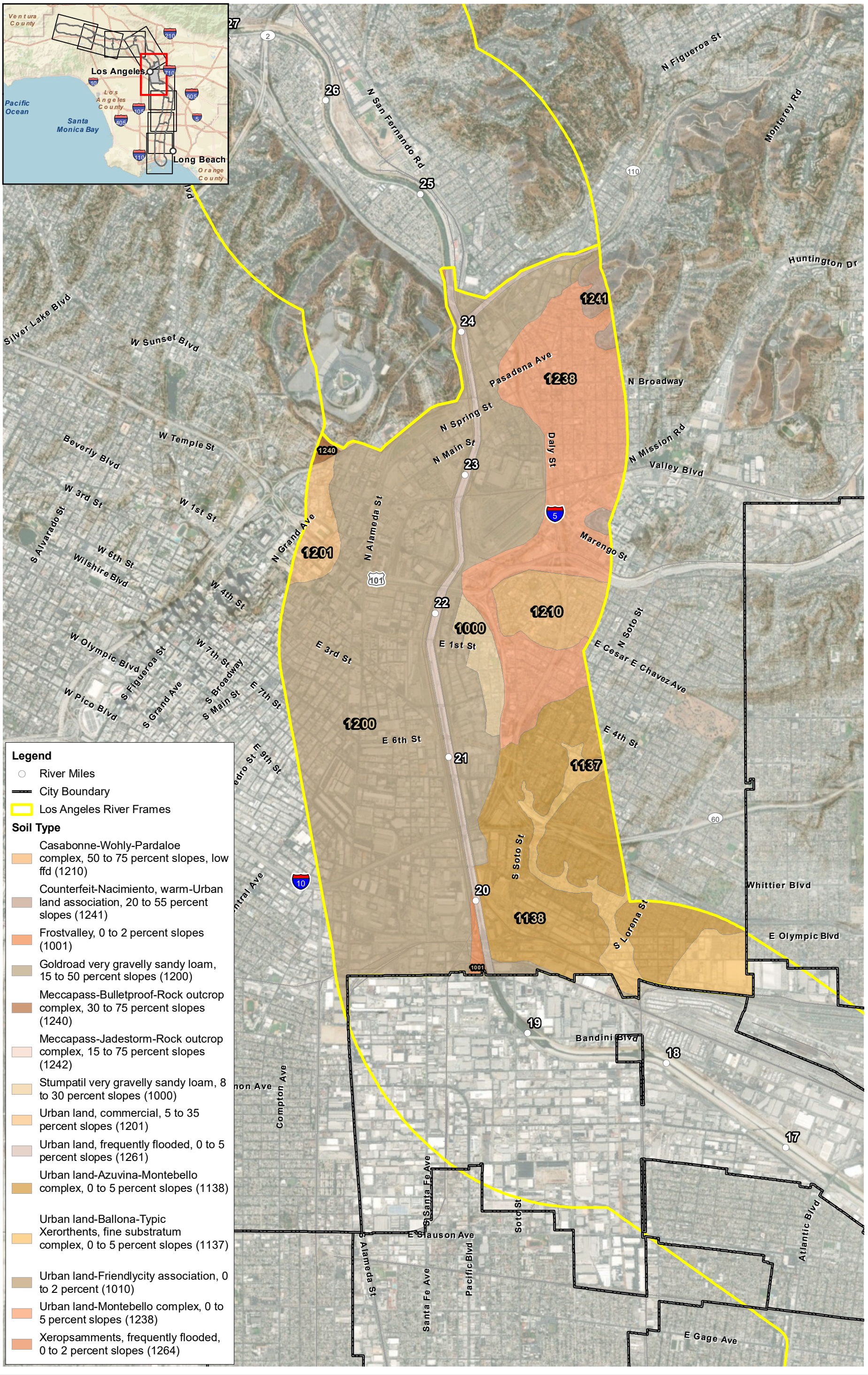
0 1,625 3,250 Feet

1:39,000

N

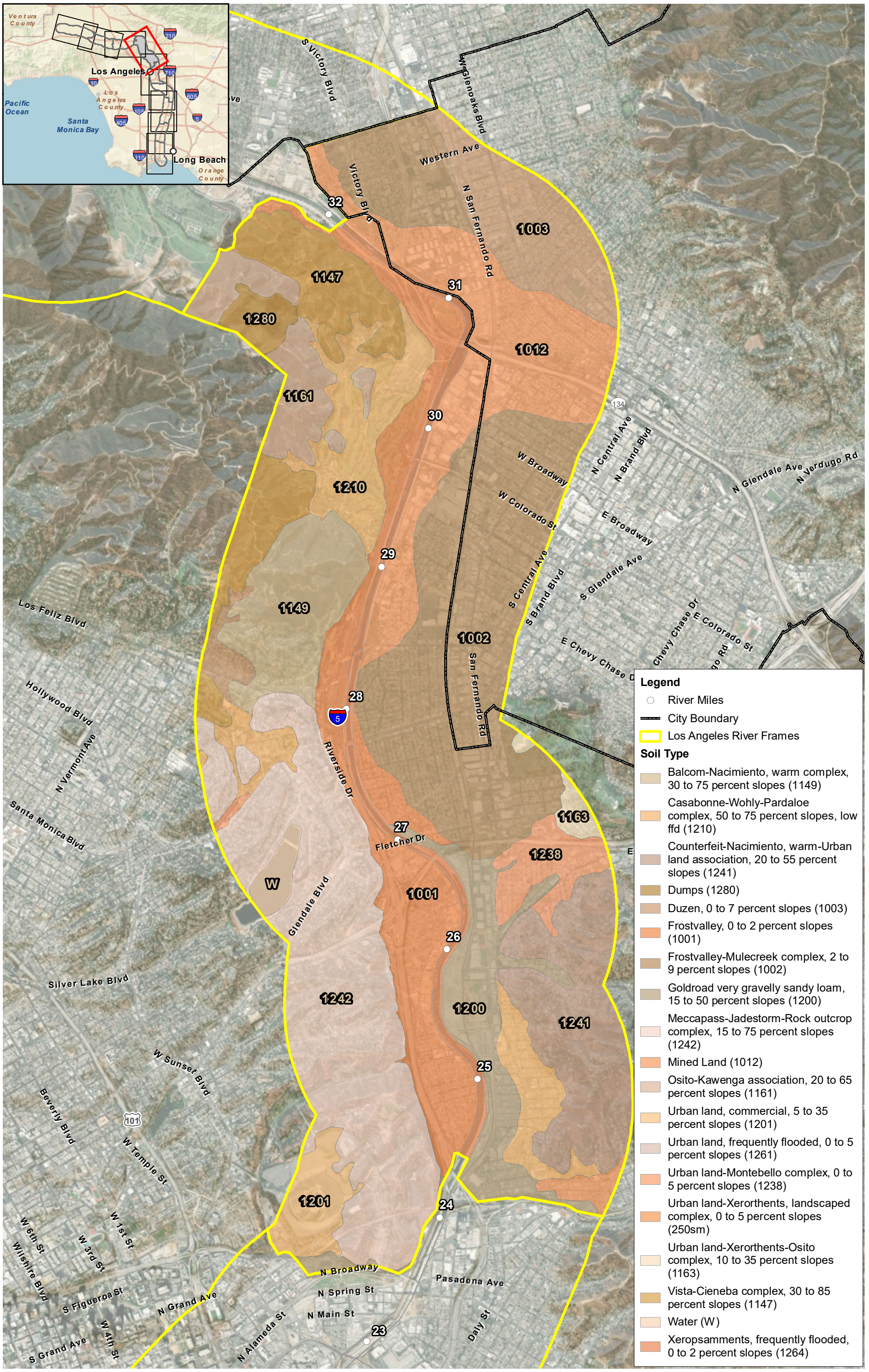
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-29
Frame 4 Soils Map



Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-30
Frame 5 Soils Map

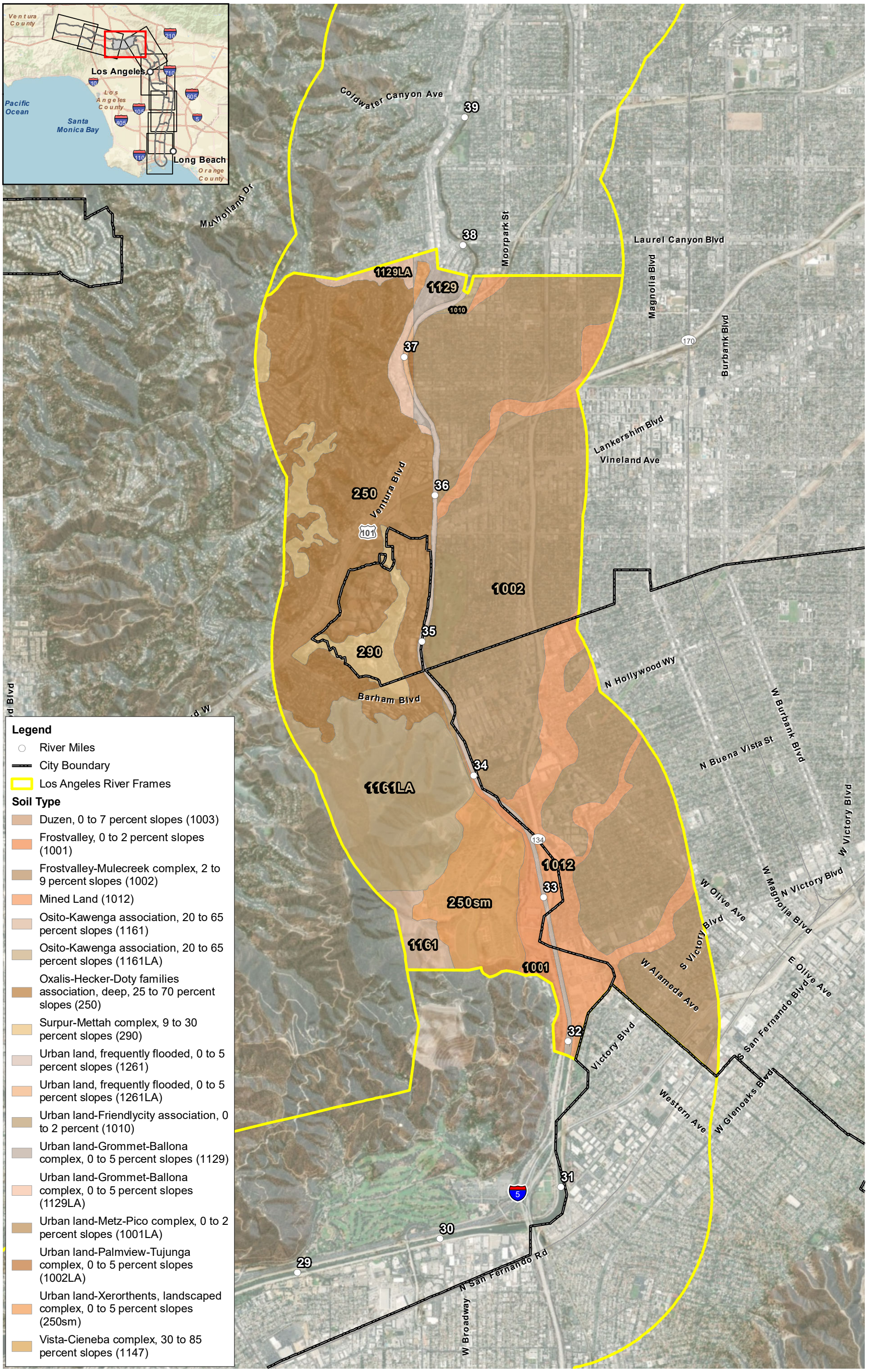


0 1,625 3,250 Feet
1:39,000

N

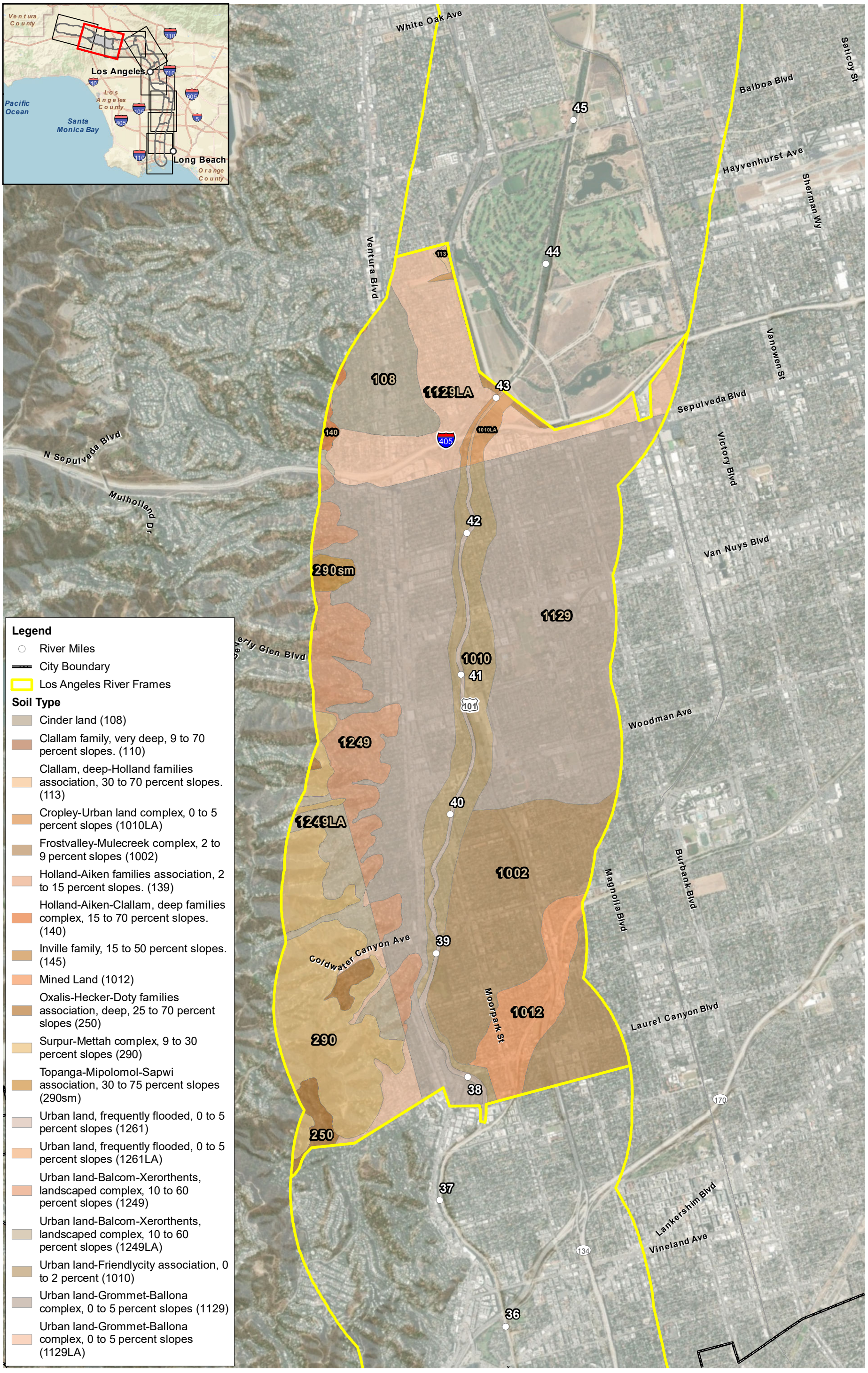
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-31
Frame 6 Soils Map



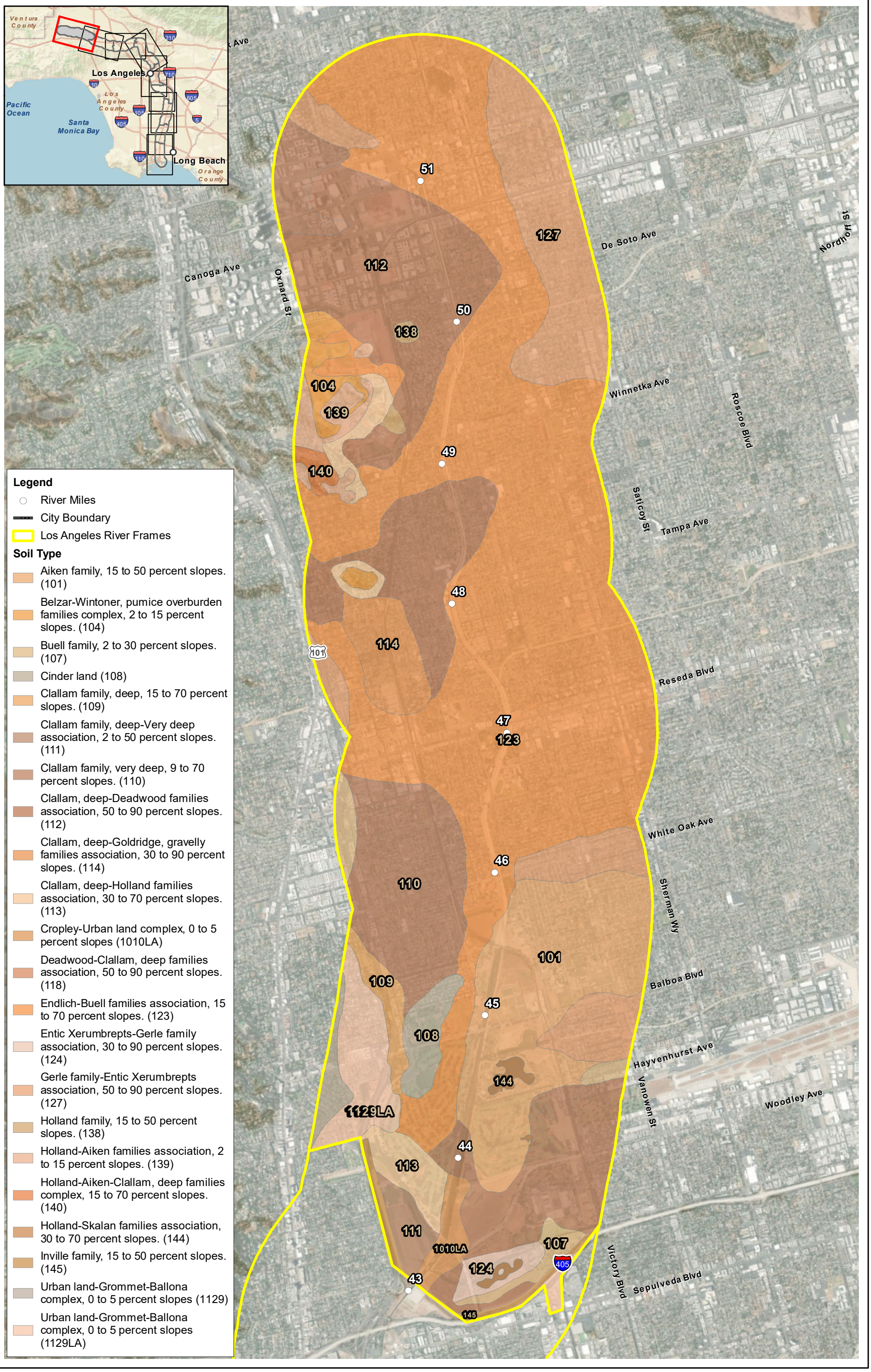
Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-32
Frame 7 Soils Map



Source: NRCS; County of Los Angeles; ESRI

Figure 3.3-33
Frame 8 Soils Map



0 1,625 3,250 Feet
1:39,000

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

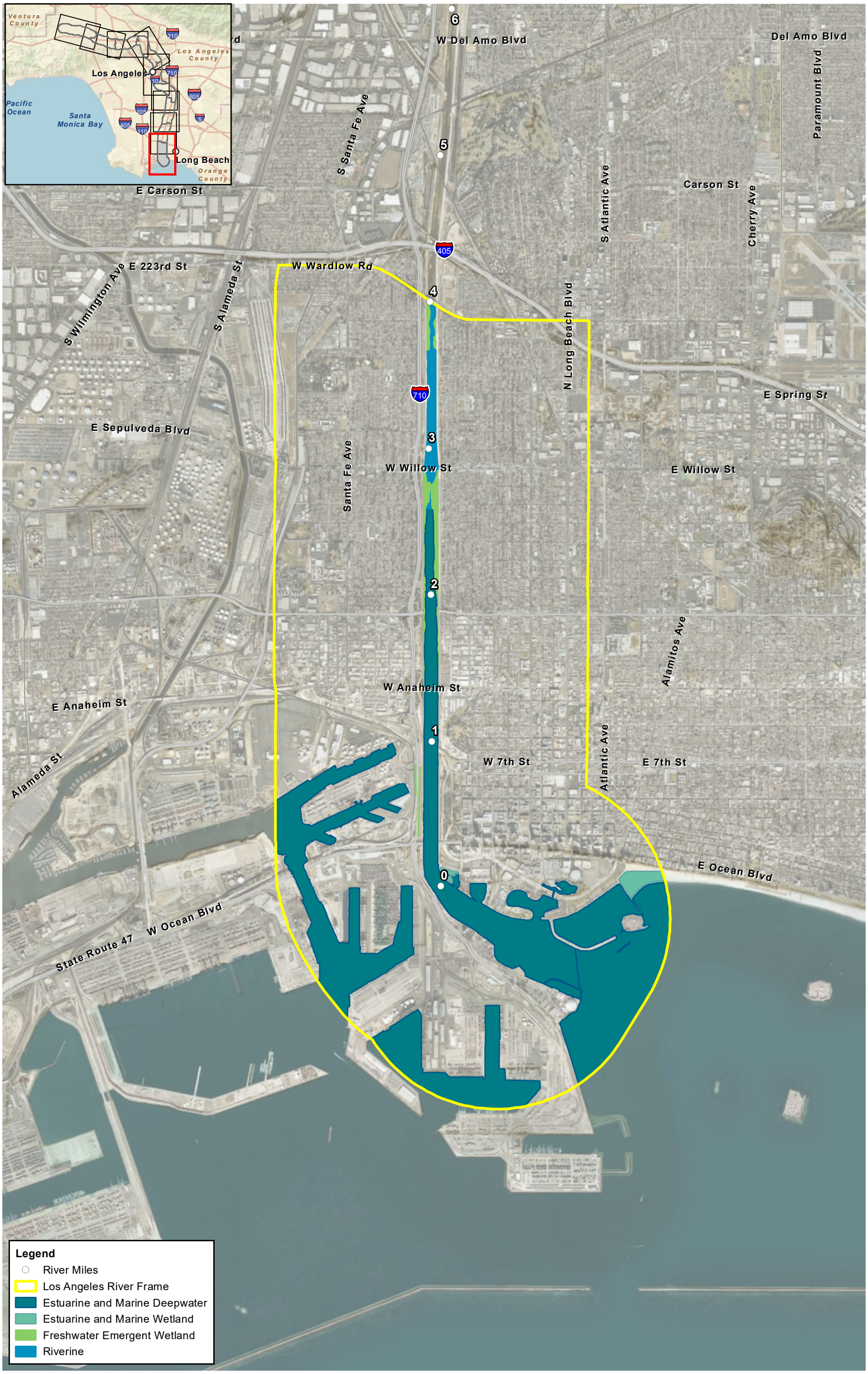
A database search was performed using the USFWS Critical Habitat Online Mapper (USFWS 2020c) to identify any USFWS-designated critical habitat that may occur within the study area. Critical habitat in the vicinity of the study area is mapped on Figure 3.3-12. The nearest critical habitat for a plant 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.



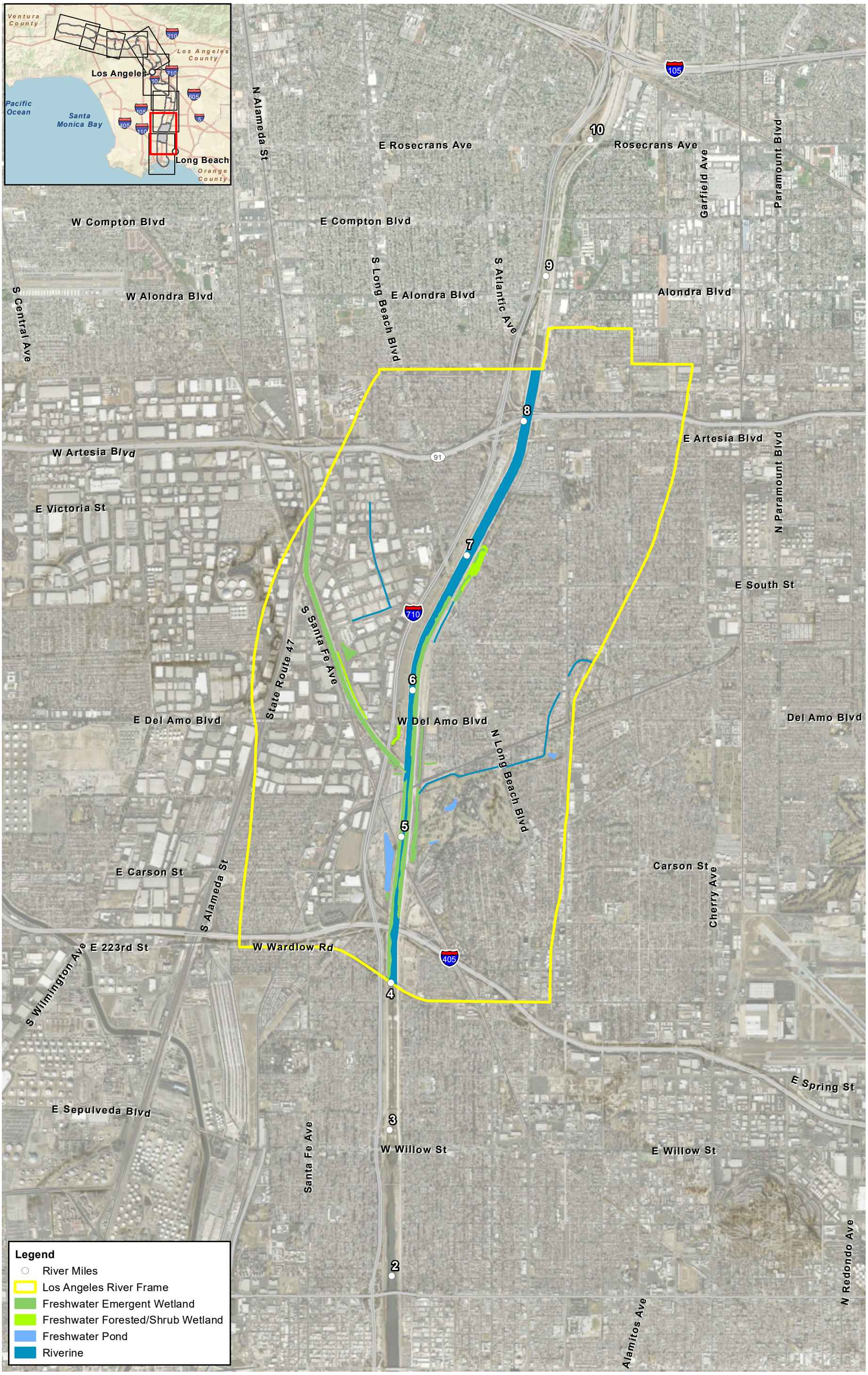
0 1,625 3,250 Feet

1:39,000

N

Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-35
National Wetland Inventory within Frame 1



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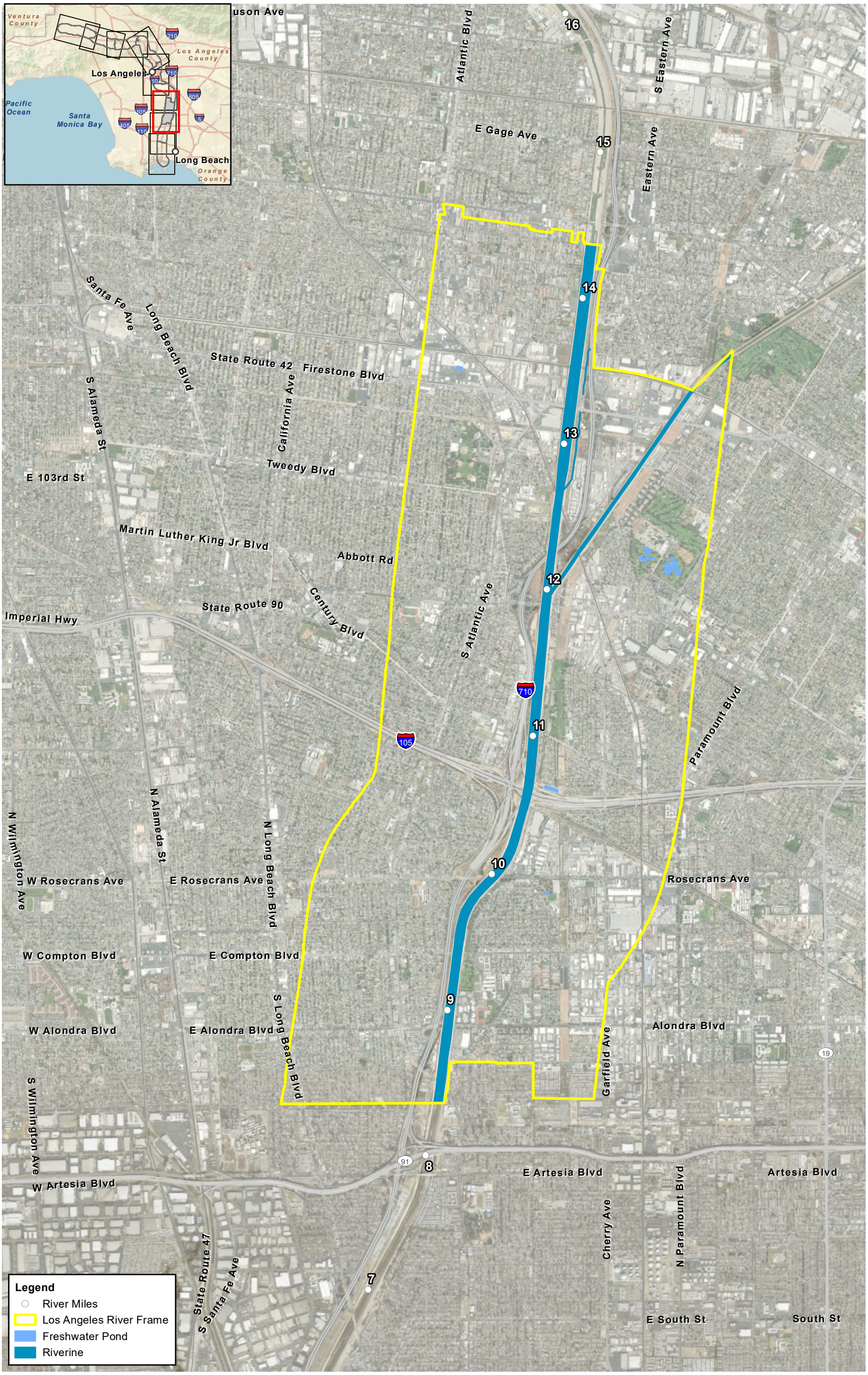
Source: NWI;
County of Los Angeles; ESRI

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

0 1,625 3,250 Feet
1:39,000

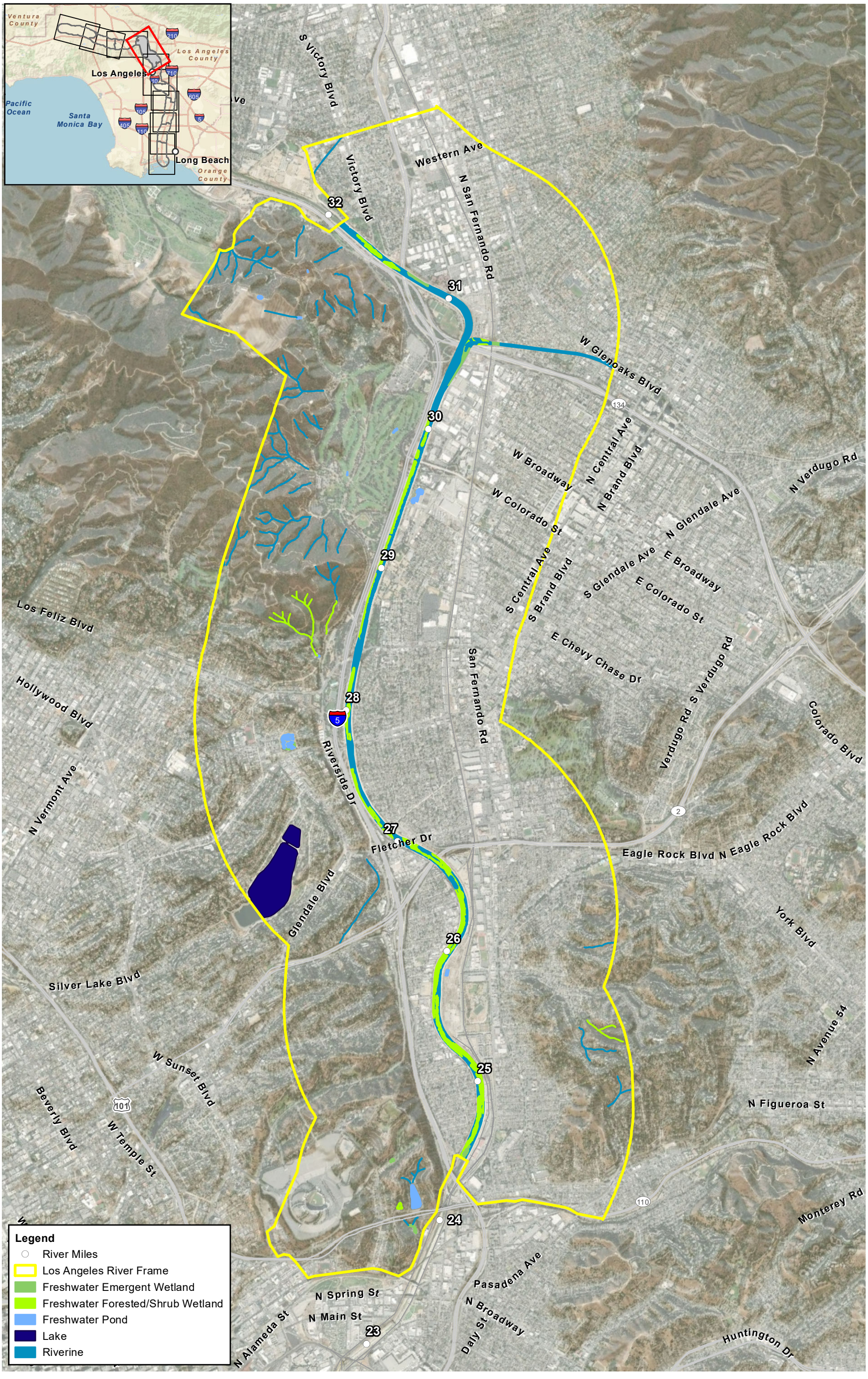
N

Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-38
National Wetland Inventory within Frame 4

Figure 3.3-39
National Wetland Inventory within Frame 5

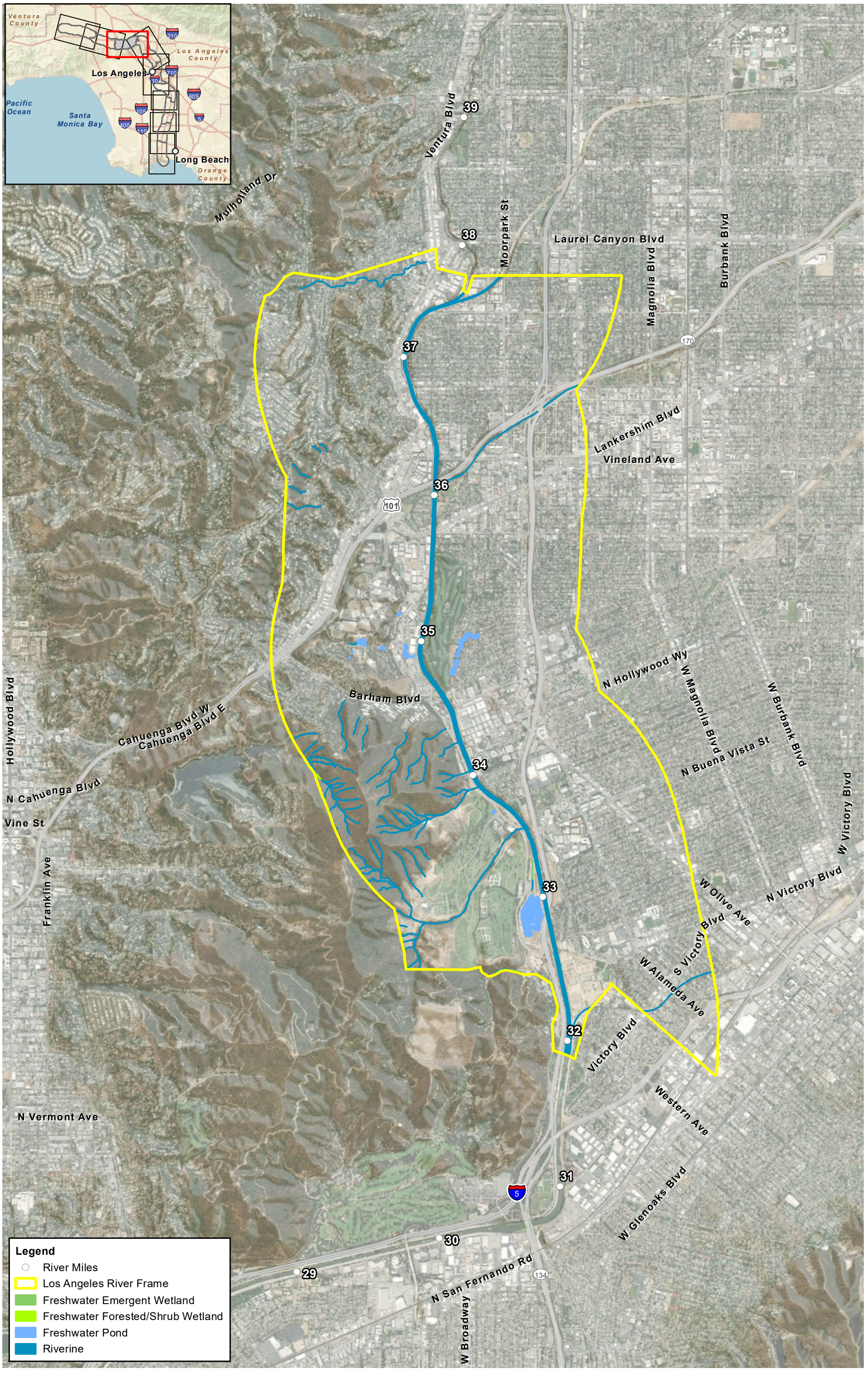
Source: NWI;
County of Los Angeles; ESRI



0 1,625 3,250 Feet
1:39,000

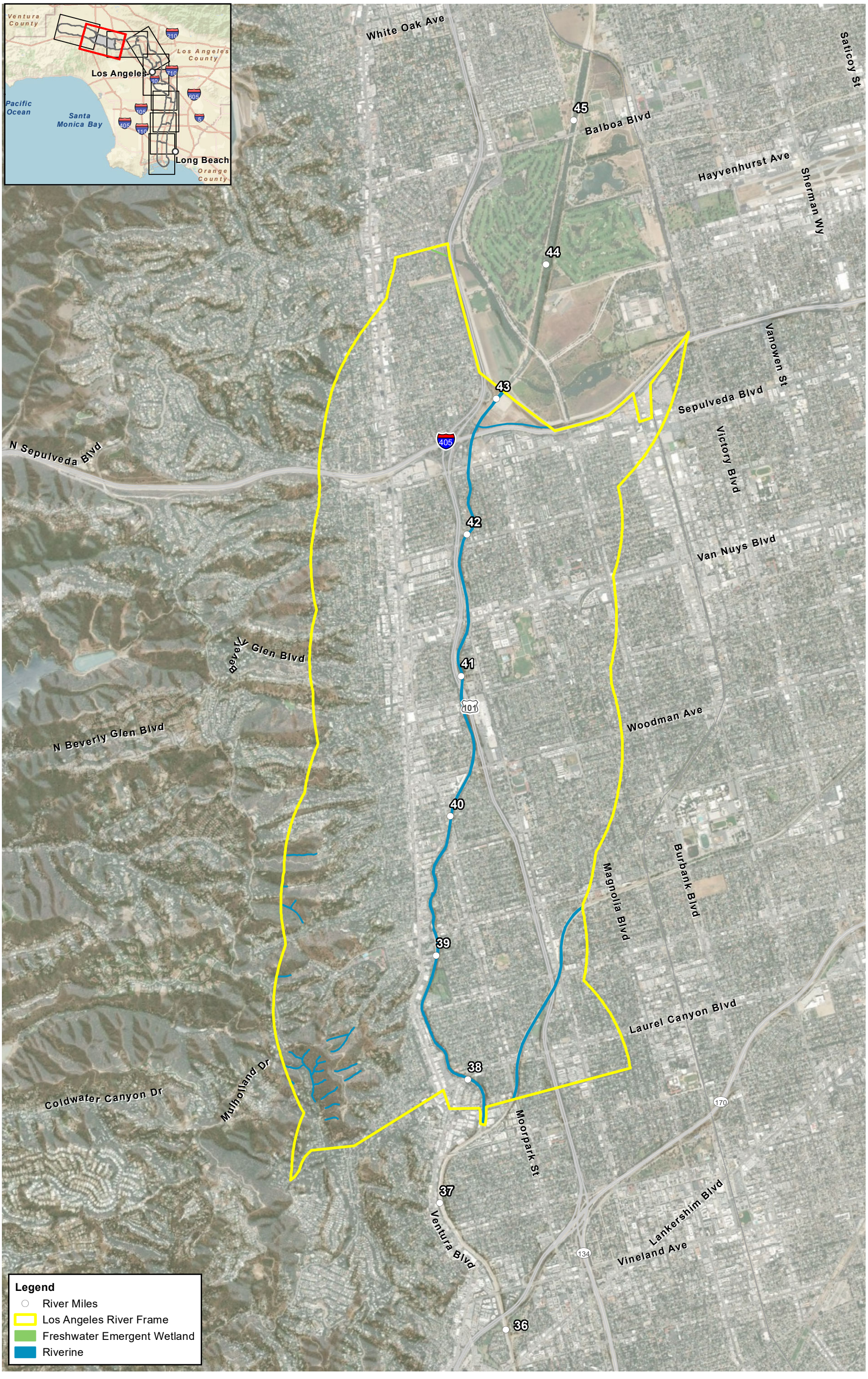
Source: NWI;
County of Los Angeles; ESRI

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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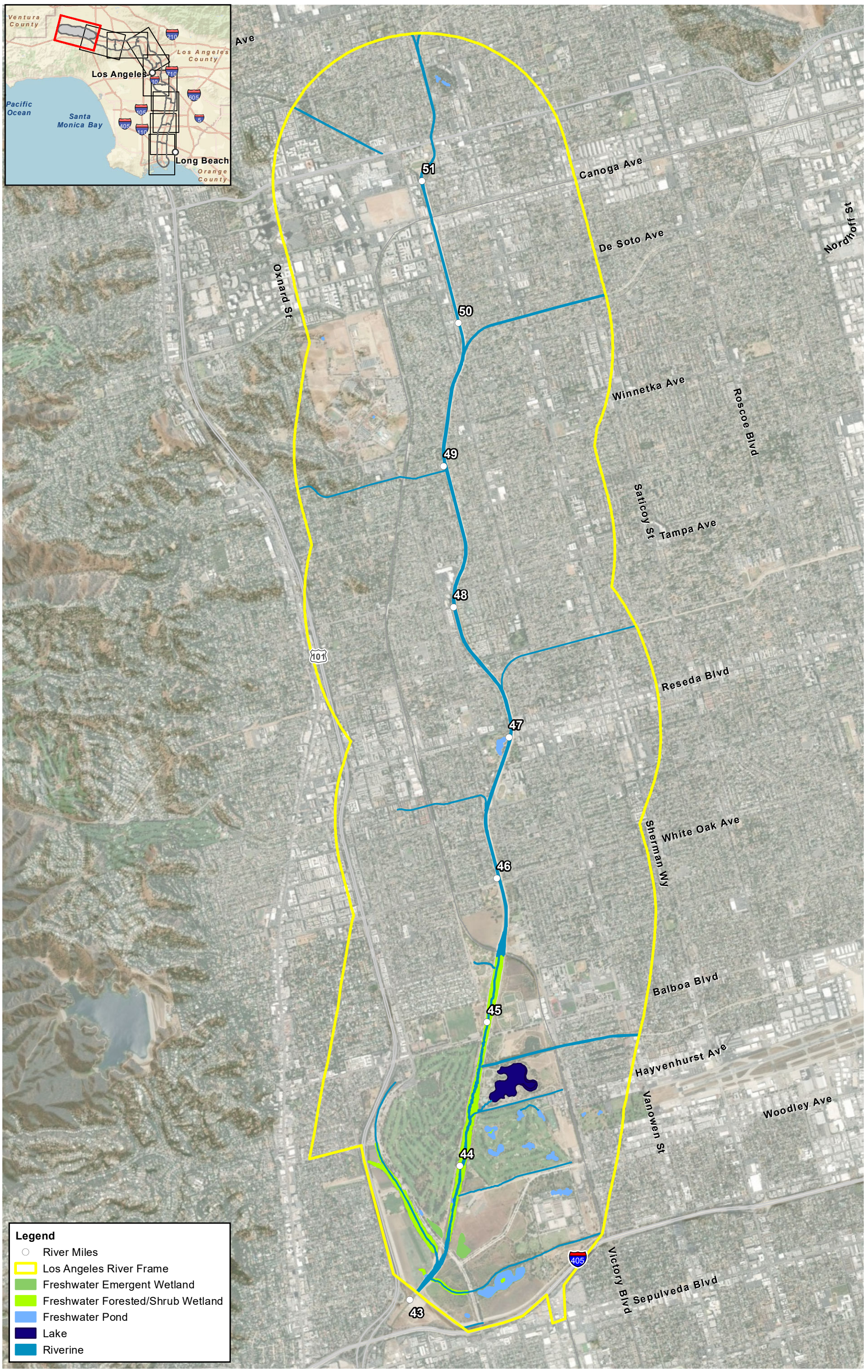
1:39,000

N

Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-42
National Wetland Inventory within Frame 8



0 1,625 3,250 Feet

1:39,000

N

Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-43
National Wetland Inventory within Frame 9

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	

Ordinance or Law	Protected Trees	Guidelines	Frames
		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,	

Ordinance or Law	Protected Trees	Guidelines	Frames
		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	

Ordinance or Law	Protected Trees	Guidelines	Frames
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,	

Ordinance or Law	Protected Trees	Guidelines	Frames
		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.	

Ordinance or Law	Protected Trees	Guidelines	Frames
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	

Ordinance or Law	Protected Trees	Guidelines	Frames
		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.

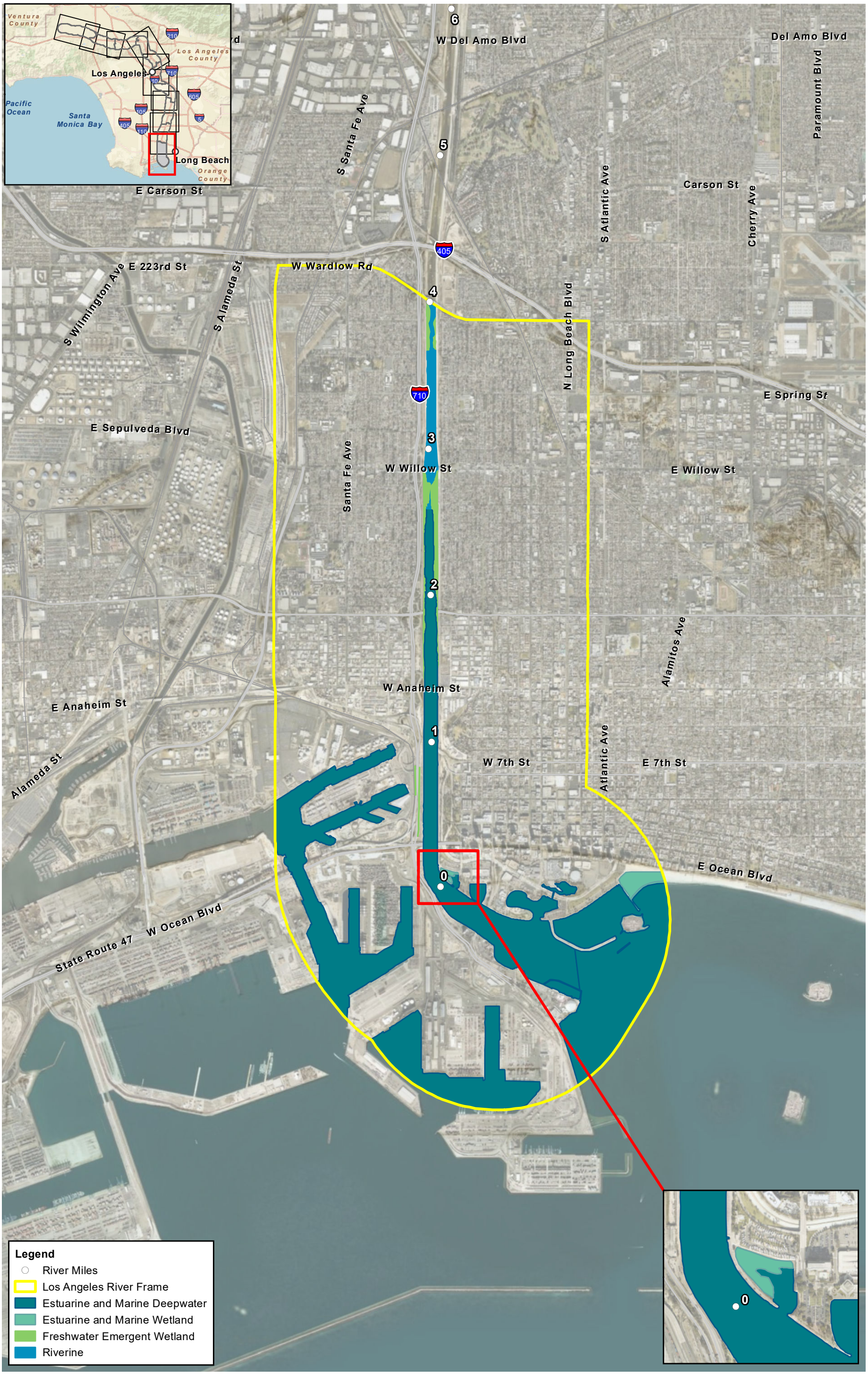
Within Frame 1, the wetlands and/or potentially jurisdictional aquatic resources within the Golden Shore Marine Biological Reserve extend to the walking path along the top of the levee and could be subject to direct impacts from the construction of a Common Elements or Multi-use Trails and Access Gateways 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.

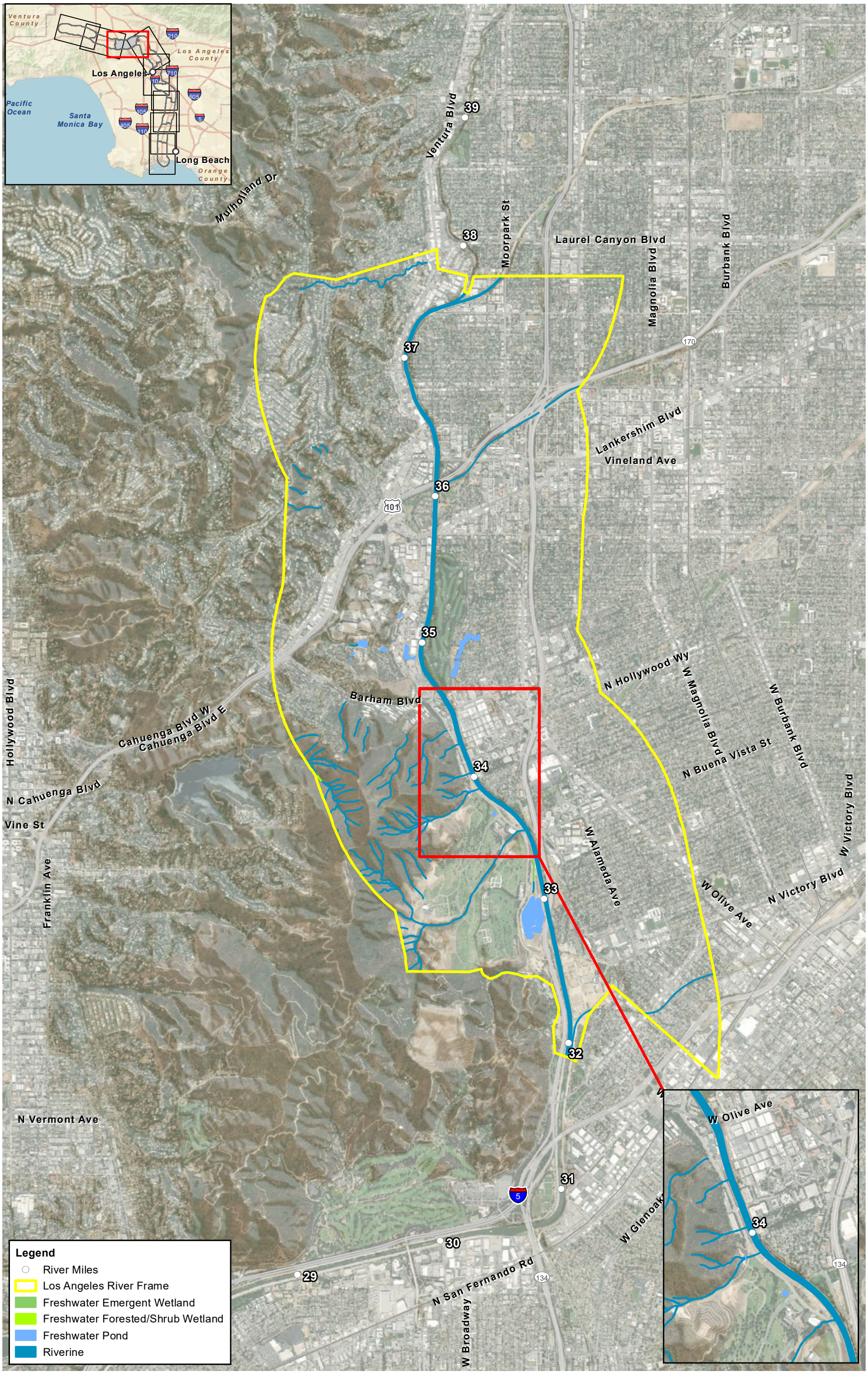


0 1,625 3,250 Feet
1:39,000

N

Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-44
National Wetland Inventory Impacts within Frame 1



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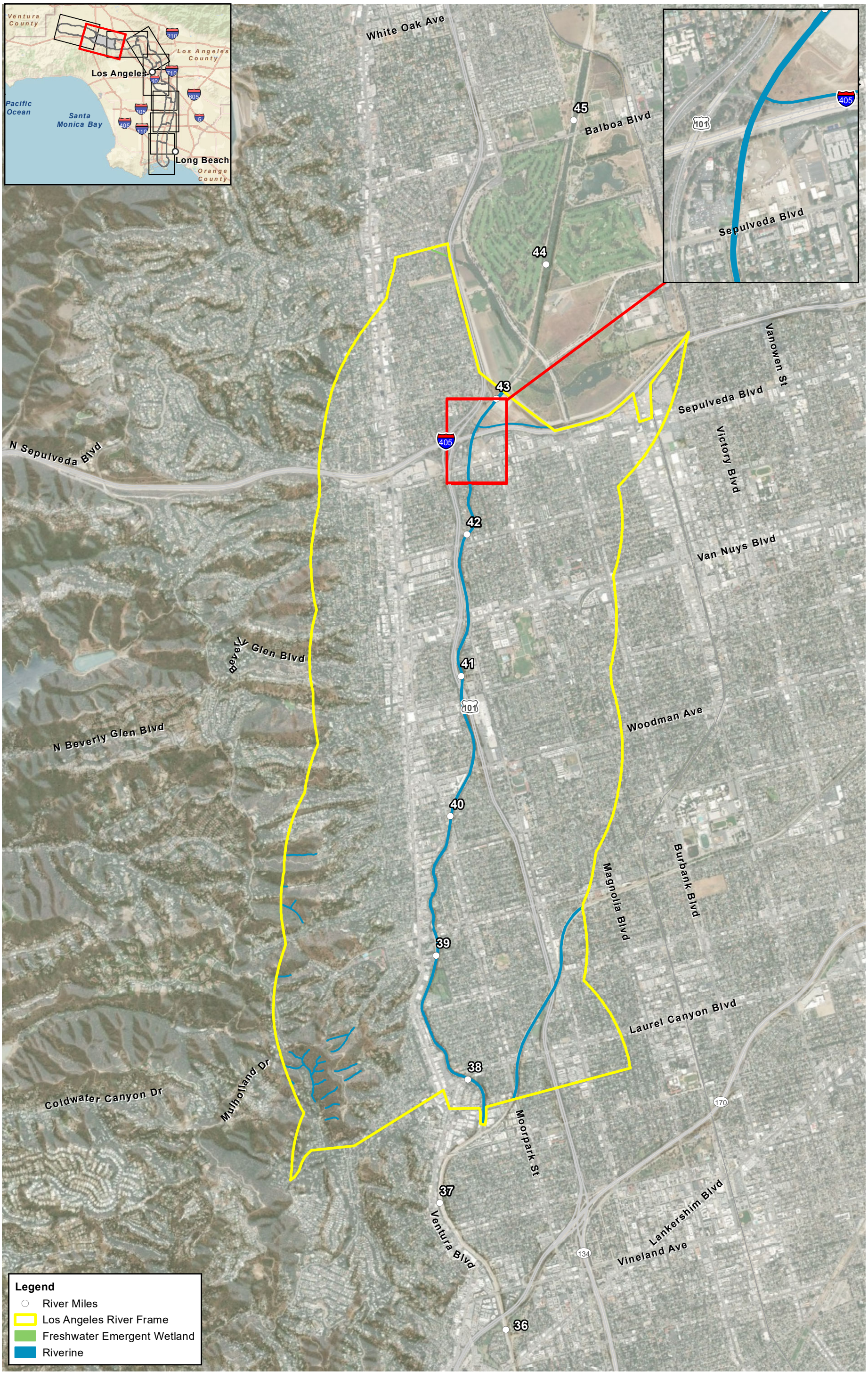
Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-45
National Wetland Inventory Impacts within Frame 7



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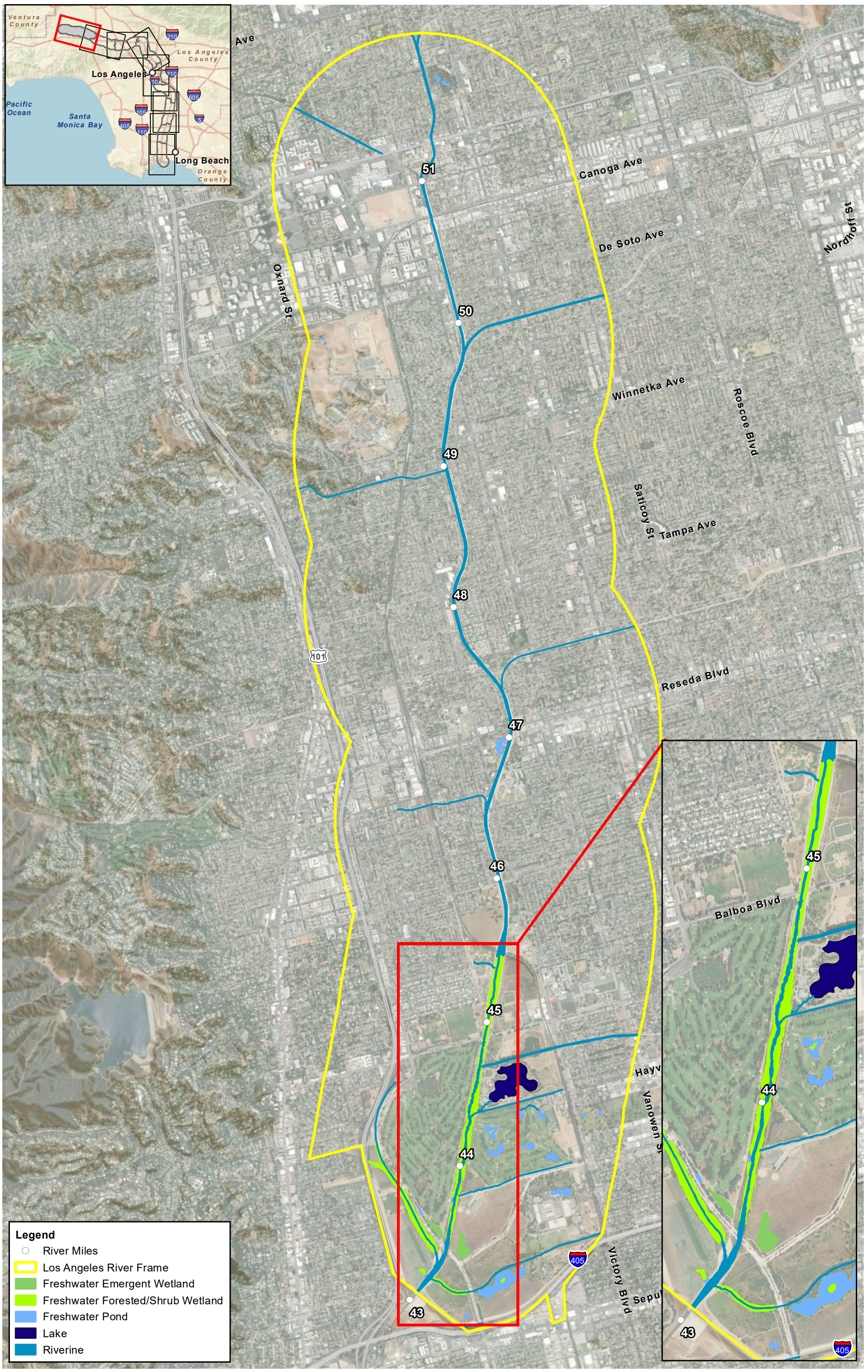
N

Source: NWI;
County of Los Angeles; ESRI

Figure 3.3-46
National Wetland Inventory Impacts within Frame 8



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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.