LOS ANGELES RIVER
MASTER PLAN UPDATE

Steering Committee Meeting #8

12 December 2019

RIVER STORY

WELCOME

Source: OLIN

MEETING PURPOSE AND AGENDA

Source: OLIN

PURPOSE OF TODAY'S MEETING

1. SUMMARIZE ENGAGEMENT ROUNDS 1-3
2. REVIEW PLANNING PROCESS, WHAT'S IN THE PLAN, & SCHEDULE
3. RESILIENCE & ADAPTATION
4. ENVIRONMENTAL GRAPHICS

FEEDBACK / Q&A

MEETING AGENDA

WELCOME & AGENDA OVERVIEW	COMMUNITY ENGAGEMENT UPDATE	LA RIVER MASTER PLAN 2020	WHAT'S IN THE PLAN	RESILIENCE & ADAPTATION	ENVIRONMENTAL GRAPHICS	PUBLIC COMMENT	WRAP UP
• River Story #8 • Welcome and Steering Committee Updates • Roundtable Introductions • Meeting Purpose, Agenda and Objectives • CEQA Update	• Additional Meetings • Engagement Summary • Community Partner Events • Discussion/Q&A	• Planning Context • Research • Data-Based • Vision & Goal Driven • Design • Discussion/Q&A	• Table of Contents • Example Spreads • Review Process • Discussion/Q&A	• Goals • Short, Medium, & Long Term Strategies • Discussion/Q&A	• Design Guidelines Overall Approach • Coordination w/ Other Entities • Wayfinding Analysis & Precedents • Technical Requirements • Logo, Font, & Symbology • Environmental Graphics Family • Q&A/Discussion	• Verbal Comments • Comment Cards	• Important Upcoming Dates

INPUT, QUESTIONS, IDEAS?

Contact Genevieve Osmeña at (626) 458-4322
or LARiver@dpw.lacounty.gov

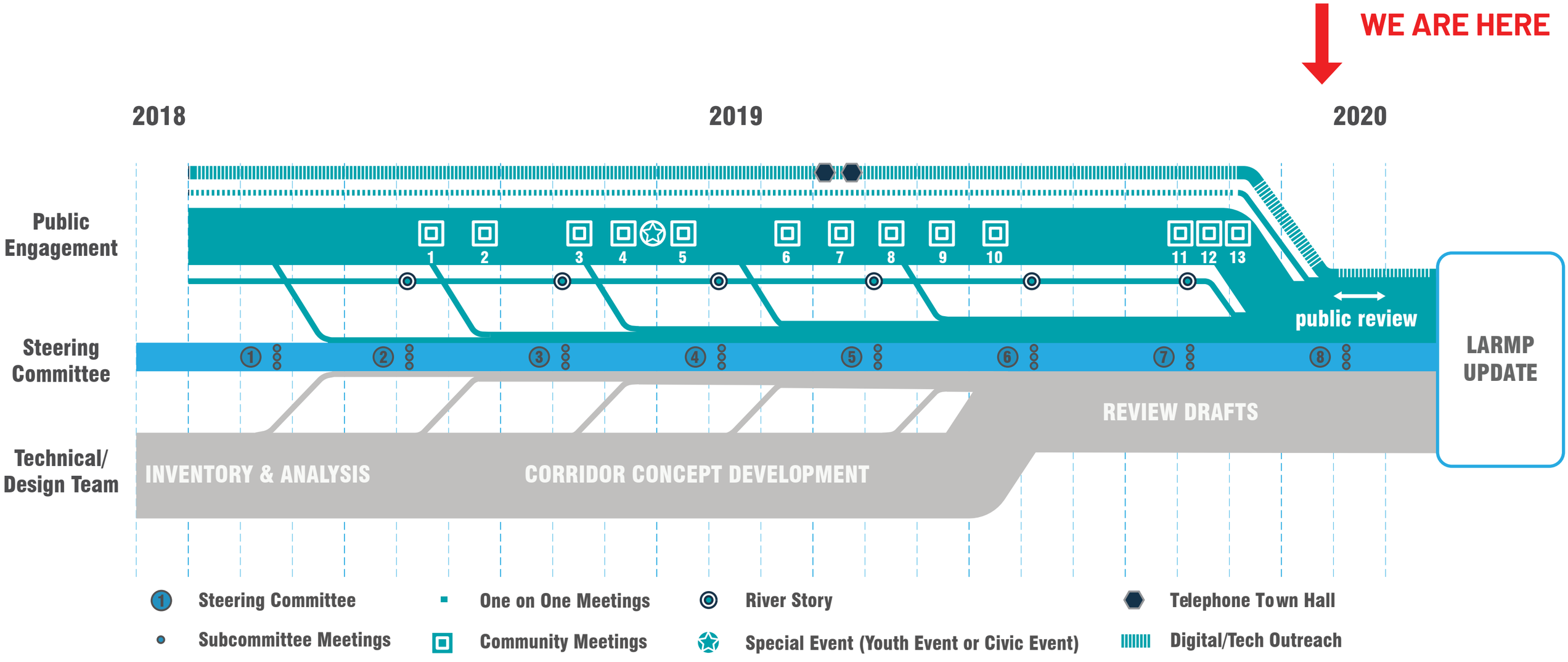
GUIDES FOR PRODUCTIVE DISCUSSIONS

- Everyone equally contributes.
- Stay concise.
- Listen for understanding.
- Help forge paths for solutions.

STEERING COMMITTEE UPDATES

Source: OLIN

PROJECT SCHEDULE



STEERING COMMITTEE FRAMEWORK

WE ARE HERE

	2018			2019				
	1	2	3	4	5	6	7	8
Key Theme & Tentative Date	LAUNCH 11 APRIL 2018	INVENTORY & VISION PRINCIPLES 27 JUNE 2018	GOALS & ANALYSIS 26 SEPTEMBER 2018	GAPS & PLANNING 12 DECEMBER 2018	PRIORITIES & OPPORTUNITIES 10 APRIL 2019	DESIGNS & PLANS 26 JUNE 2019	PLANS & STANDARDS 25 SEPTEMBER 2019	DRAFT REVIEW 12 DECEMBER 2019
Dialogue Focus	Vision Brainstorming Project Schedule and Scope Committee Organization Draft Community Outreach Plan, Branding Strategy, and Website Flood Control History, Plan Priorities, Channel Strategies	Draft Vision Principles Existing Conditions Literature Review Community Outreach Plan Demographics, Affordable Housing, Displacement	Revised Draft Vision and Goals Goal-Driven Planning Jurisdictional Boundaries Water Resources, O&M, Access and Security, Safety, Homelessness Youth Summit	Policy Framework Planning Reaches Design Guidelines Review Geographic Gap Analysis Intro	Gap Analysis Draft Planning Concepts Table of Contents Revised Goals, Actions, & Methods Introduction	Design Guidelines Goals, Actions, and Methods and Implementation Matrix Site Selection	Design Concepts and Design Guidelines Update	Review of LARMP Key Concepts

Q & A AND DISCUSSION

Source: OLIN

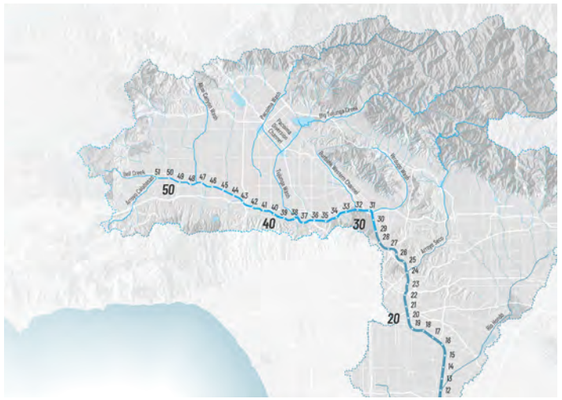
COMMUNITY ENGAGEMENT UPDATE

Source: USACE, Los Angeles District, E-1517 - NW of 7th St - 9-7-1927, http://cespl.maps.arcgis.com/apps/MapSeries/index.html?appid=e15694dbf7c54f8c96285a0e74039e69

MEETINGS WITH OTHER ORGANIZATIONS

UPPER LA RIVER & TRIBUTARIES (AB466)

September 26, 2019, November 14, 2019, & Ongoing



- Chapters 1-4 of the plan document are online for public review
- Commenting will be open online for all chapters until 1/20/2020
- Ongoing coordination on sites
- Ongoing coordination to integrate AB466 and LARMP

LA RIVER FLOW STUDY: RWQCB

October 18, 2019

CITY OF LA COUNCIL DISTRICT COORDINATION

Ongoing

NATIVE AMERICAN COMMUNITIES ONGOING COORDINATION

November 5, 2019

Los Angeles City/County NAIC Native American Indian Commission

- LARMP team shared and received feedback on Land Acknowledgment
- LARMP team presented updated signage guidelines
- Public Works team introduced plan for department liaisons for tribes
- FTBMI will provide additional feedback by end of November

CITY OF LONG BEACH SUSTAINABLE CITY COMMISSION

December 4, 2019

COMMUNITY ENGAGEMENT MEETINGS SUMMARY

ROUND 1

JUNE 2018 – DECEMBER 2018

1. Canoga Park
2. Cudahy
3. Long Beach
4. Friendship Auditorium
5. Studio City / North Hollywood

Survey 1

ROUND 2

FEBRUARY 2019 – JULY 2019

6. West Valley
7. South Gate
8. Compton / Lynwood / East Rancho Dominguez
9. Pacoima
10. Glendale

Survey 2

ROUND 3

AUGUST 2019 – OCTOBER 2019

11. Canoga Park
12. North Long Beach
13. Central Los Angeles

Feedback

ENGAGEMENT BY THE NUMBERS

1306 **Community members attended meetings in Rounds 1-3**

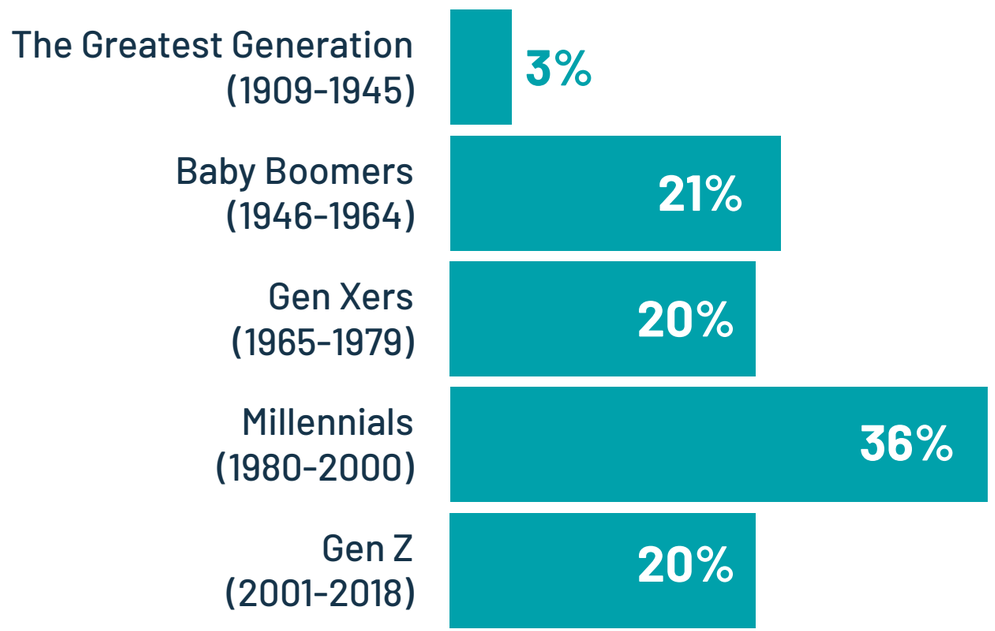
800 **Youth Summit Participants**

1650 **Completed surveys**

5,592 **Telephone Town Hall Participants**

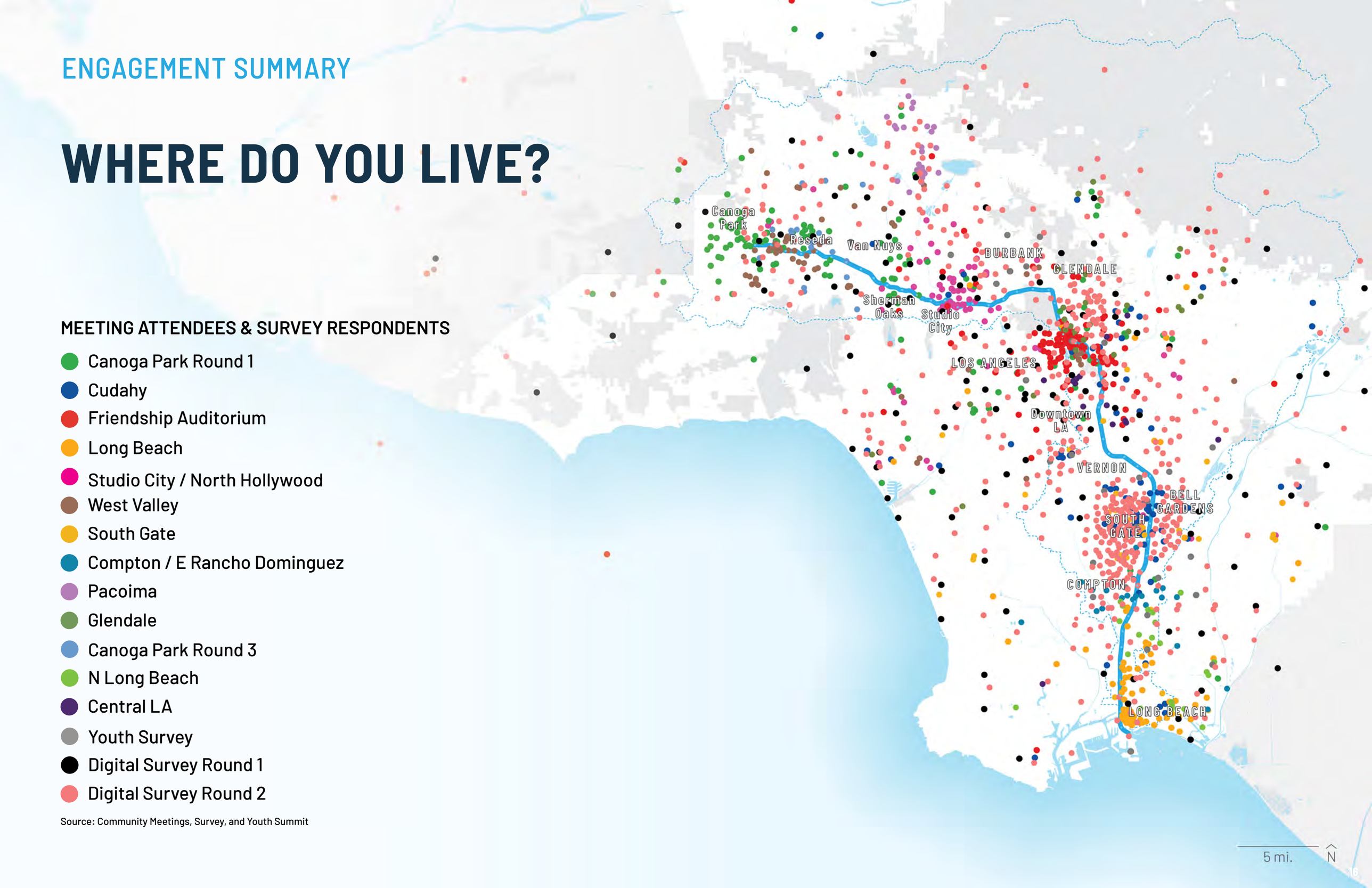
981,898 **Digital Ad Impressions**

GENERATIONS REPRESENTED:



Source: Community Meetings, Survey

WHERE DO YOU LIVE?



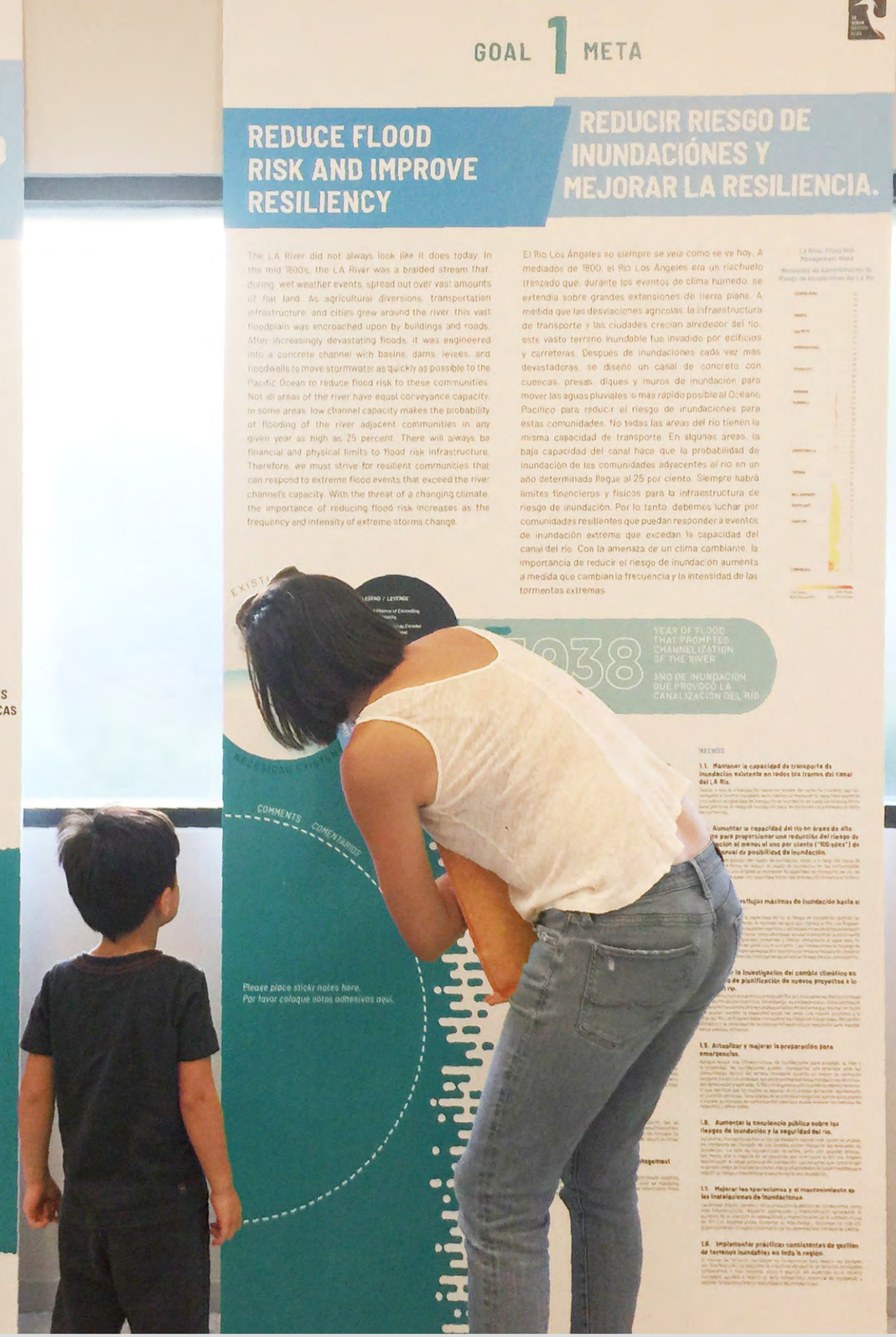
MEETING ATTENDEES & SURVEY RESPONDENTS

- Canoga Park Round 1
- Cudahy
- Friendship Auditorium
- Long Beach
- Studio City / North Hollywood
- West Valley
- South Gate
- Compton / E Rancho Dominguez
- Pacoima
- Glendale
- Canoga Park Round 3
- N Long Beach
- Central LA
- Youth Survey
- Digital Survey Round 1
- Digital Survey Round 2

Source: Community Meetings, Survey, and Youth Summit

CANOGA PARK

OCTOBER 15, 2019



Source: OLIN

N LONG BEACH

OCTOBER 16, 2019

Source: OLIN

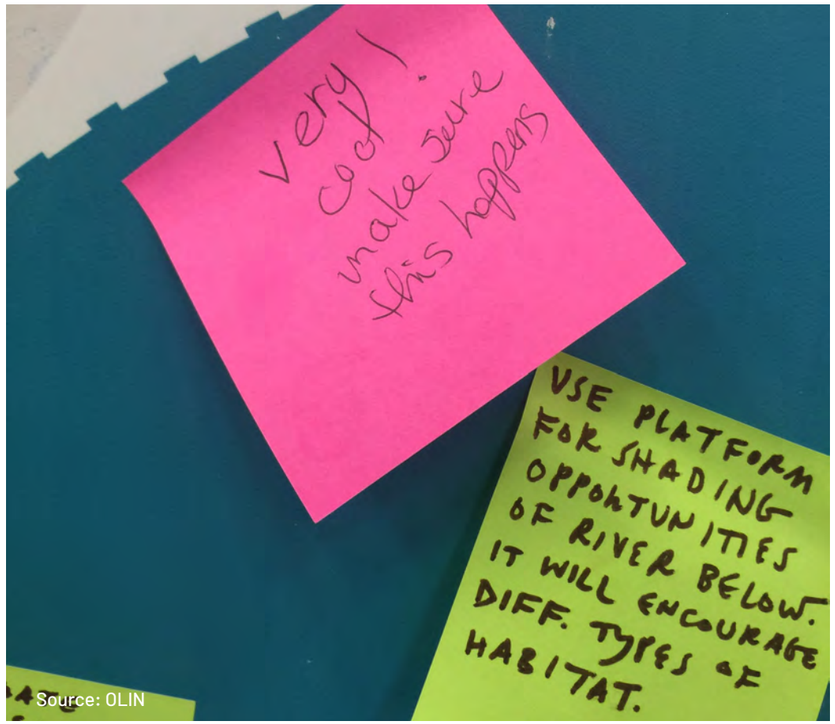
CENTRAL LA

OCTOBER 17, 2019

Source: OLIN

WHAT WE HEARD: COMMUNITY INPUT

Source: LA County Public Works



Source: OLIN


Source: LA County Public Works

- *I love the community-based 'Goal Driven Framework'*
- *Bathrooms every mile*
- *Utilize solar and wind power*
- *Local schools should learn about water quality*
- *More junior park rangers*
- *More fruit trees!*

THANK YOU TO OUR COMMUNITY PARTNERS!

- Resource Conservation District of the Santa Monica Mountains
- Pacoima Beautiful
- Fernandeños Tataviam Band of Mission Indians
- Gabrielino-Tongva Tribe
- Anahuak
- From Lot to Spot
- East Yard Communities for Environmental Justice
- Friends of the LA River
- Las Fotos Project
- Weaving the River

ENGAGEMENT SUMMARY

EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE RIVER TALKS

NOVEMBER 21, 2019

Source: Gehry Partners

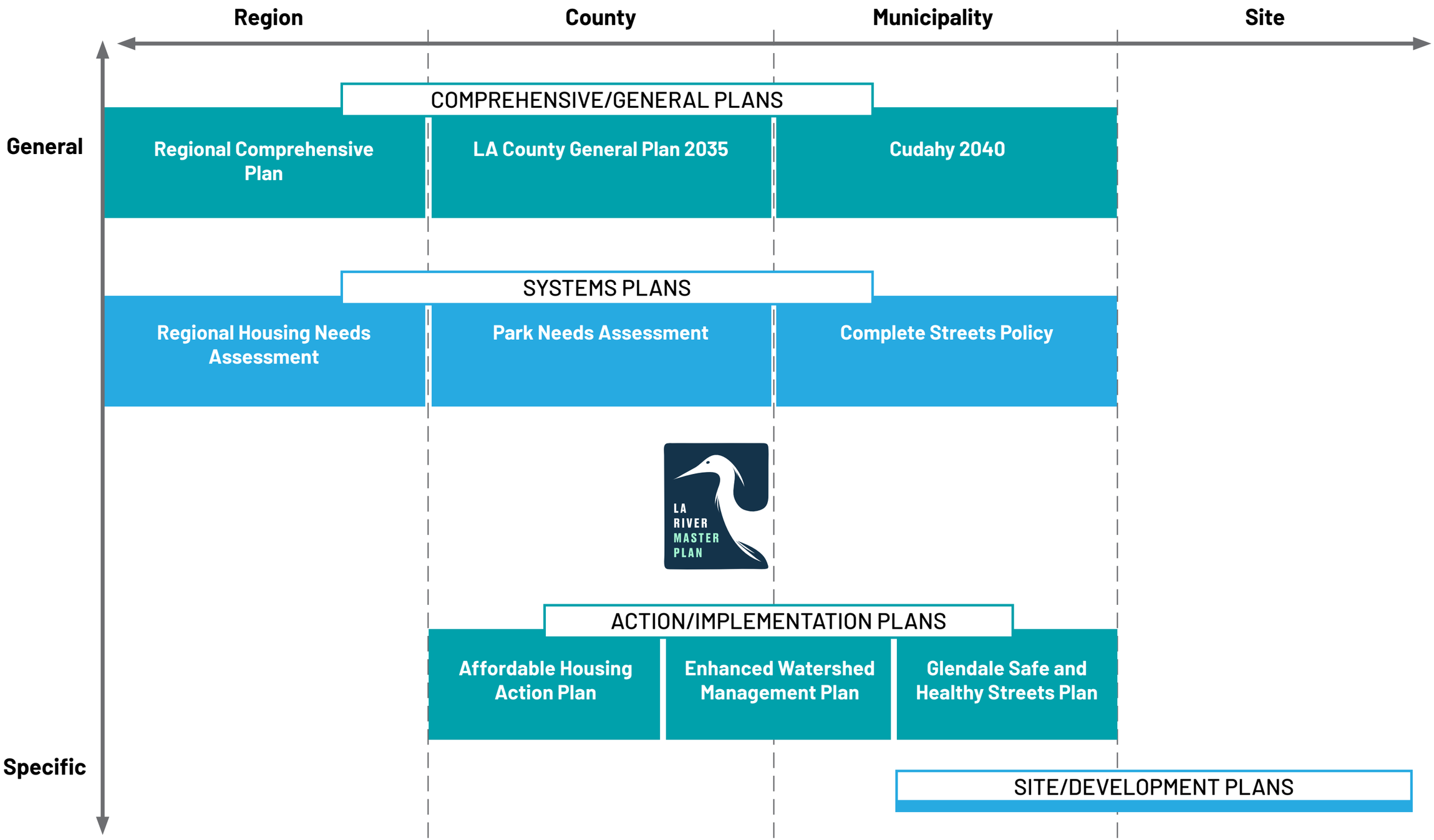
Q & A AND DISCUSSION

Source: OLIN

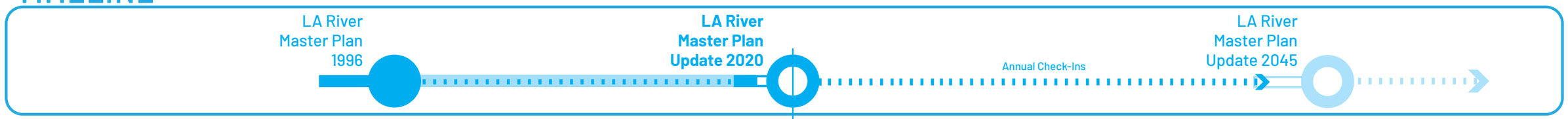
LA RIVER MASTER PLAN 2020

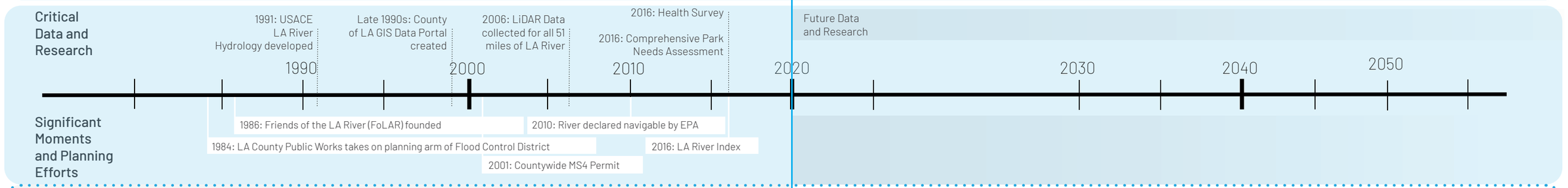
Source: OLIN

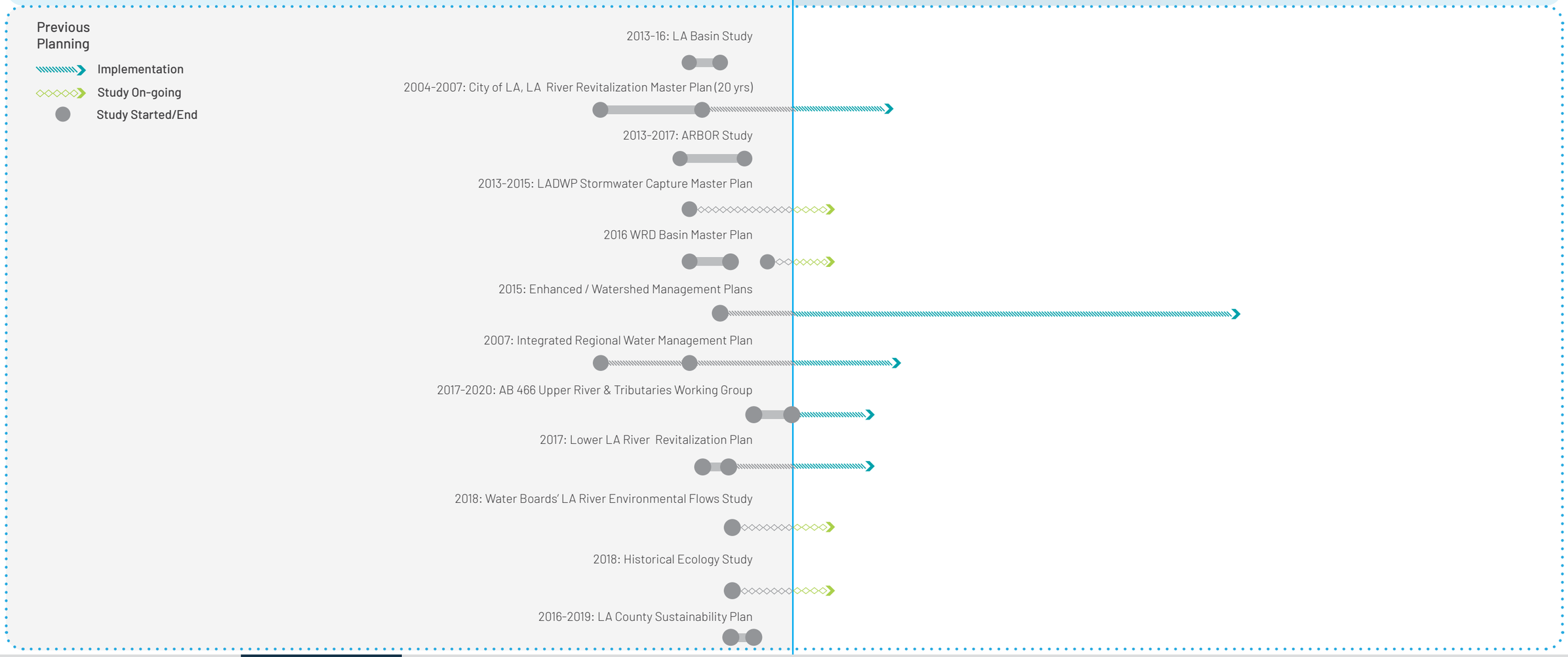
PLANNING CONTEXT



TIMELINE


LA River
Master Plan
1996
LA River
Master Plan
Update 2020
Annual Check-Ins
LA River
Master Plan
Update 2045


Critical
Data and
Research
1991: USACE
LA River
Hydrology developed
Late 1990s: County
of LA GIS Data Portal
created
2006: LiDAR Data
collected for all 51
miles of LA River
2016: Health Survey
2016: Comprehensive Park
Needs Assessment
Future Data
and Research
1990
2000
2010
2020
2030
2040
2050
Significant
Moments
and Planning
Efforts
1986: Friends of the LA River (FoLAR) founded
2010: River declared navigable by EPA
1984: LA County Public Works takes on planning arm of Flood Control District
2016: LA River Index
2001: Countywide MS4 Permit

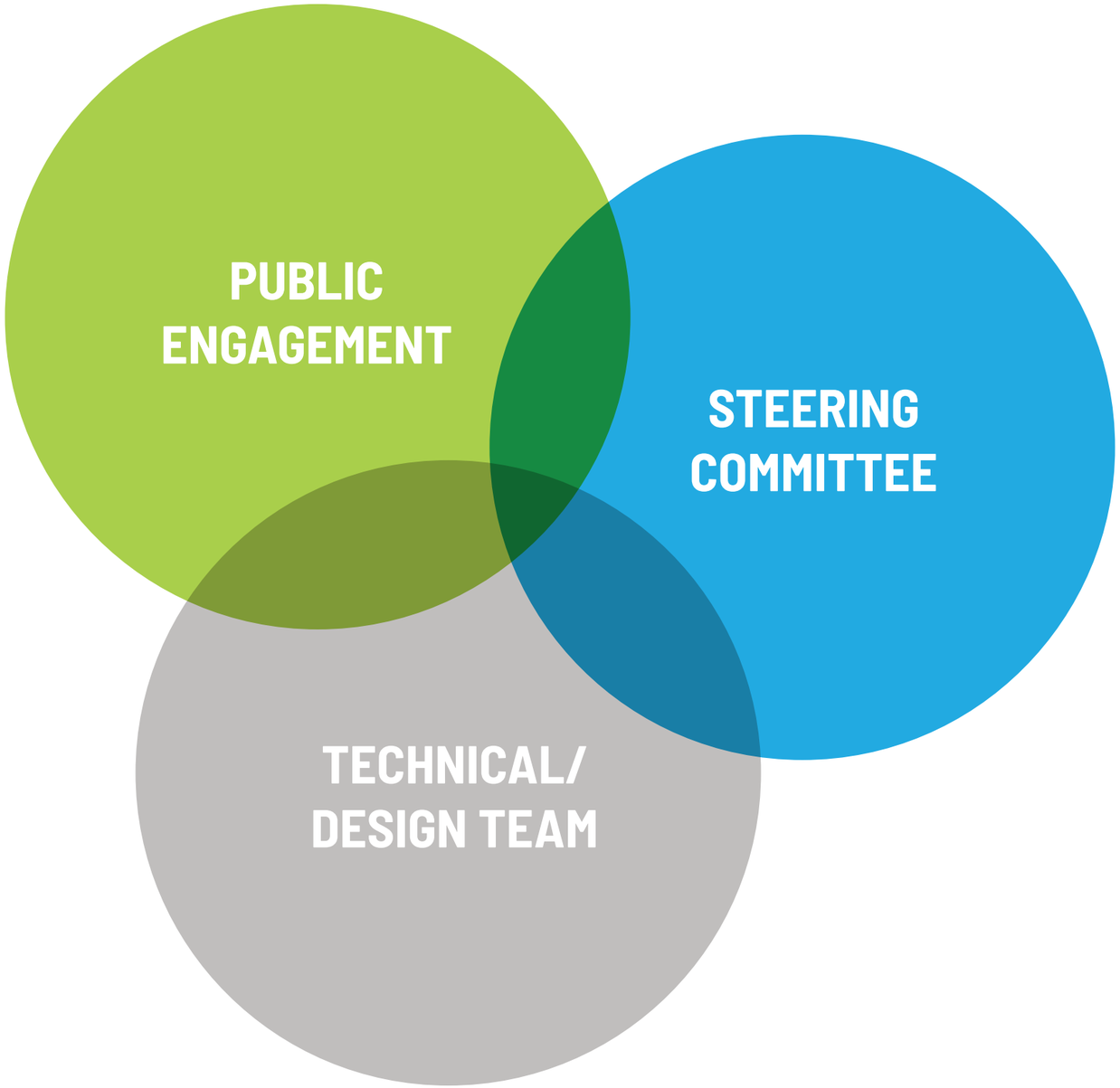

Previous
Planning
Implementation
Study On-going
Study Started/End
2013-16: LA Basin Study
2004-2007: City of LA, LA River Revitalization Master Plan (20 yrs)
2013-2017: ARBOR Study
2013-2015: LADWP Stormwater Capture Master Plan
2016 WRD Basin Master Plan
2015: Enhanced / Watershed Management Plans
2007: Integrated Regional Water Management Plan
2017-2020: AB 466 Upper River & Tributaries Working Group
2017: Lower LA River Revitalization Plan
2018: Water Boards' LA River Environmental Flows Study
2018: Historical Ecology Study
2016-2019: LA County Sustainability Plan

RELEVANT PLANNING EFFORTS

140+

NUMBER OF DOCUMENTS REVIEWED AS PART OF LARMP LITERATURE REVIEW

PLAN INPUT


PUBLIC ENGAGEMENT
STEERING COMMITTEE
TECHNICAL/ DESIGN TEAM

VISION

The Reimagined River

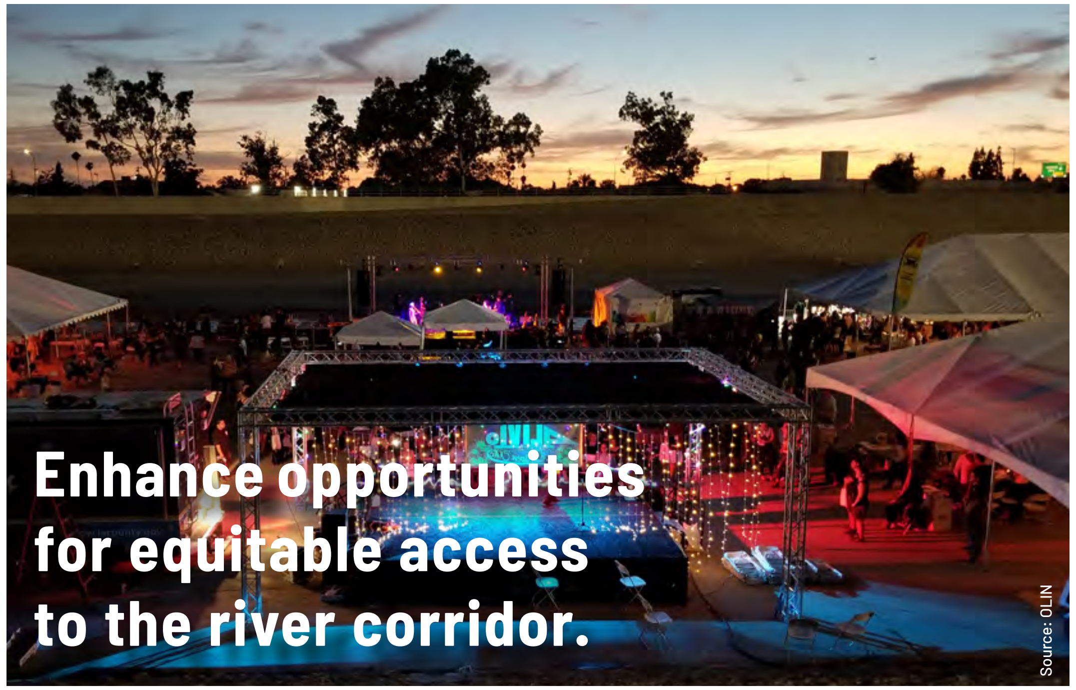
The iconic LA River flows through a 51-mile connected public open space that is seamlessly woven together with neighboring communities. It is an integral part of daily life in LA County—a place to enjoy the outdoors and to get across town, a place to appreciate the serene and to bring all people together, a place to celebrate a thriving urban habitat and respect feats of infrastructure, a place to learn from the past and to shape the future.

GOALS

Reduce flood risk and improve resiliency.

Provide equitable, inclusive, and safe parks, open space, and trails.

Support healthy, connected ecosystems.



Enhance opportunities for equitable access to the river corridor.

Source: OLIN

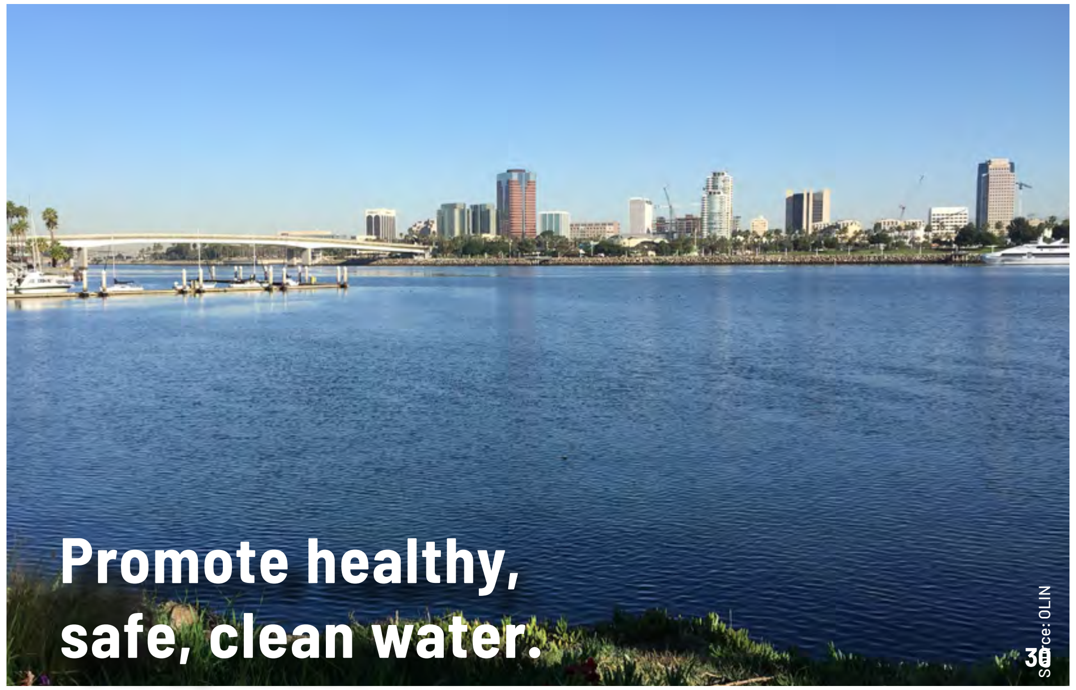
Embrace and enhance opportunities for arts and culture.

Address potential adverse impacts to housing affordability and people experiencing homelessness.

Foster opportunities for continued community engagement, development, and education.

Improve local water supply reliability.

Source: OLIN

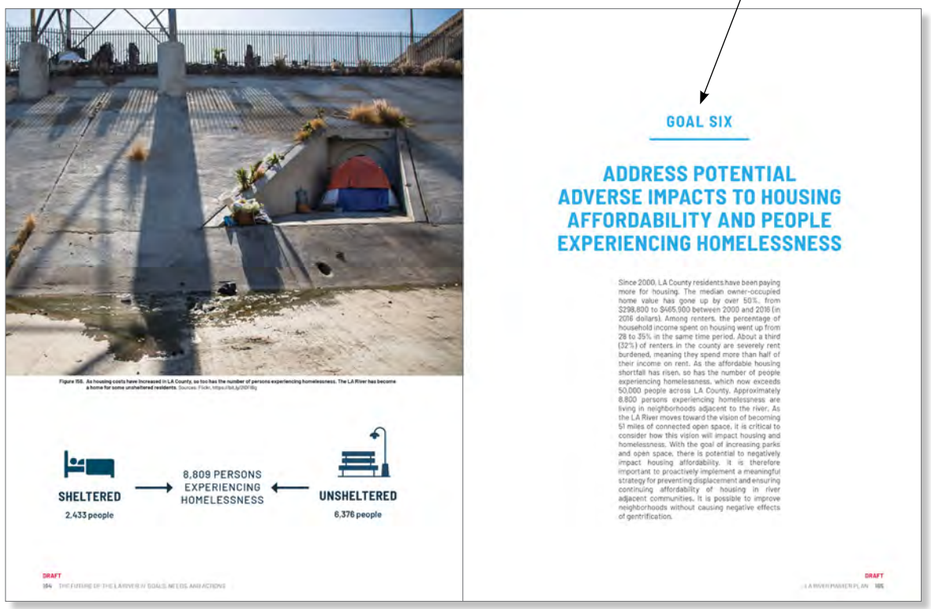


Promote healthy, safe, clean water.

LARMP 2020

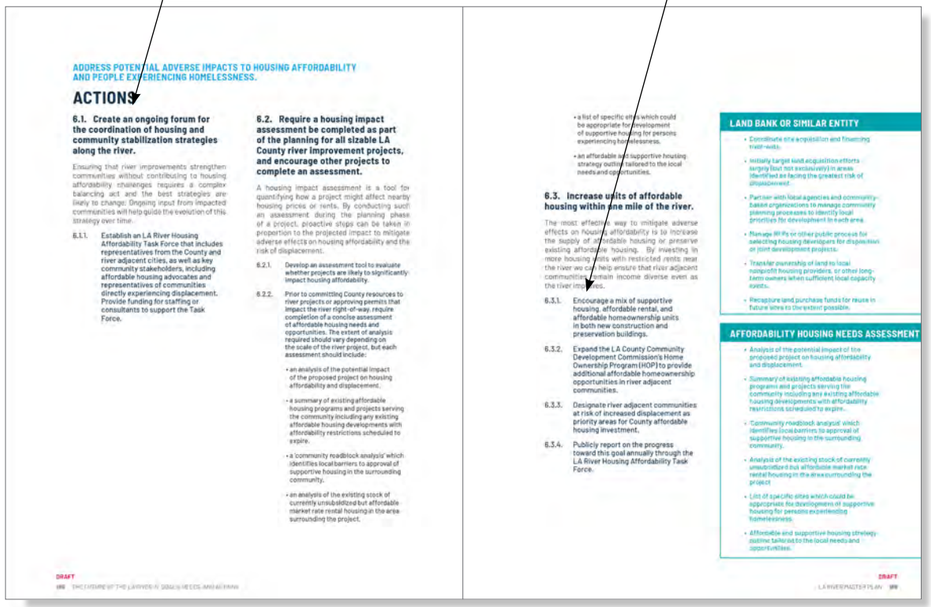
GOALS, ACTIONS, METHODS (GAM)

GOAL

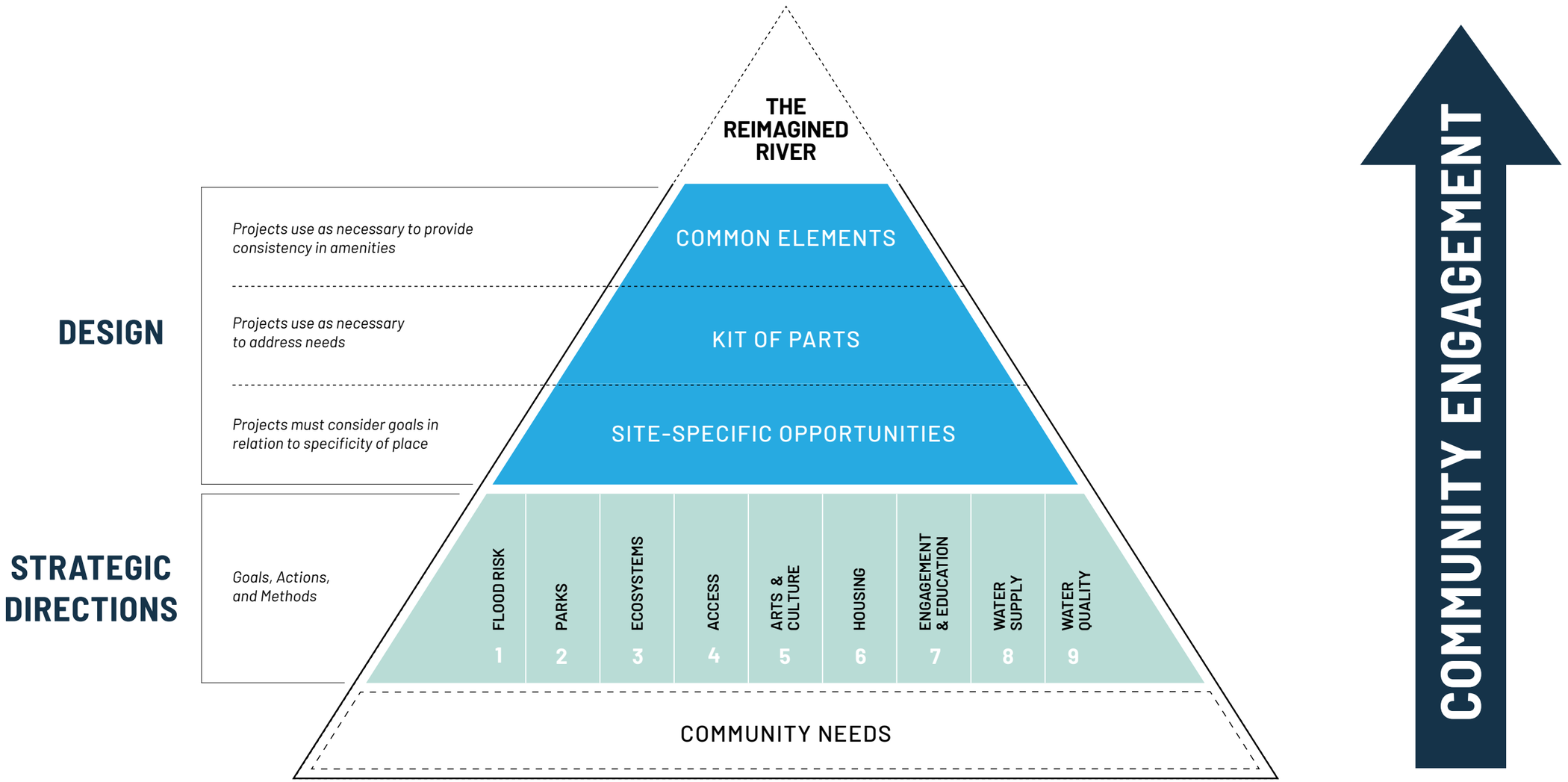


ACTIONS

METHODS

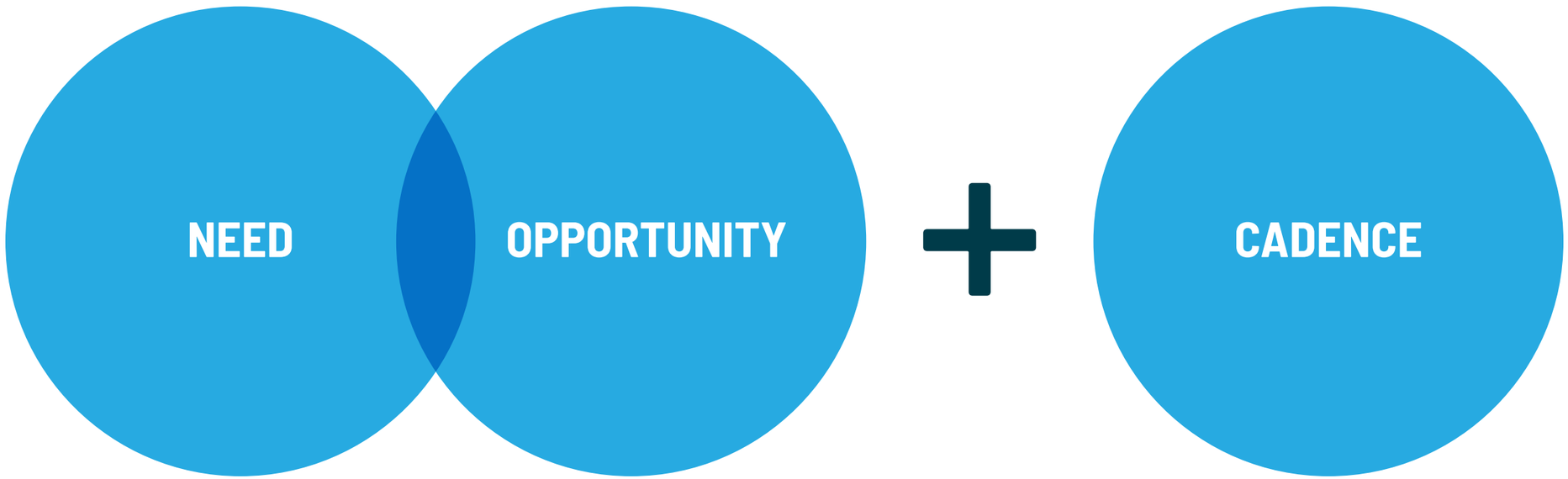


PROJECTS SHOULD BUILD UPON THE GOALS USING THE KIT OF PARTS AND COMMON ELEMENTS



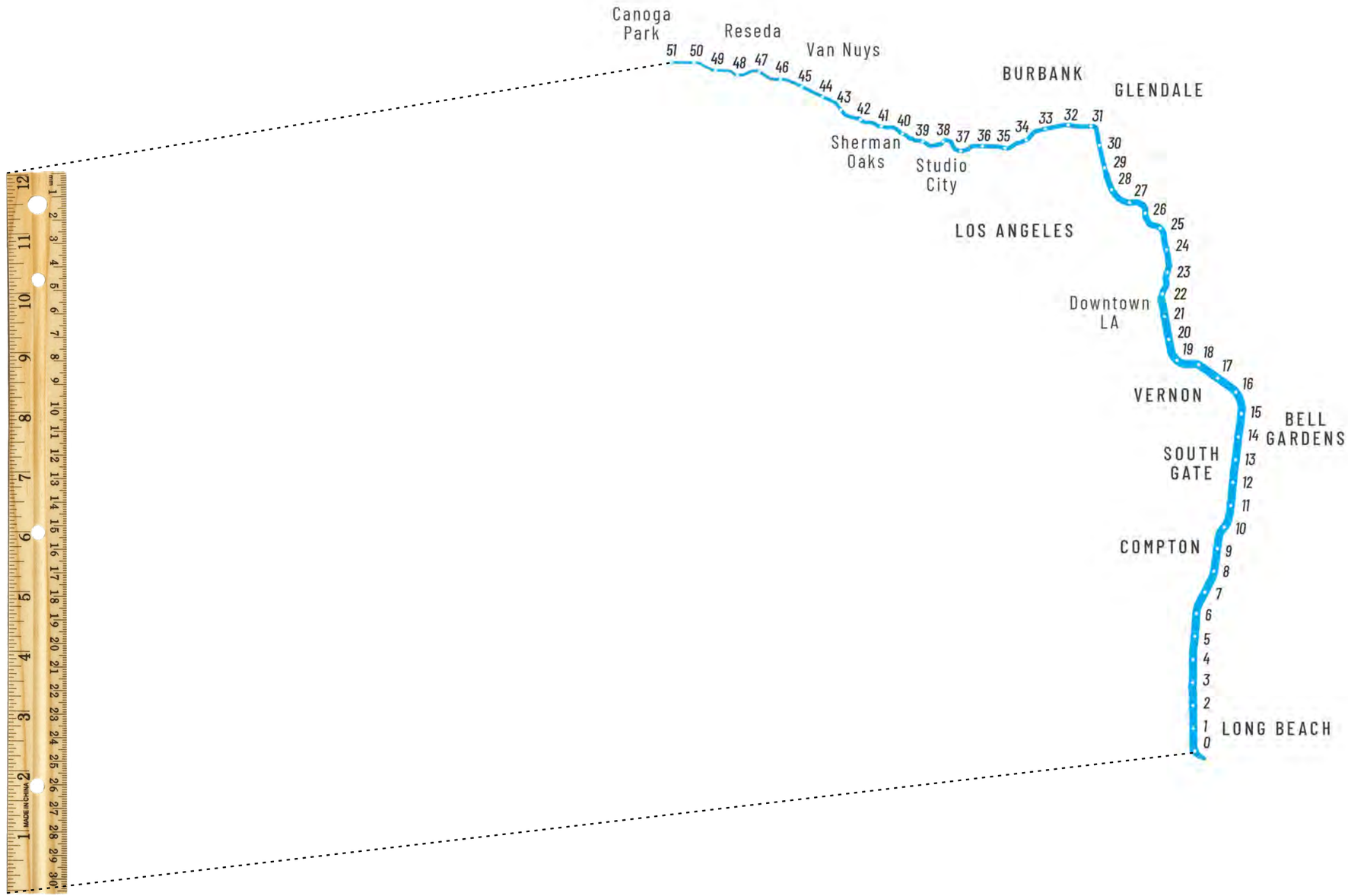
HOW DO WE LOCATE NEW PROJECTS?

Align need, opportunity, and cadence along the LA River Corridor.



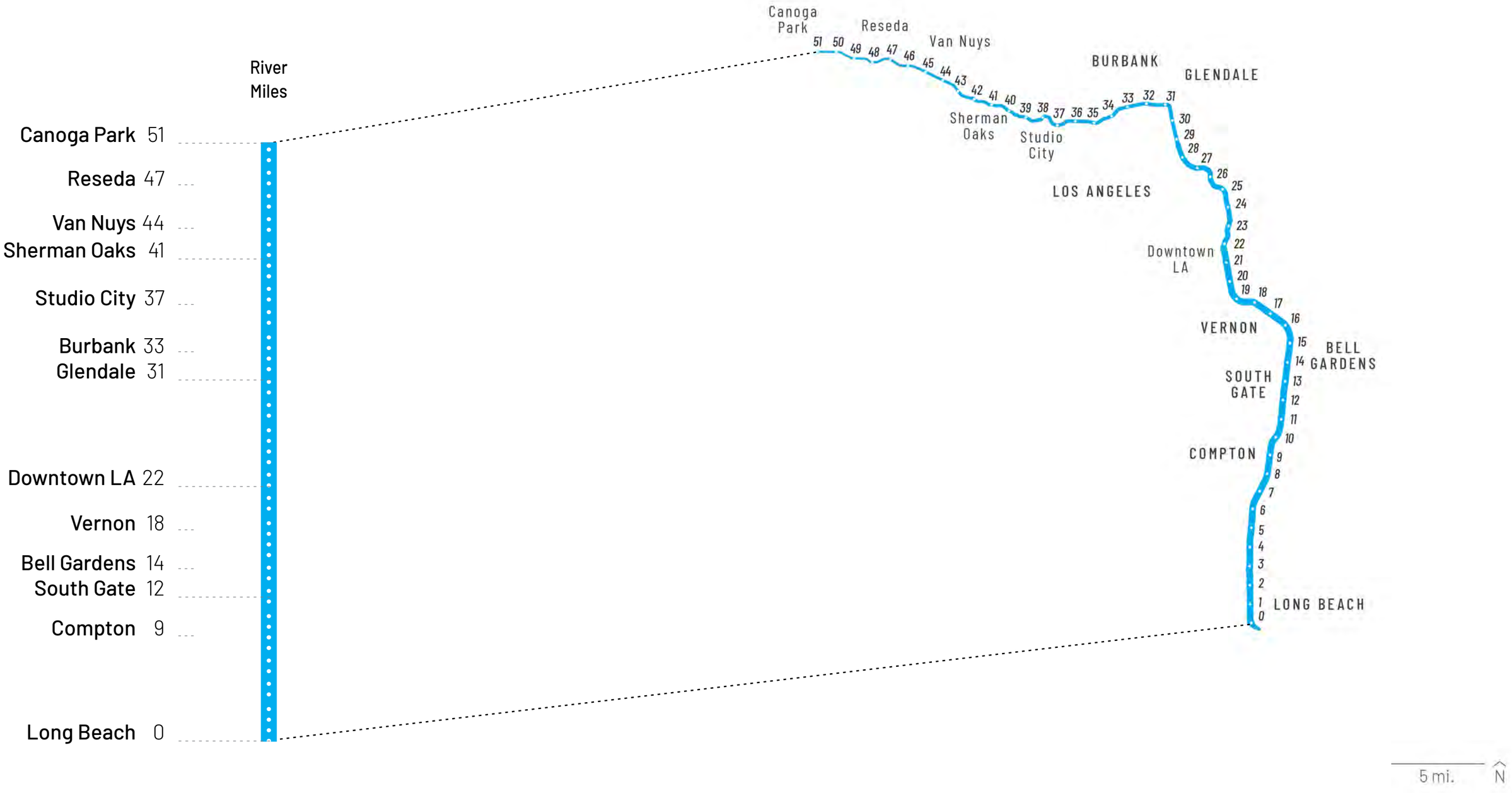
LARMP 2020

THE LA RIVER RULER



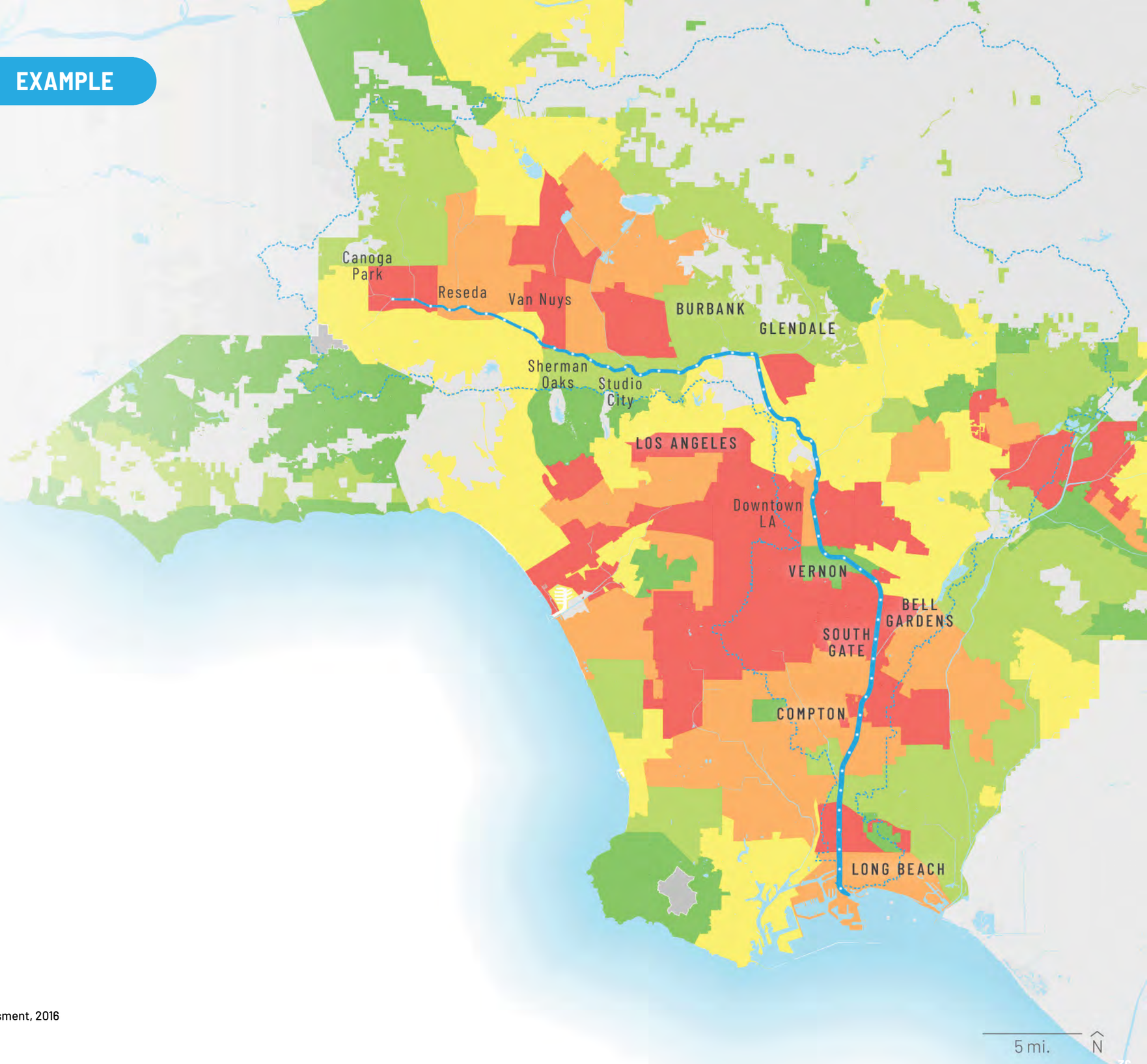
Source: OLIN, Geosyntec

THE LA RIVER RULER



EXAMPLE

PARK NEED



Park Need Analysis:

- Very High
- High
- Moderate
- Low
- Very Low

Source: Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, 2016

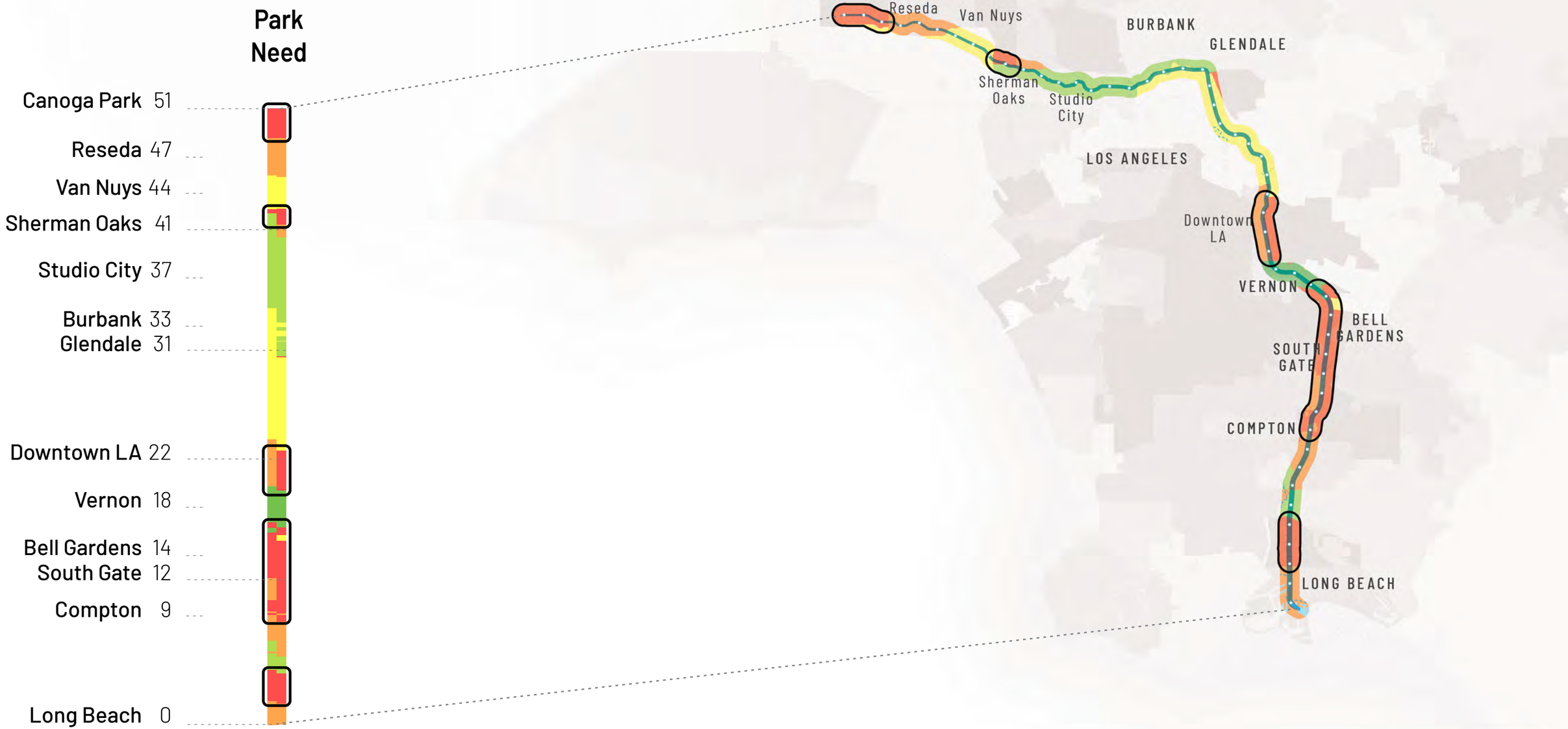
EXAMPLE

PARK NEED ALONG THE LA RIVER CORRIDOR

Source: OLIN, Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, 2016

EXAMPLE

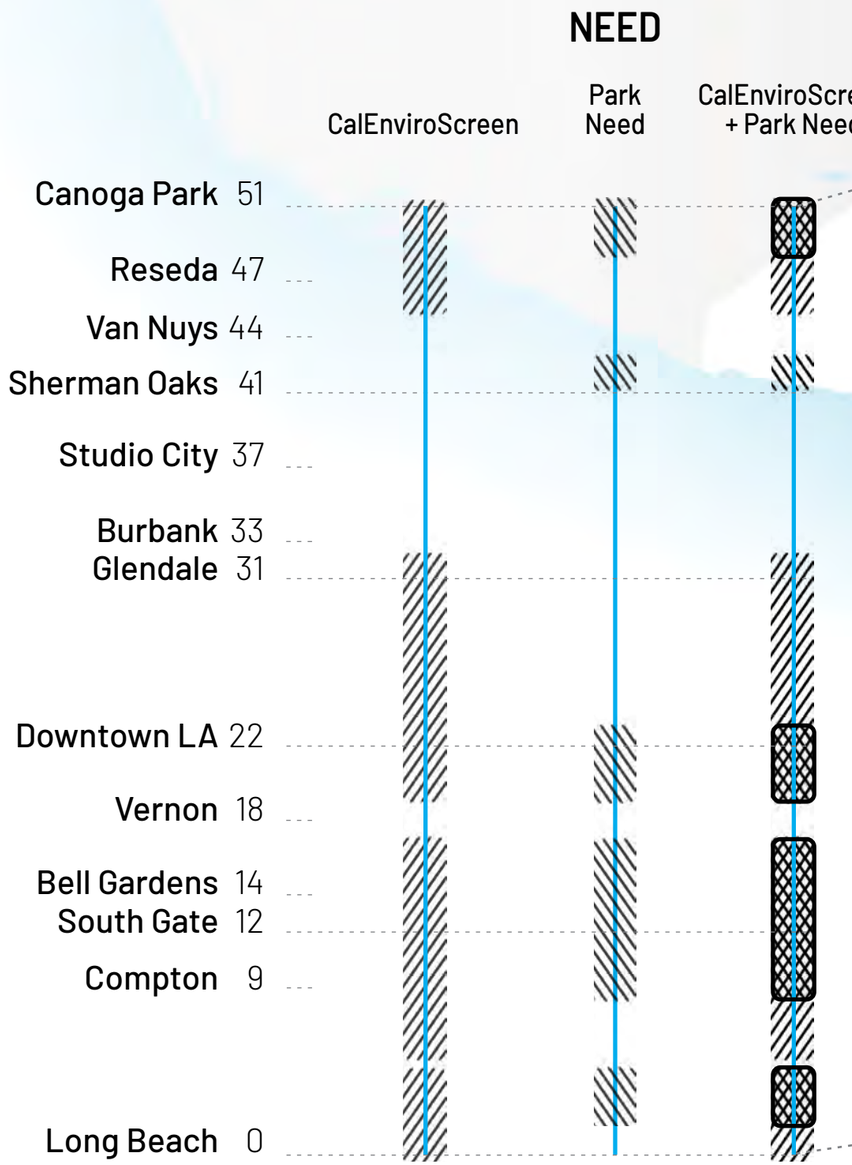
IDENTIFY AREAS OF HIGHEST NEED

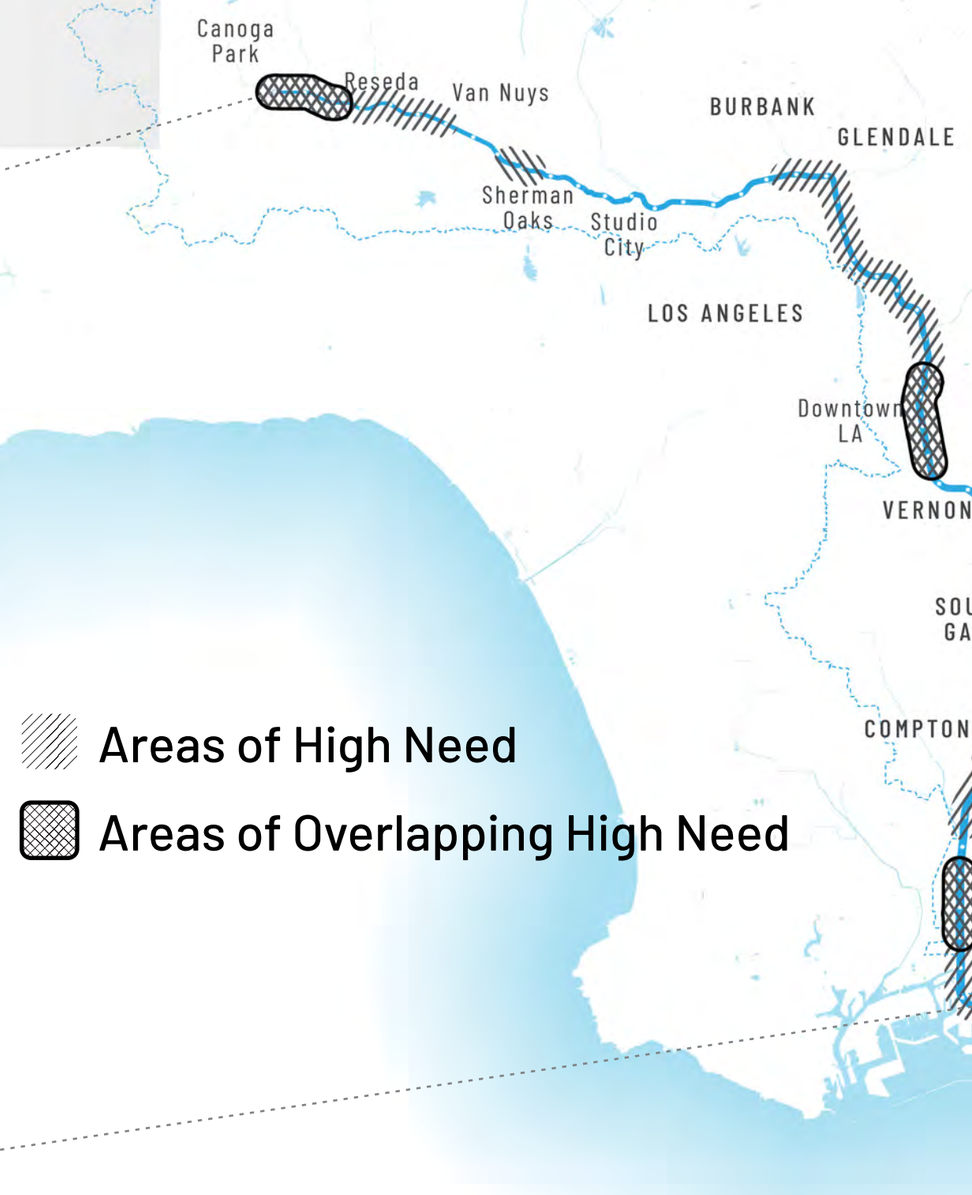


Source: OLIN, Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, 2016

EXAMPLE

IDENTIFY AREAS OF OVERLAPPING HIGH NEED

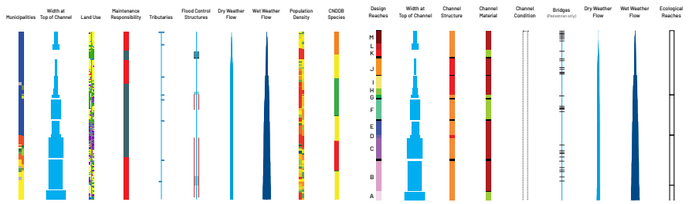


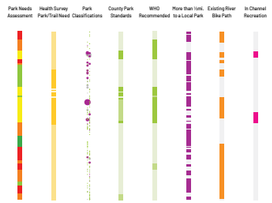


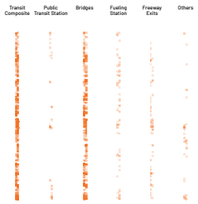
Source: OLIN

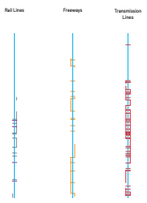
LARMP 2020

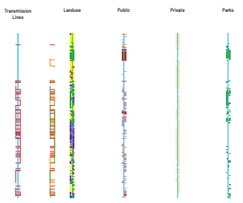
RIVER RULERS

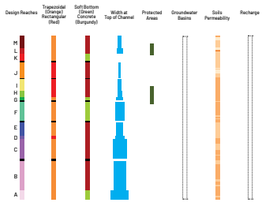


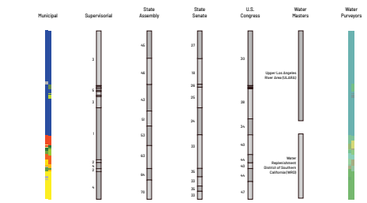


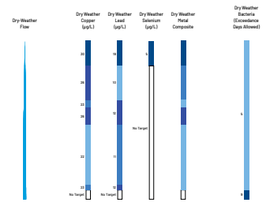


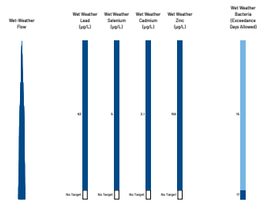


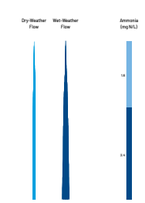


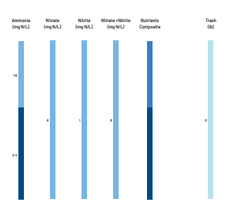


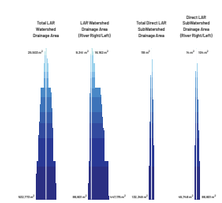


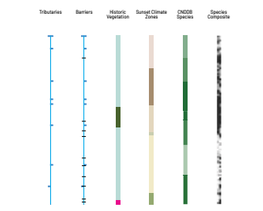


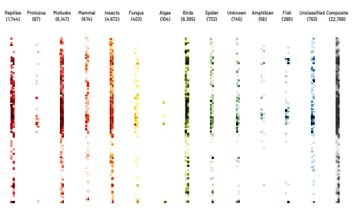


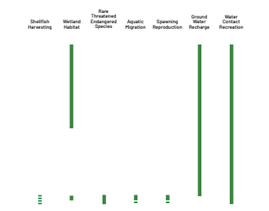


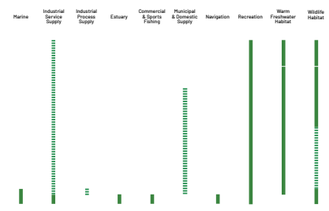


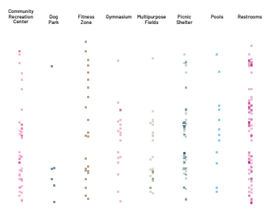


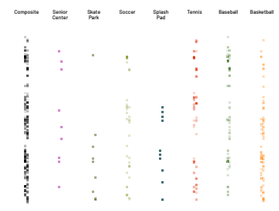


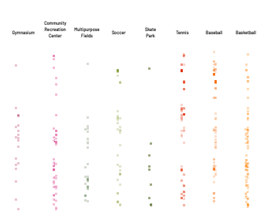


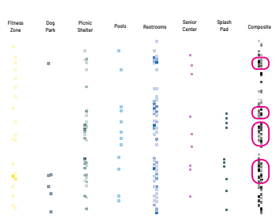


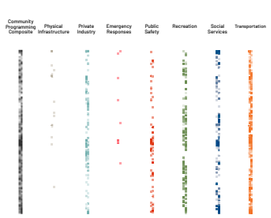


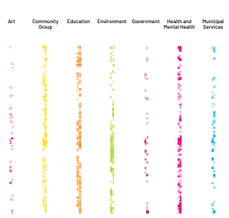


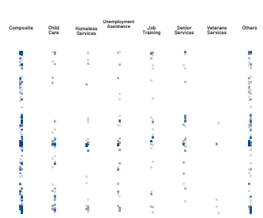


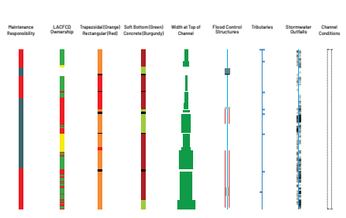


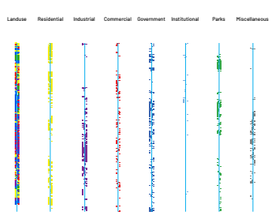


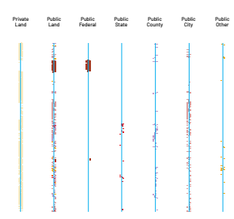


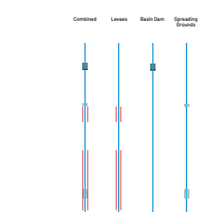


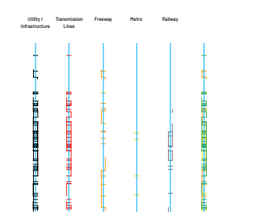


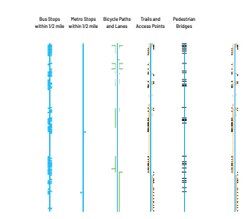


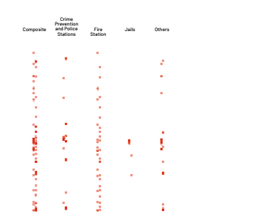


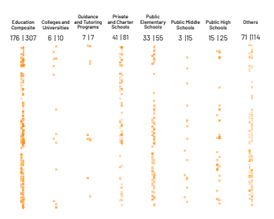


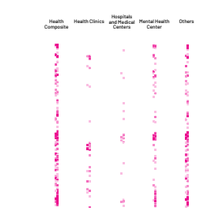


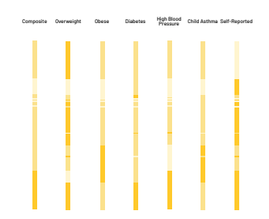


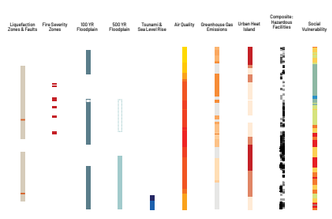


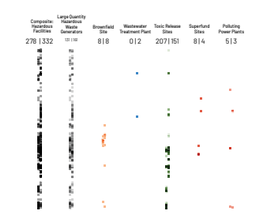


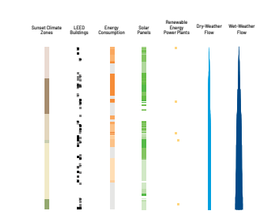






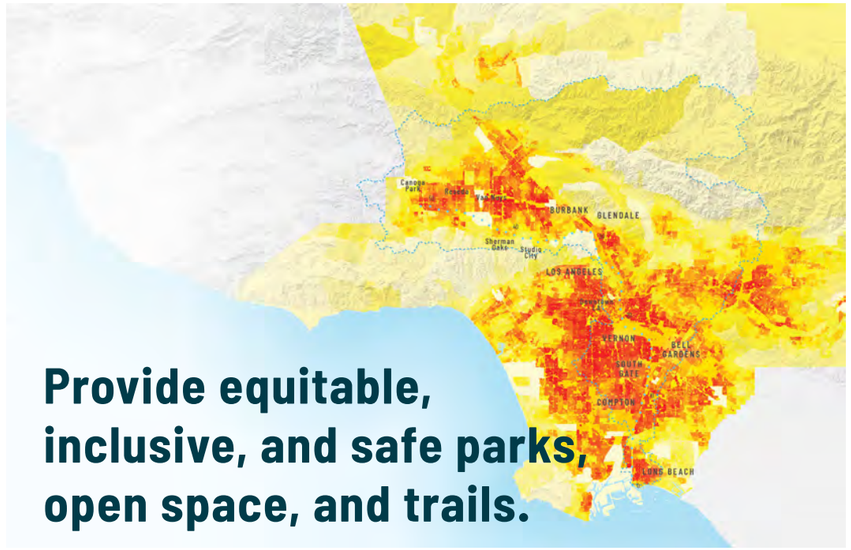






LARMP 2020

Reduce flood risk and improve resiliency.



Provide equitable, inclusive, and safe parks, open space, and trails.

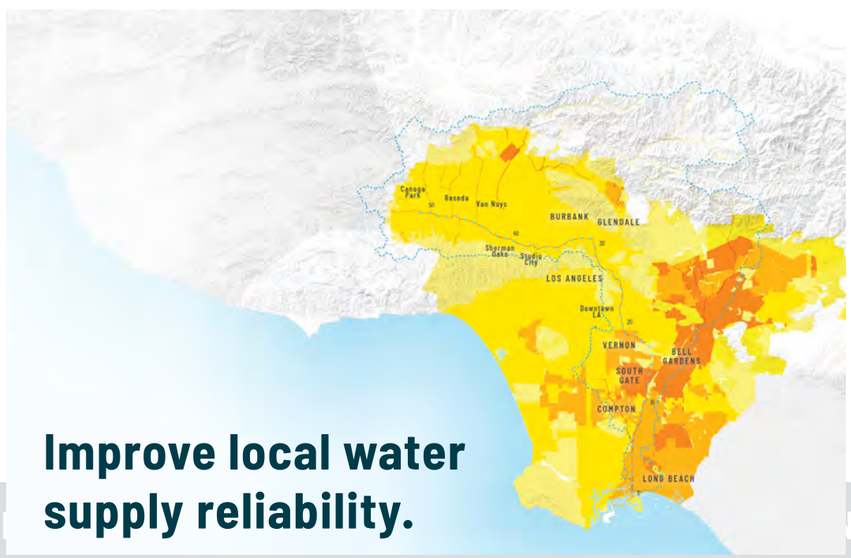
Support healthy, connected ecosystems.

Enhance opportunities for equitable access to the river corridor.

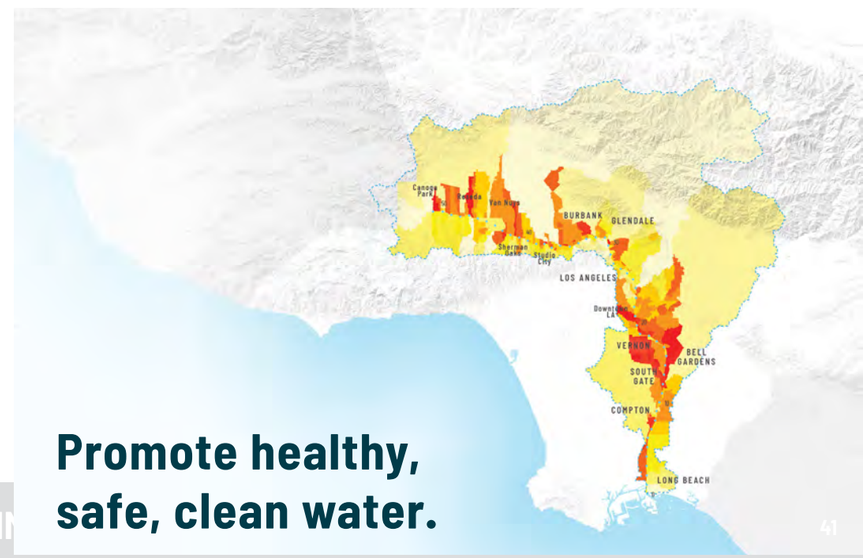
Embrace and enhance opportunities for arts and culture.

Address potential adverse impacts to housing affordability and people experiencing homelessness

Foster opportunities for continued community engagement, development, and education.



Improve local water supply reliability.



Promote healthy, safe, clean water.

OPPORTUNITY

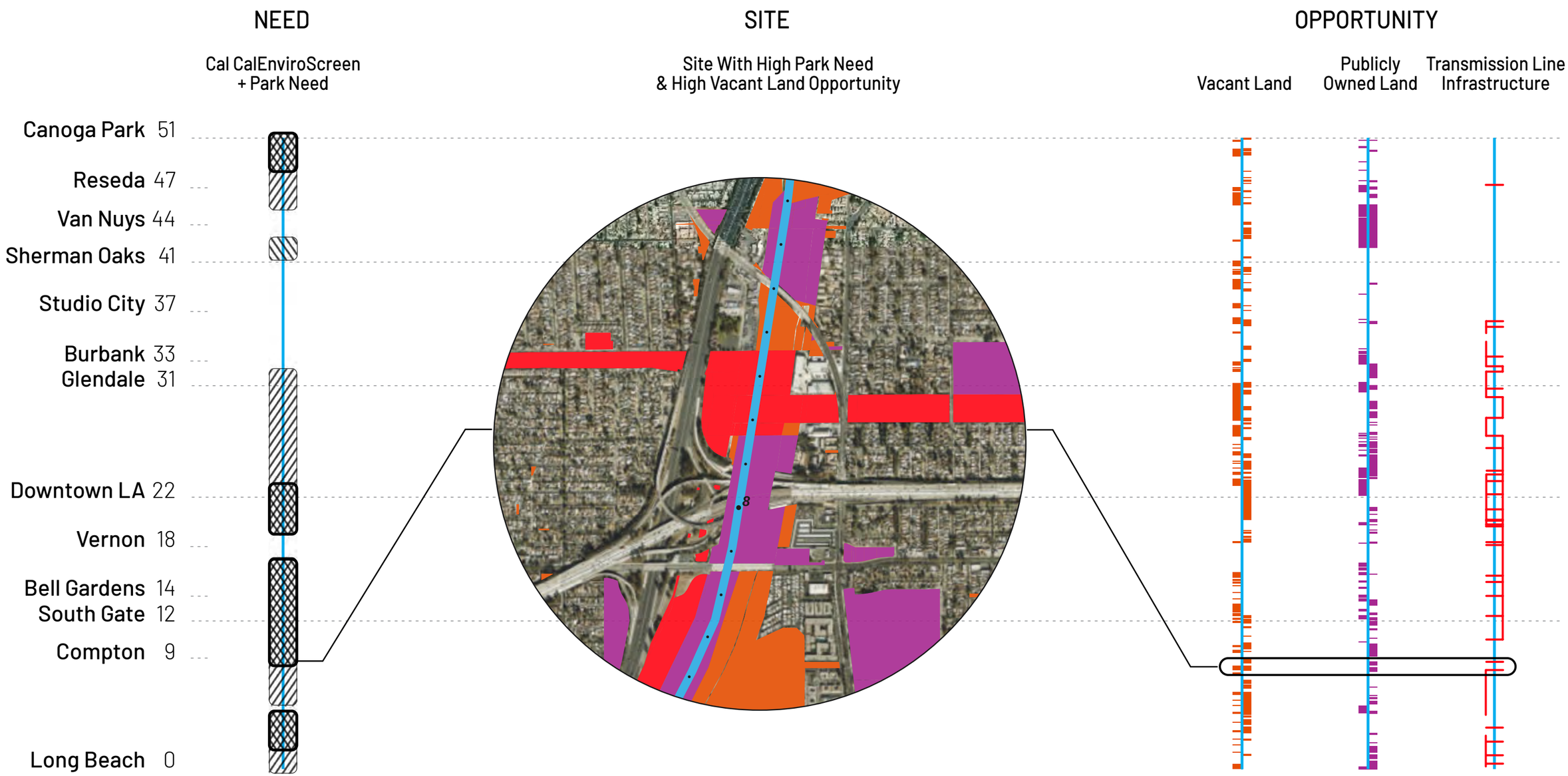
Capitalize on areas that have the greatest capacity to site new projects.

LAND ASSETS:

- LA River Right-of-Way
- **LA County Owned Parcels** (Priority to Vacant & Underutilized)
- **Other Publicly Owned Parcels** (Priority to Vacant & Underutilized)
- Other Underutilized Right-of-Way
- Vacant Private Parcels
- **Underutilized Private Parcels** (Only Applied to Housing Need)
- Pedestrian Street Network

EXAMPLE

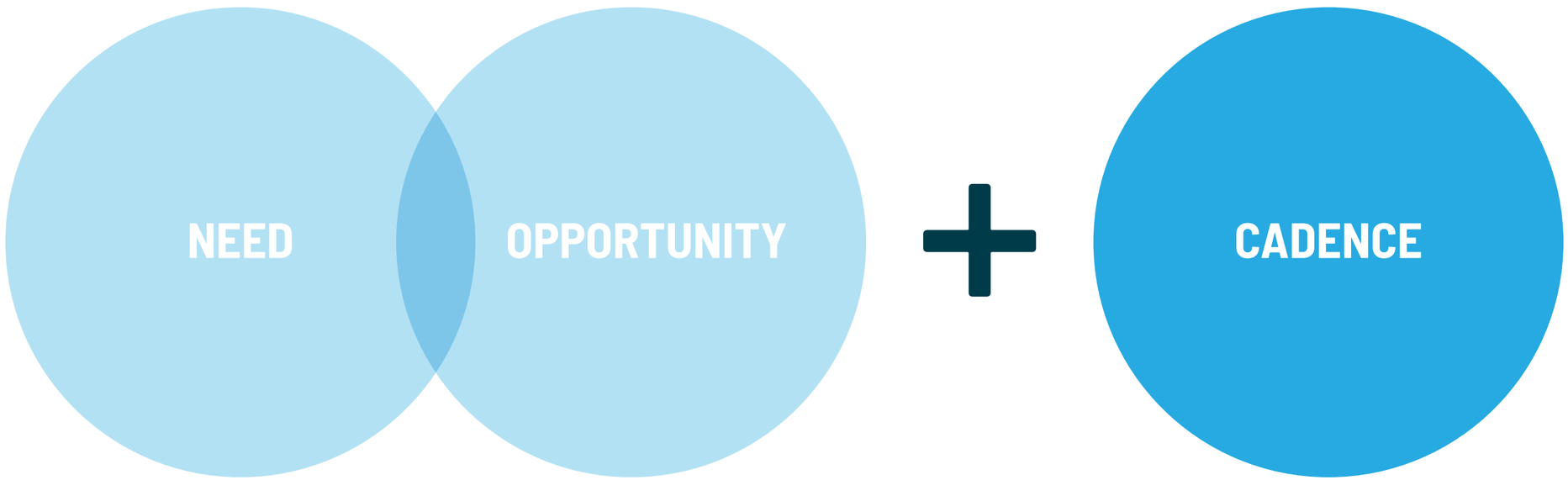
COMPARE AREAS OF HIGHEST NEED & OPPORTUNITY



Source: OLIN, based on LA County Assessor Parcels Data, 2016

HOW DO WE LOCATE NEW PROJECTS?

Align need, opportunity, and cadence along the LA River Corridor.



CADENCE

Confirm projects are distributed along the river equally and vary in scale.

XL
ex: Regional Parks, Water Recharge Area

L
ex: Community Park, Cultural Center

M
ex: Neighborhood Parks, Community Center, Bridges

S
ex: Pocket Parks, Park Nodes, Access Gateways, Restrooms, Pavilions

XS
ex: Pavilions, Lighting, Environmental Graphics, Benches

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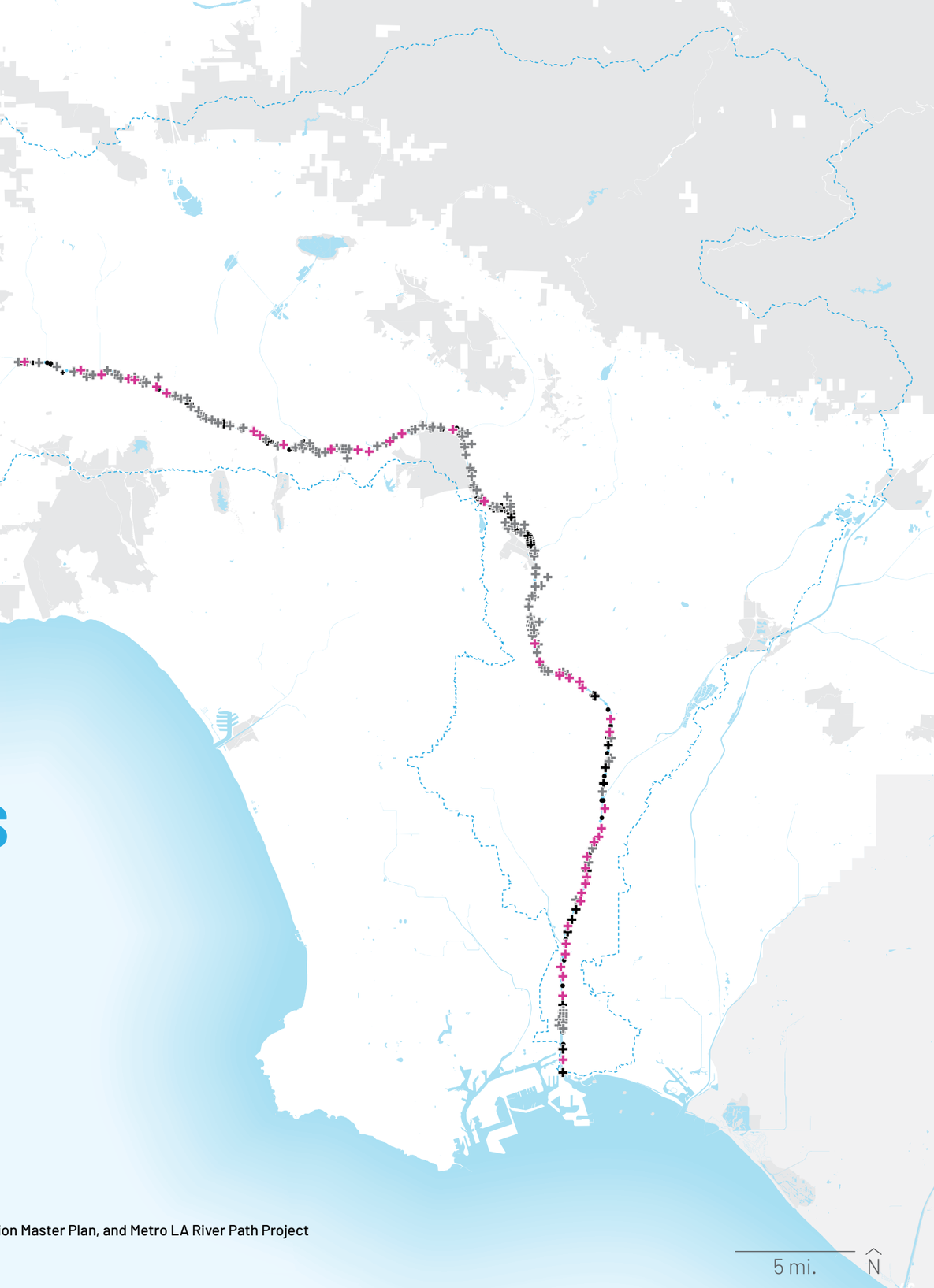
XS, S PROJECTS

43 NEWLY PROPOSED PROJECTS
123 ADDITIONAL PROJECTS FROM PLANS
42 IMPROVED ACCESS POINTS

- XS, S Proposed Projects
- XS, S Projects from Plans*
- Potential Access Points to Upgrade
- Existing Access Points



Source: OLIN, Gehry Partners, Geosyntec

*Plans referenced include Lower Los Angeles River Revitalization Plan, Los Angeles River Revitalization Master Plan, and Metro LA River Path Project

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M, L, XL SITE-BASED PROJECTS

22 PROPOSED PROJECT SITES
54 PLANNED MAJOR PROJECTS

Proposed Project Sites

Planned Major Projects

Sources: OLIN, Gehry Partners, Geosyntec

SITES AND NEEDS

RM 51.1
WATER SUPPLY
ECOSYSTEMS
ARTS & CULTURE
AFFORDABLE HOUSING
EDUCATION

RM 51
ECOSYSTEMS
ARTS & CULTURE
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 50.6
FLOOD RISK
PARKS
ECOSYSTEMS
ARTS & CULTURE
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY

RM 48.9
FLOOD RISK
WATER SUPPLY
PARKS
ECOSYSTEMS
ARTS & CULTURE
EDUCATION

RM 47.8
FLOOD RISK
ECOSYSTEMS
ACCESS
WATER SUPPLY
EDUCATION

RM 47.5
PARKS
ARTS & CULTURE
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 47.4
FLOOD RISK
ACCESS
ARTS & CULTURE
WATER SUPPLY
PARKS, ECOSYSTEMS
EDUCATION
WATER QUALITY

RM 46.8
FLOOD RISK
ACCESS
WATER SUPPLY
ECOSYSTEMS
ARTS & CULTURE
EDUCATION
WATER QUALITY

RM 46.5
FLOOD RISK
ACCESS
WATER SUPPLY
ECOSYSTEMS
ARTS & CULTURE

RM 44
ECOSYSTEMS
WATER SUPPLY

RM 41.2
ACCESS
EDUCATION
WATER SUPPLY
ECOSYSTEMS
WATER QUALITY

RM 40.9
ACCESS
EDUCATION
WATER SUPPLY
ECOSYSTEMS
WATER QUALITY

RM 40.8
ACCESS
EDUCATION
WATER SUPPLY
ECOSYSTEMS

RM 39.4
WATER SUPPLY
ECOSYSTEMS
EDUCATION
WATER QUALITY

RM 38.8
ECOSYSTEMS
EDUCATION
WATER SUPPLY

RM 38.2
FLOOD RISK
WATER SUPPLY
ECOSYSTEMS
ACCESS
EDUCATION
WATER QUALITY

RM 37.6
FLOOD RISK
WATER SUPPLY
WATER QUALITY
ECOSYSTEMS
EDUCATION

RM 37.5
ECOSYSTEMS
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 35.9
ACCESS
FLOOD RISK
EDUCATION
WATER SUPPLY
ECOSYSTEMS
WATER QUALITY

RM 33.5
ECOSYSTEMS
ACCESS
EDUCATION
WATER SUPPLY

RM 33
FLOOD RISK
ECOSYSTEMS
ACCESS
EDUCATION
WATER SUPPLY

RM 32.8
FLOOD RISK
ACCESS
ECOSYSTEMS
EDUCATION
WATER SUPPLY

RM 31
FLOOD RISK
ECOSYSTEMS
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 30.9
FLOOD RISK
ECOSYSTEMS
EDUCATION
WATER SUPPLY

RM 30.8
FLOOD RISK
ECOSYSTEMS
EDUCATION
WATER SUPPLY

RM 30.7
PARKS
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 30.65
FLOOD RISK
ECOSYSTEMS
EDUCATION
WATER SUPPLY

RM 30.6
ECOSYSTEMS
WATER QUALITY
ARTS & CULTURE
EDUCATION
WATER SUPPLY

RM 30.5
ECOSYSTEMS
WATER QUALITY
PARKS
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY

RM 29.3
FLOOD RISK
ACCESS
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY

RM 29.1
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ACCESS
ECOSYSTEMS
WATER SUPPLY

RM 27.7
FLOOD RISK
ECOSYSTEMS
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY

RM 26.2
ECOSYSTEMS
FLOOD RISK
PARKS
AFFORDABLE HOUSING
WATER SUPPLY

RM 25.6
ECOSYSTEMS
FLOOD RISK
PARKS
AFFORDABLE HOUSING
WATER SUPPLY

RM 25.3
FLOOD RISK
AFFORDABLE HOUSING
ECOSYSTEMS
EDUCATION
WATER SUPPLY

RM 25.2
FLOOD RISK
ECOSYSTEMS
AFFORDABLE HOUSING
PARKS
WATER SUPPLY

RM 24.5
ACCESS
AFFORDABLE HOUSING
WATER SUPPLY
FLOOD RISK
PARKS
ECOSYSTEMS

RM 24.1
FLOOD RISK
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING
WATER SUPPLY

RM 24
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING

RM 23.5
FLOOD RISK
ACCESS
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING
WATER SUPPLY
WATER QUALITY

RM 23.2
FLOOD RISK
ACCESS
WATER SUPPLY
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING

RM 22.6
FLOOD RISK
PARKS
ACCESS
AFFORDABLE HOUSING
WATER SUPPLY
WATER QUALITY

RM 21.6
ACCESS
AFFORDABLE HOUSING
WATER SUPPLY
PARKS
ECOSYSTEMS

RM 21.5
AFFORDABLE HOUSING
ACCESS
PARKS
ECOSYSTEMS
WATER SUPPLY
WATER QUALITY

RM 21.1
ACCESS
AFFORDABLE HOUSING
PARKS
ECOSYSTEMS
ARTS & CULTURE
WATER SUPPLY

RM 19.9
ACCESS
AFFORDABLE HOUSING
PARKS
ARTS & CULTURE
AFFORDABLE HOUSING
WATER QUALITY

RM 18.2
WATER QUALITY
FLOOD RISK
PARKS
ARTS & CULTURE
AFFORDABLE HOUSING
WATER SUPPLY

RM 16.2
ECOSYSTEMS
WATER QUALITY
FLOOD RISK
PARKS
ACCESS
ARTS & CULTURE
AFFORDABLE HOUSING

RM 15.8
ECOSYSTEMS
ARTS & CULTURE
PARKS
AFFORDABLE HOUSING
WATER QUALITY

RM 15.3
PARKS
WATER QUALITY
ARTS & CULTURE
AFFORDABLE HOUSING

RM 14.1
ARTS & CULTURE
WATER QUALITY
FLOOD RISK
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING
EDUCATION

RM 13.9
ARTS & CULTURE
FLOOD RISK
PARKS
ECOSYSTEMS
AFFORDABLE HOUSING
EDUCATION
WATER QUALITY

RM 13.5
ARTS & CULTURE
WATER SUPPLY
PARKS
AFFORDABLE HOUSING
WATER QUALITY

RM 12.9
WATER SUPPLY
ECOSYSTEMS
AFFORDABLE HOUSING
WATER QUALITY
FLOOD RISK
PARKS
ARTS & CULTURE

RM 12.7
ECOSYSTEMS
AFFORDABLE HOUSING
WATER SUPPLY
WATER QUALITY
FLOOD RISK, PARKS
ARTS & CULTURE

RM 12
ECOSYSTEMS
ARTS & CULTURE
WATER SUPPLY
WATER QUALITY
FLOOD RISK, PARKS
AFFORDABLE HOUSING

RM 11.9
ECOSYSTEMS
PARKS
ACCESS
ARTS & CULTORE
AFFORDABLE HOUSING
WATER SUPPLY
WATER QUALITY

RM 11.8
ECOSYSTEMS
AFFORDABLE HOUSING
WATER QUALITY
FLOOD RISK
PARKS
ARTS & CULTURE

RM 11.7
ECOSYSTEMS
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ARTS & CULTURE

RM 10.5
FLOOD RISK
PARKS
ACCESS
ARTS & CULTURE
AFFORDABLE HOUSING
WATER SUPPLY
WATER QUALITY

RM 10.4
FLOOD RISK
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ECOSYSTEMS
ACCESS
ARTS & CULTURE
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 10.2
ECOSYSTEMS
ARTS & CULTURE
WATER SUPPLY
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AFFORDABLE HOUSING
WATER QUALITY

RM 9.4
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ACCESS
ARTS & CULTURE
AFFORDABLE HOUSING
WATER SUPPLY
WATER QUALITY

RM 8.1
ECOSYSTEMS
ACCESS
ARTS & CULTURE
WATER SUPPLY
FLOOD RISK
PARKS
AFFORDABLE HOUSING
EDUCATION
WATER QUALITY

RM 7.2
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ACCESS
ARTS & CULTURE
EDUCATION
WATER SUPPLY
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RM 6.3
ECOSYSTEMS
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PARKS
ARTS & CULTURE
AFFORDABLE HOUSING
EDUCATION
WATER SUPPLY
WATER QUALITY

RM 5.5
ECOSYSTEMS
WATER SUPPLY
FLOOD RISK, PARKS
ARTS & CULTURE
EDUCATION
WATER QUALITY

RM 5.1
ECOSYSTEMS
WATER SUPPLY
FLOOD RISK
WATER QUALITY

RM 4.4
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ACCESS
ARTS & CULTURE
WATER SUPPLY

RM 3.7
ECOSYSTEMS
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ARTS & CULTURE
AFFORDABLE HOUSING
EDUCATION

RM 2.9
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FLOOD RISK
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WATER QUALITY

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AFFORDABLE HOUSING
WATER SUPPLY

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ECOSYSTEMS
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WATER SUPPLY

RM 0.7
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AFFORDABLE HOUSING
ARTS & CULTURE
WATER SUPPLY

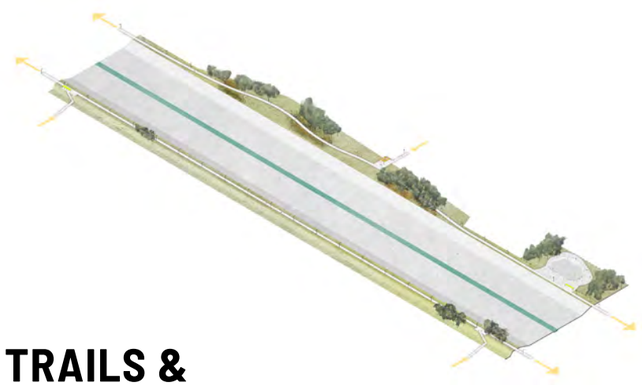
RM 0.6
AFFORDABLE HOUSING
FLOOD RISK
ECOSYSTEMS
WATER SUPPLY

Potential Project Site
Planned Major Project

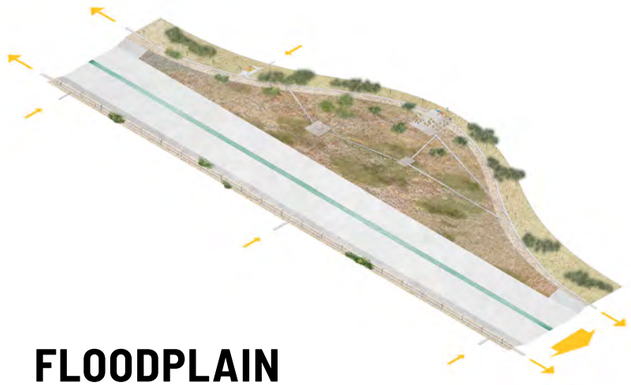
VERY HIGH NEED
HIGH NEED
NEED

Source: OLIN, Gehry Partners, Geosyntec

KIT OF PARTS: CATEGORIES



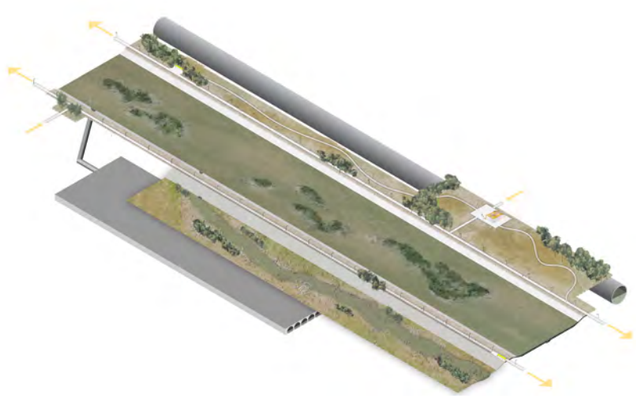
TRAILS & ACCESS GATEWAYS



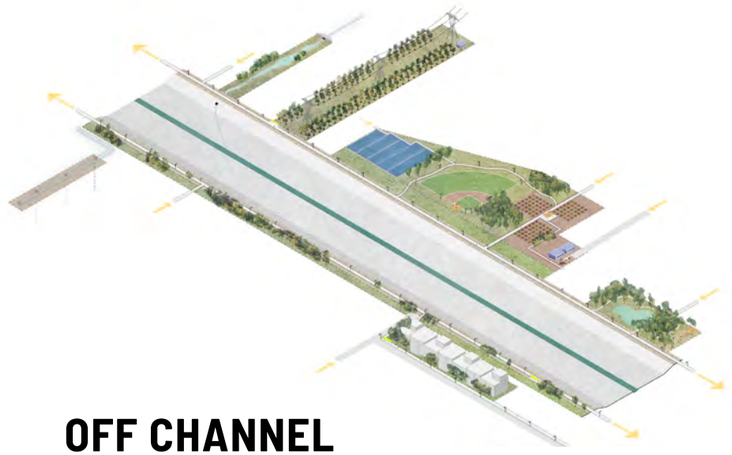
FLOODPLAIN RECLAMATION

CROSSINGS & PLATFORMS

CHANNEL MODIFICATIONS



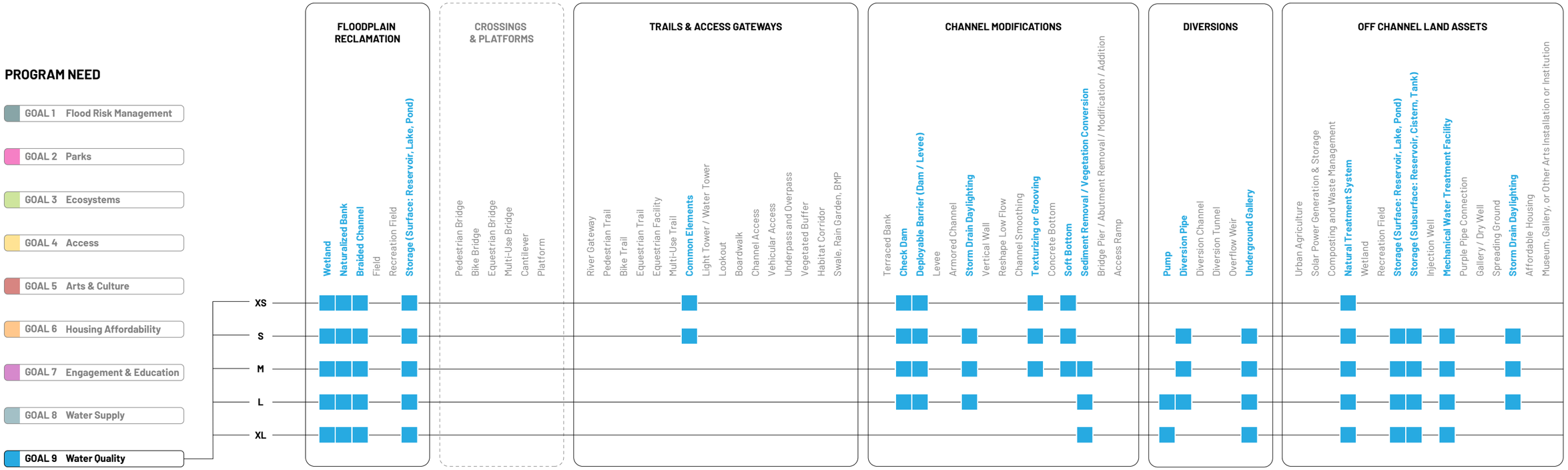
DIVERSIONS



OFF CHANNEL LAND ASSETS

Source: OLIN, Gehry Partners, Geosyntec

KIT OF PARTS FRAMEWORK



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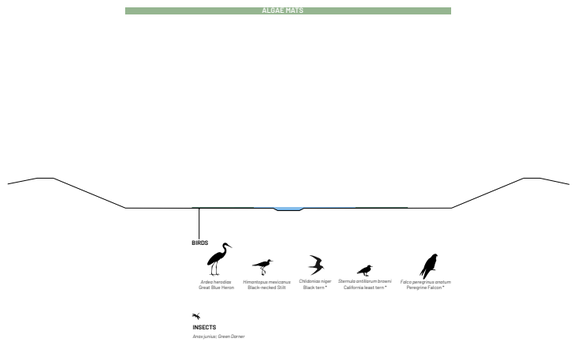
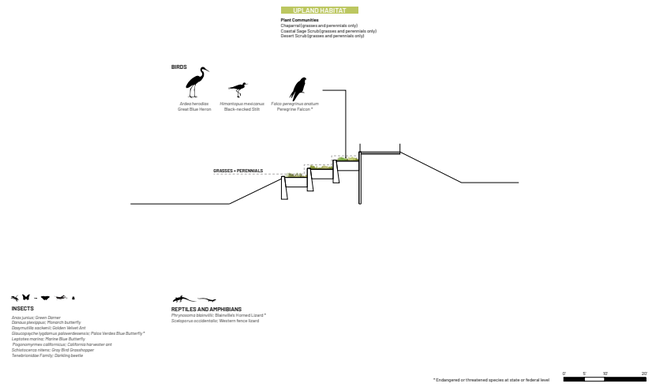
BIODIVERSITY PROFILES

CHANNEL CONDITIONS

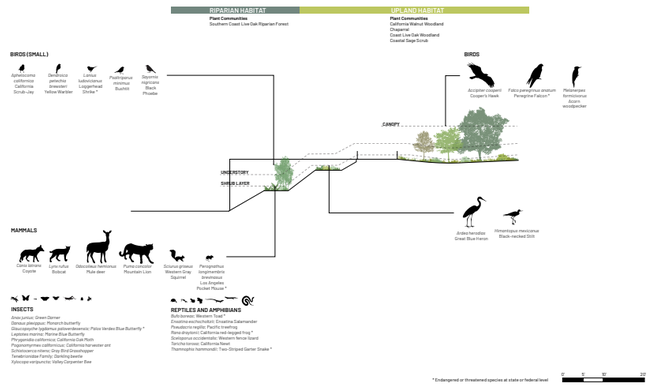
CONCRETE CHANNEL



CONCRETE TERRACES



CONCRETE RAMP



* Endangered or threatened species at state or federal level

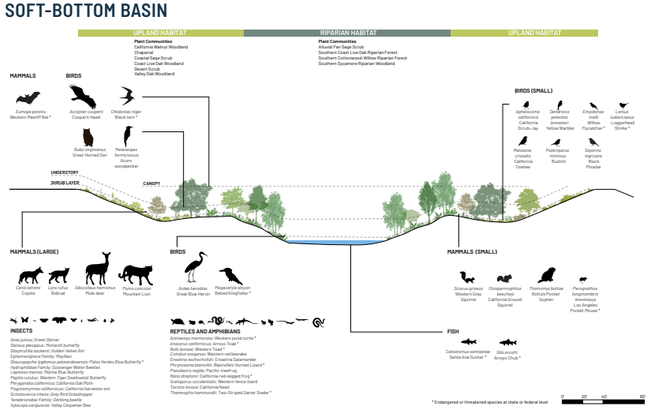
0 5' 10' 20'

BASIN CONDITIONS

* Endangered or threatened species at state or federal level

0 20' 40' 80'

SOFT-BOTTOM BASIN

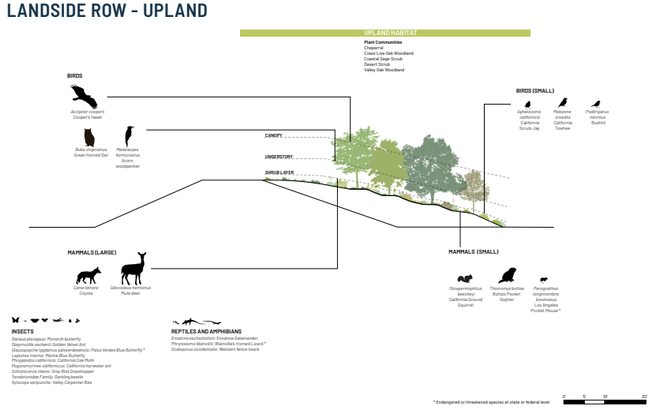


* Endangered or threatened species at state or federal level

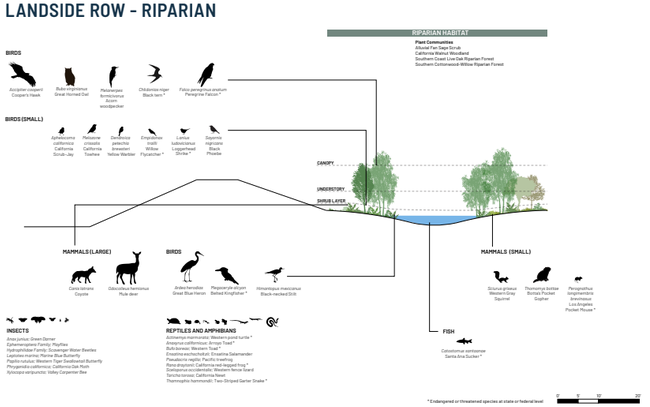
0' 20' 40' 80'

LANDSIDE CONDITIONS

LANDSIDE ROW - UPLAND

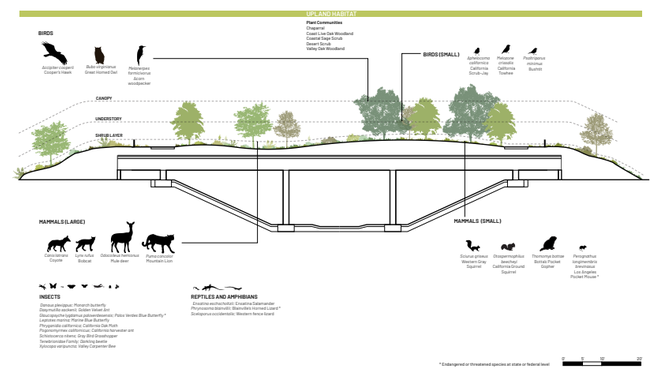


LANDSIDE ROW - RIPARIAN

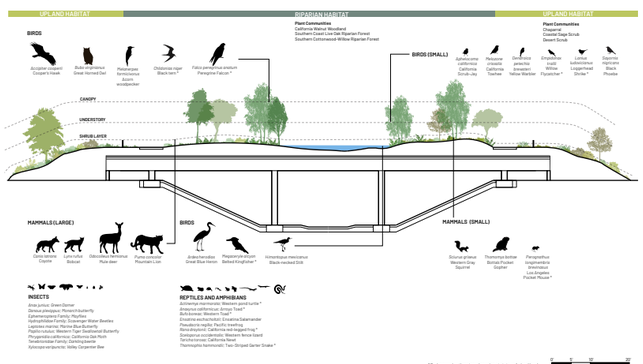


PLATFORM CONDITIONS

PLATFORM - UPLAND



PLATFORM - RIPARIAN

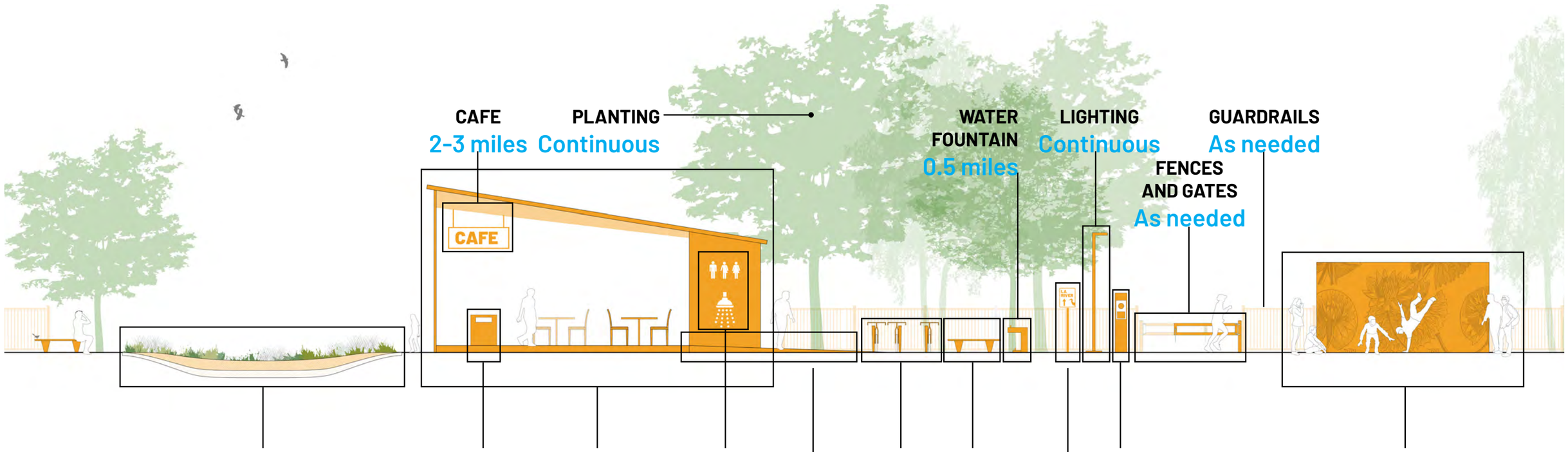


* Endangered or threatened species at state or federal level

0' 10' 20' 40'

INVENTORY OF REPEATED COMMON ELEMENTS

Developed Under Design Guidelines



Source: OLIN, Gehry Partners

RM 30.9: FERRARO FIELDS SIDE CHANNEL

Source: OLIN

RM 30.9: FERRARO FIELDS SIDE CHANNEL

Source: OLIN

IMPLEMENTATION PLAN HIERARCHY

WHAT

GOAL
an ideal future state

2. Provide equitable, inclusive, and safe access to parks and trails.

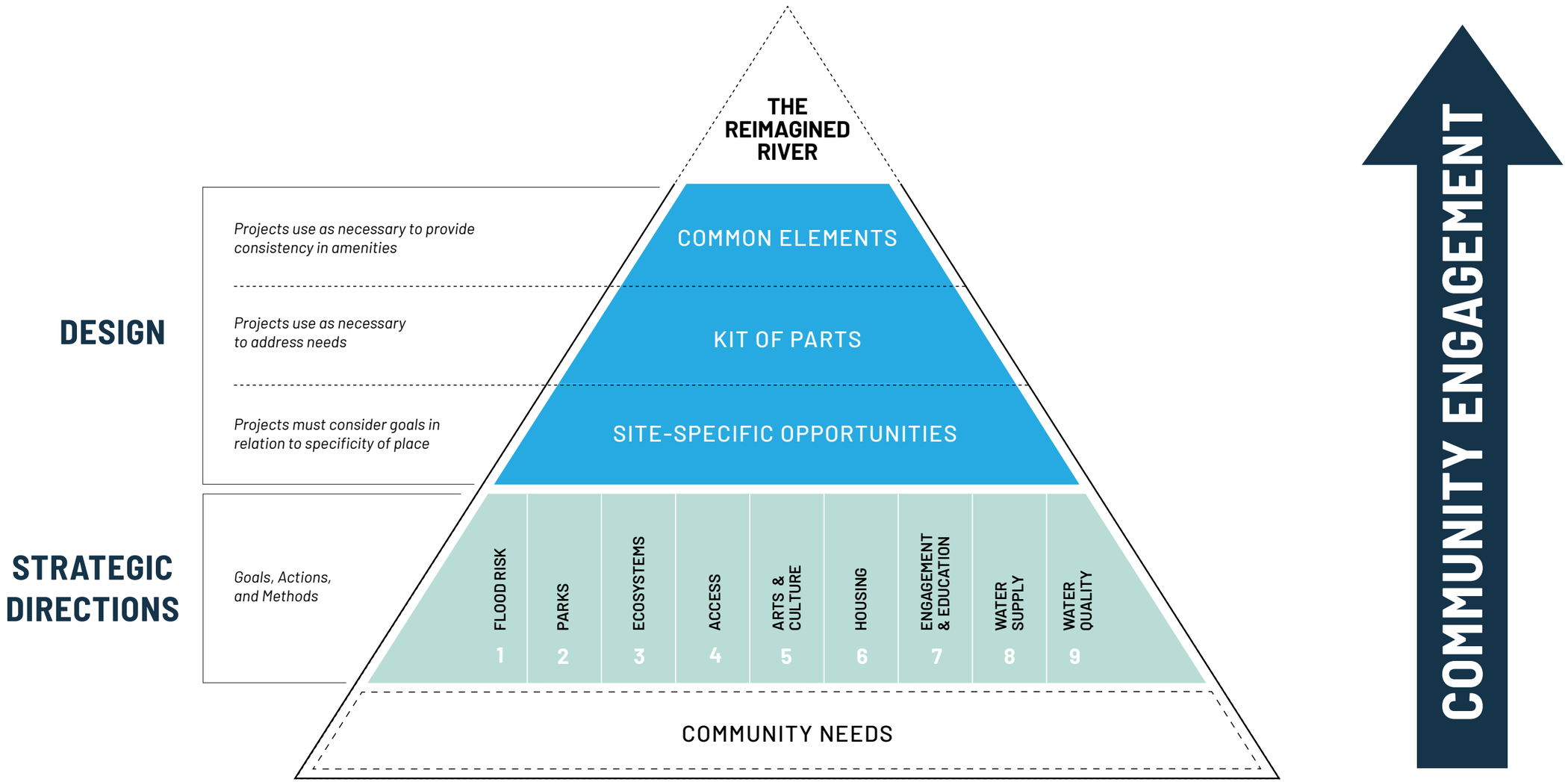
ACTIONS
that move towards the ideal state

2.1. Create 51 miles of connected open space along the river.

WHO	**PARTIES RESPONSIBLE FOR IMPLEMENTATION**	Department of Parks and Recreation
	POTENTIAL IMPLEMENTATION PARTNERS	Public Works/FCD, DRP, USACE, MRCA, RMC, Conservation Corps

THE REIMAGINED RIVER

Projects should build upon the Goals using the Kit of Parts and Common Elements



Q & A AND DISCUSSION

Source: OLIN

WHAT'S IN THE PLAN

Source: OLIN

WHAT'S IN THE PLAN

STRATEGIC DIRECTIONS

- **Goals, Actions, Methods**
- **Implementation Responsibility and Partners**
- **Funding Sources**

DESIGN FRAMEWORK

- **Needs Analysis**
- **Sites**
- **Kit of Parts and Common Elements** (possible intervention strategies)
- **System Recommendations**
- **Design Examples**

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SECTION I:
INTRODUCTION

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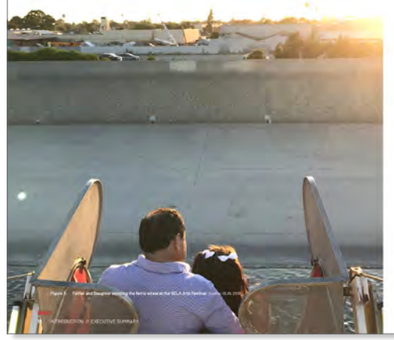

1. EXECUTIVE SUMMARY

THE LA RIVER MASTER PLAN SEEKS TO CREATE AN EQUITABLE FUTURE FOR THE REIMAGINED RIVER

One million people live within one mile of the Los Angeles River. More impressively, one out of four Californians lives within a one-hour drive of the river. Channelized to protect lives and property from flooding during the late 19th through the mid-20th centuries, the Los Angeles River has largely been separated from our social and ecological communities. While fragmented jurisdictions, land ownership, and funding present hurdles in rethinking the LA River, the 2020 Los Angeles River Master Plan seeks to build on prior planning efforts to continue to reimagine the LA River from a single-use corridor to a tangible, multi-benefit resource for the communities of Los Angeles County, while still meeting the needs of flood risk management. The 2020 Plan recognizes the need for resilient systems that address the most complex issues facing the Los Angeles Region, such as climate change, population growth, resource scarcity, and social inequity. These resilient systems are necessary to create fifty-one miles of connected open space that includes clean water, native habitat, parks, recreation, multiuse trails, art, and cultural resources to improve human and ecosystem health, equity, access, mobility, and economic opportunity for the diverse communities of LA County, while providing flood risk management.

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BACKGROUND

The 2020 Master Plan Update process began in 2016 with a motion by the Board of Supervisors to update the 1996 Los Angeles County LA River Master Plan. The update process, led by Los Angeles County Public Works, is supported by an Internal County Team with representatives from each LA County department. A Steering Committee of 42 members representing municipalities, non-profit organizations, or other governmental and non-governmental entities provides input and expertise in issues related to water, people, or the environment. In addition to the technical team and steering committee, the update process includes a robust public engagement program designed to provide opportunities for LA County residents to express ideas for the future of the river.

The 2020 Master Plan is based on a watershed and community approach. This approach is unique from previous efforts in that analysis work, including ecosystem, demographic, and hydrologic studies were conducted for the entire 834-square mile watershed. Recognizing that these systemic and natural elements cannot be studied in isolation, several studies included information for areas outside the watershed. This research is now publicly available and can be utilized for parallel efforts within the watershed.

There is no singular, 51-mile solution for the LA River. Projects along the river should reflect the needs and opportunities of specific reaches and provide multiple benefits. Projects should respect the needs of flood risk management while enhancing the environment and strengthening our communities through the celebration of local culture and creation of jobs. While design strategies in the Master Plan focus on elements along the main stem within and immediately adjacent to the river right-of-way, the Master Plans vision, goals, actions, and methods require an understanding of, and coordination with, communities, the watershed, and parallel efforts such as the Upper River and Tributaries Working Group (ARARE), the Lower LA River Working Group, Metro, the Regional Water Quality Control Board, the LA County Geneva Plan, the LA County Sustainability Plan, the City of Los Angeles' LA River Revitalization Master Plan, the LA County Regional Parks Needs Assessment, the Department of Arts and Culture Cultural Equity and Inclusion Initiative, and watershed management plans. Additionally, coordination between LA County municipalities, other governmental entities, and non-profit organizations will be necessary to achieve the robust vision and goals of this Master Plan. The Reimagined LA River relies on these collective efforts to envision the future of the LA River, its watershed, and all of LA County.

PROJECT THEMES

The Master Plan process was guided by three overarching and coequal themes—water, people, and environment. At the heart of this plan is the realization that infrastructure planning cannot be isolated from social and environmental needs. The full integration of the three themes is fundamental to the Master Plan's success.

These three themes proved both broad and robust enough to capture the key issues from the 1996 plan as well as from the literature review and planning context for the update. They ensured that the Master Plan balanced but did not reduce hydrological, social, and environmental needs.

THE 2020 MASTER PLAN IS BASED ON A WATERSHED AND COMMUNITY APPROACH.

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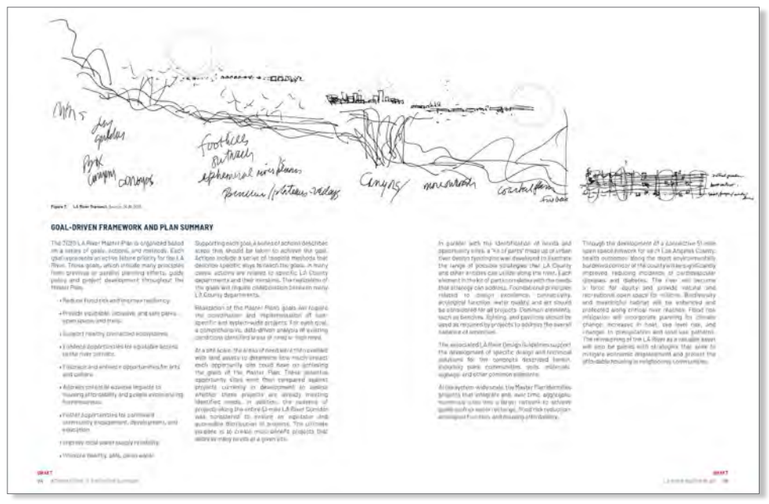

GOAL-DRIVEN FRAMEWORK AND PLAN SUMMARY

The 2020 LA River Master Plan is organized based on a series of goals, actions, and methods. Each goal represents an active future priority for the LA River. Those goals, which include many principles from previous or parallel planning efforts, guide policy and project development throughout the Master Plan.

- Reduce flood risk and improve resiliency.
- Provide equitable, inclusive, and safe parks, open spaces, and trails.
- Support healthy, connected ecosystems.
- Embrace opportunities for equitable access to the river corridor.
- Embrace and enhance opportunities for arts and culture.
- Address potential adverse impacts to housing affordability and people experiencing homelessness.
- Foster opportunities for continued community engagement, development, and education.
- Improve local water supply reliability.
- Promote healthy, safe, clean water.

Supporting each goal, a series of actions describes ways the should be taken to achieve the goal. Actions include a series of "toolkit methods that describe specific ways to reach the goals. In many cases, actions are related to specific LA County departments and their missions. The realization of the goals will require collaboration between many LA County departments.

Realization of the Master Plans goals will require the coordination and implementation of both specific and system-wide projects. For each goal, a comprehensive, data-driven analysis of existing conditions identified areas of need or high need.

At a site scale, the areas of need were then overlaid with land assets to determine key multi-benefit ends opportunity sites. From there compared against projects currently in development to assess whether these projects are already meeting identified needs. In addition, the visioning of projects along the entire 51-miles LA River Corridor was considered to evaluate an equitable and achievable distribution of projects. The ultimate goal is to create multi-benefit projects that address many levels at a given site.

In parallel with the identification of needs and opportunity sites, a "kit of parts" made up of urban river corridor typologies was developed to illustrate the range of possible strategies the LA County and other entities can utilize along the river. Each element in the kit of parts relates with the needs that strategy can address. Foundational principles related to design excellence, connectivity, ecological function, water quality, and art should be considered for all projects. Context elements, such as benches, lighting, and pavilions should be used as required by projects to address the overall balance of amenities.

The associated LA River Design Guidelines support the development of specific design and technical solutions for the concepts described herein. Inclusivity, safe communities, safe, multi-modal systems, and other common elements.

At the system-wide scale, the Master Plan identifies projects that integrate and, over time, aggregate numerous sites into a larger network to achieve goals such as water recharge, flood risk reduction, ecological functions, and mobility and resiliency.

Through the development of a cumulative 51-mile open space network for all of Los Angeles County, health outcomes along the most environmentally burdened corridor of the county will be significantly improved, reducing incidences of cardiovascular diseases and diabetes. The river will become a force for equity and provide natural and recreational open space for millions. Biodiversity and watershed habitat will be enhanced and protected along critical river reaches. Flood risk mitigation will incorporate planning for climate change. Increases in heat, low river flow, and changes in precipitation and land use patterns. The reimagining of the LA River as a resilient asset will also be paired with strategies that seek to mitigate economic displacement and protect the affordable housing in neighboring communities.

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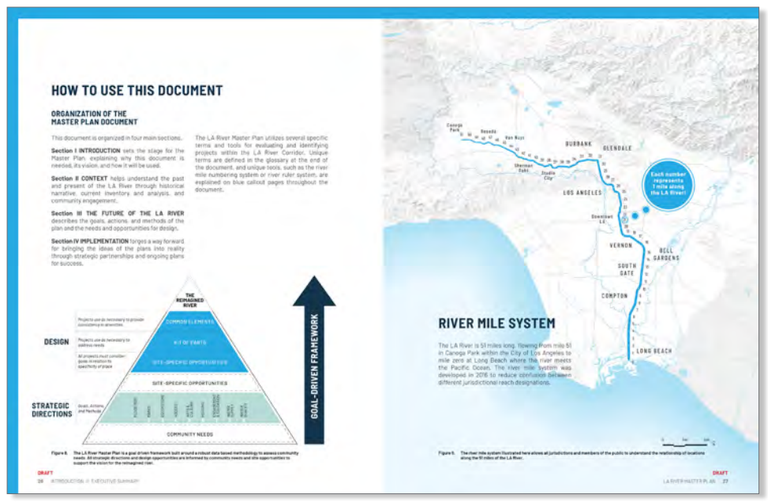

HOW TO USE THIS DOCUMENT

ORGANIZATION OF THE MASTER PLAN DOCUMENT

This document is organized in four main sections.

Section I INTRODUCTION sets the stage for the Master Plan, explaining why this document is needed, its vision, and how it will be used.

Section II CONTEXT helps understand the past and present of the LA River through historical narrative, current inventory and analysis, and community engagement.

Section III THE FUTURE OF THE LA RIVER describes the goals, actions, and methods of the plan and the needs and opportunities for design.

Section IV IMPLEMENTATION forges a way forward for bringing the ideas of the plans into reality through strategic partnerships and ongoing plans for success.

The LA River Master Plan utilizes several specific terms and tools for evaluating and identifying projects within the LA River Corridor. Unique terms are defined in the glossary at the end of the document, and unique tools, such as the river mile numbering system or river ruler system, are explained on blue callout pages throughout the document.

RIVER MILE SYSTEM

The LA River is 51 miles long, flowing from mile 51 in Canoga Park within the City of Los Angeles to mile zero at Long Beach where the river meets the Pacific Ocean. The river mile system was developed in 2016 to reduce confusion between different jurisdictional reach designations.

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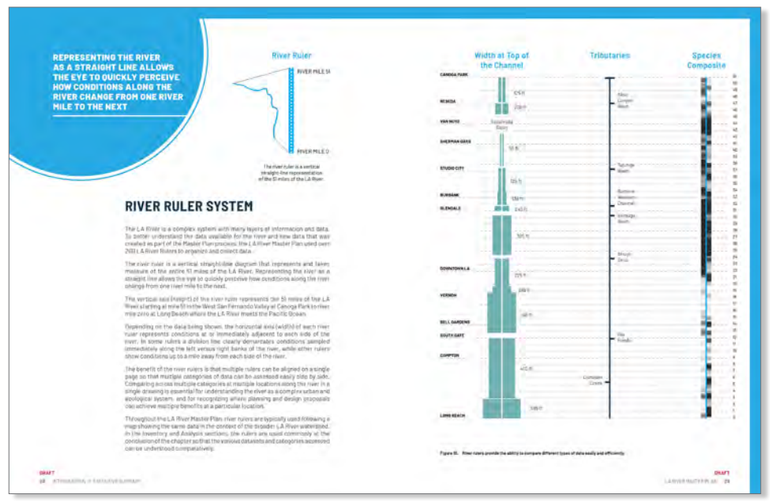

RIVER RULER SYSTEM

The LA River is a complex system with many layers of information and data. To better understand the data available for the river and new data that was created as part of the Master Plan process, the LA River Master Plan called over 2000 LA River Rulers to organize and collect data.

The river ruler is a vertical, straightline diagram that represents and takes measure of the entire 51 miles of the LA River. Representing the river as a straight line allows the eye to quickly perceive how conditions along the river change from one river mile to the next.

The vertical axis (height) of the river ruler represents the 51 miles of the LA River starting at mile 51 in the West San Fernando Valley at Canoga Park to river mile zero at Long Beach where the LA River meets the Pacific Ocean.

Depending on the data being shown, the horizontal axis (width) of each river ruler represents conditions at or immediately adjacent to each side of the river. In some rulers a division line clearly demarcates conditions sampled immediately along the left versus right banks of the river, while other rulers show conditions up to a mile away from each side of the river.

The benefit of the river rulers is that multiple rulers can be aligned on a single page so that multiple categories of data can be assessed easily side by side. Comparing across multiple categories at multiple locations along the river in a single drawing is essential for understanding the river as a complex urban and ecological system, and for recognizing where planning and design proposals can achieve multiple benefits at a particular location.

Throughout the LA River Master Plan, river rulers are typically used following a map showing the same data in the context of the broader LA River watershed. In the Inventory and Analysis sections, the rulers are used commonly at the conclusion of the chapter so that the various datasets and categories assessed can be understood comparatively.

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VISION STATEMENT

VISION: THE REIMAGINED RIVER

The iconic LA River flows through a 51-mile connected public open space that is seamlessly woven together with neighboring communities. It is an integral part of daily life in LA County—a place to enjoy the outdoors and to get across town, a place to appreciate the serene and to bring all people together, a place to celebrate a thriving urban habitat and respect feats of infrastructure, a place to learn from the past and to shape the future.

THE LA RIVER

Perhaps no other river occupies Southern California's imagination like the LA River. 4.6 million people[1] live within its watershed and a million people live beside. The river offers the opportunity to bring 17 municipalities together. It's a connector unlike the numerous highways, because it truly can bring people together face-to-face across 51 miles. This capacity was recognized early on in the seminal Olmsted-Bartholomew regional plan of 1929. Their plan, completed at the start of the Great Depression and just before the massive floods of the 1930's, foresaw the rapid urbanization of Los Angeles County and they knew parks, open spaces, and connection to nature would be essential to the health, environment, and economy of the region.

In 1996 LA County rediscovered the ambitions of this past planning as numerous citizens, communities and advocates have pushed for an inclusive vision of shared open spaces and parks, stewardship of precious water resources and safeguarding communities from hazardous floods. Now the river is poised to take on greater use to the people of Los Angeles County, it was never meant to be one thing, it was meant to collect water as much as it is to move it. It was meant to connect Angelinos on foot, wheel, and hoof. It was meant to be community open space and ball fields. It was meant to support the life of humans as well as Southern California's wildlife and migratory birds. It was meant for Los Angeles's vibrant creative arts culture and most of all it was meant for everyone regardless of income or condition, the river is welcome to all.

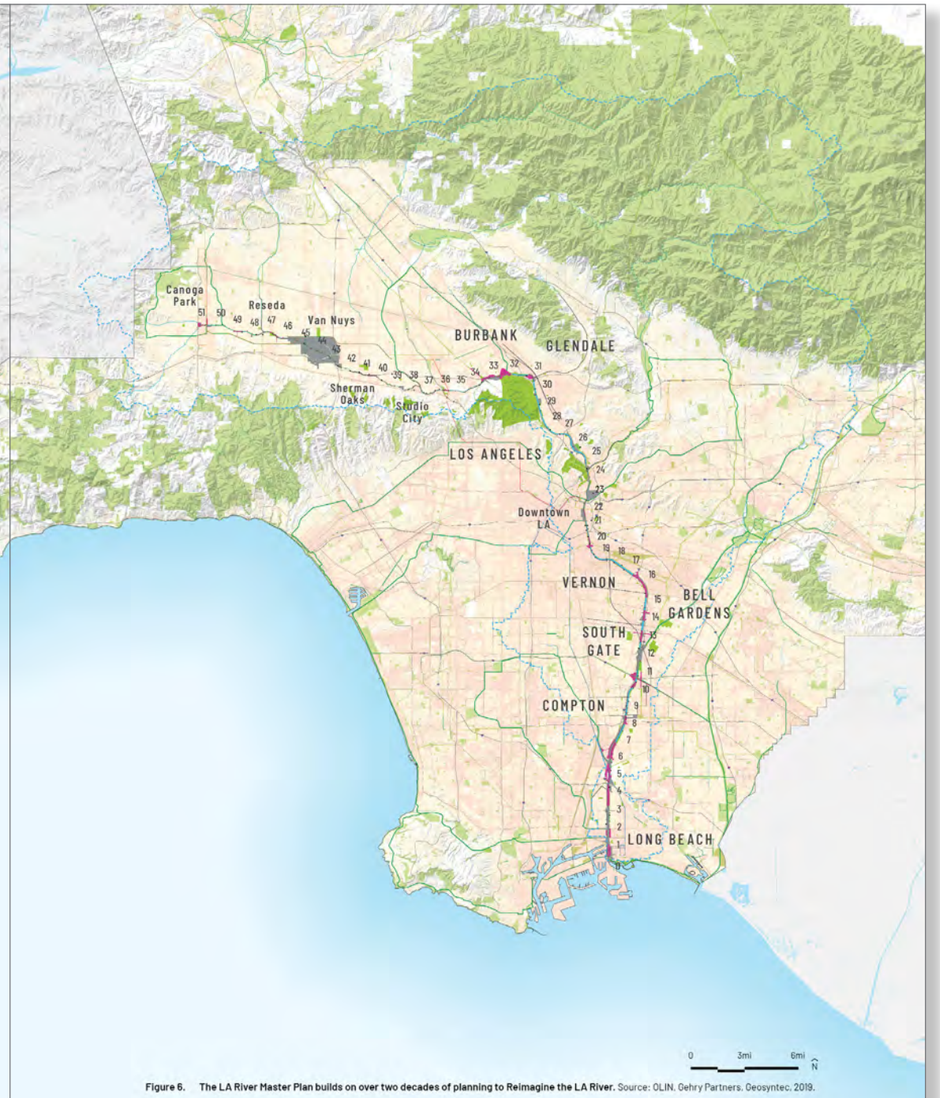
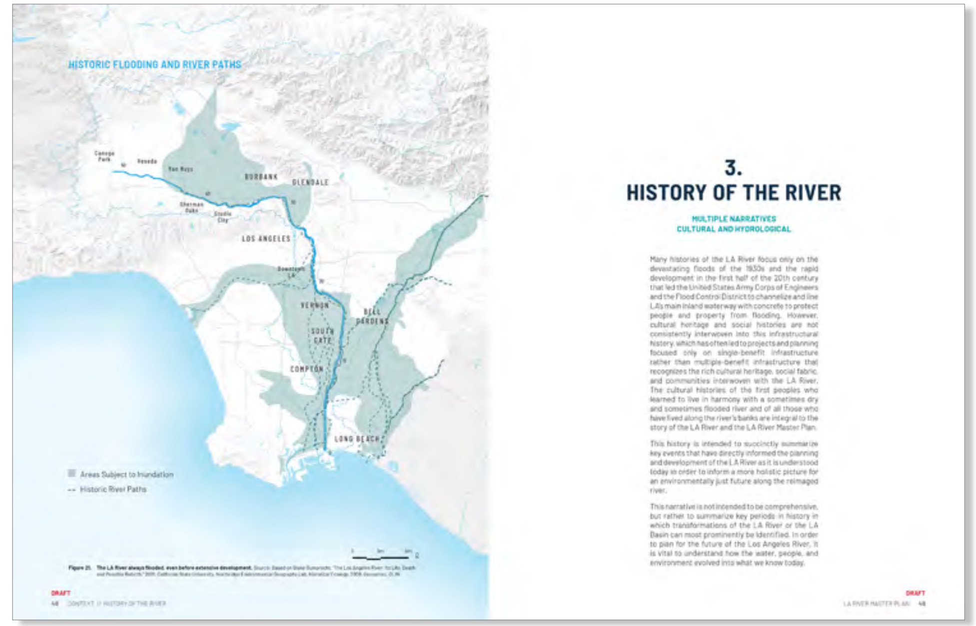
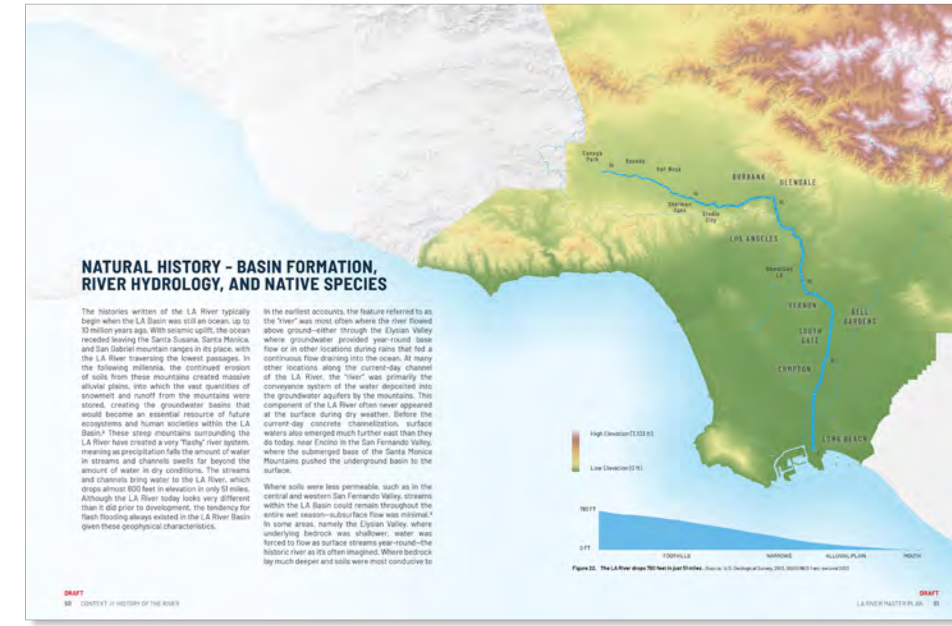
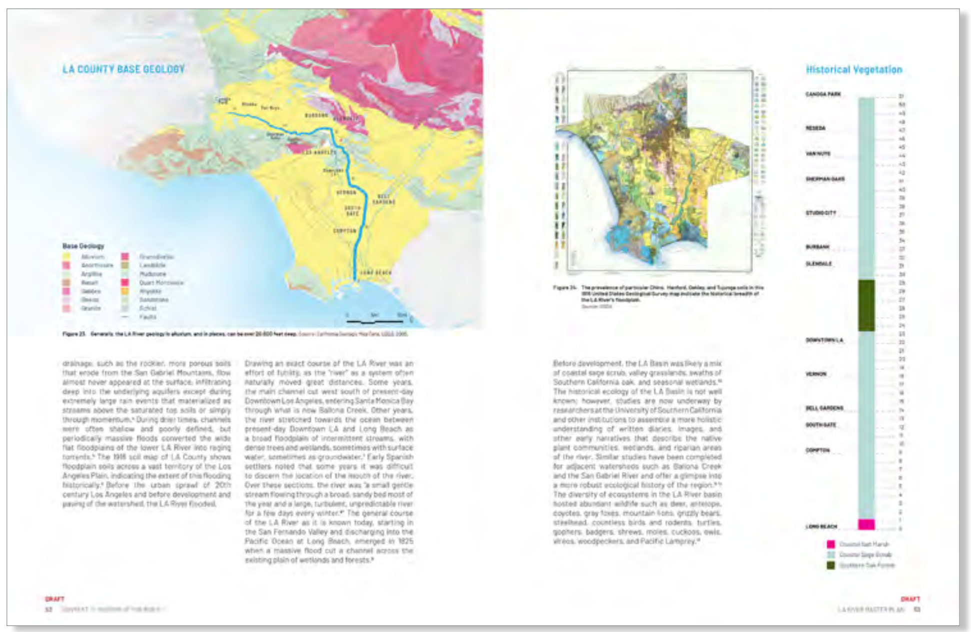


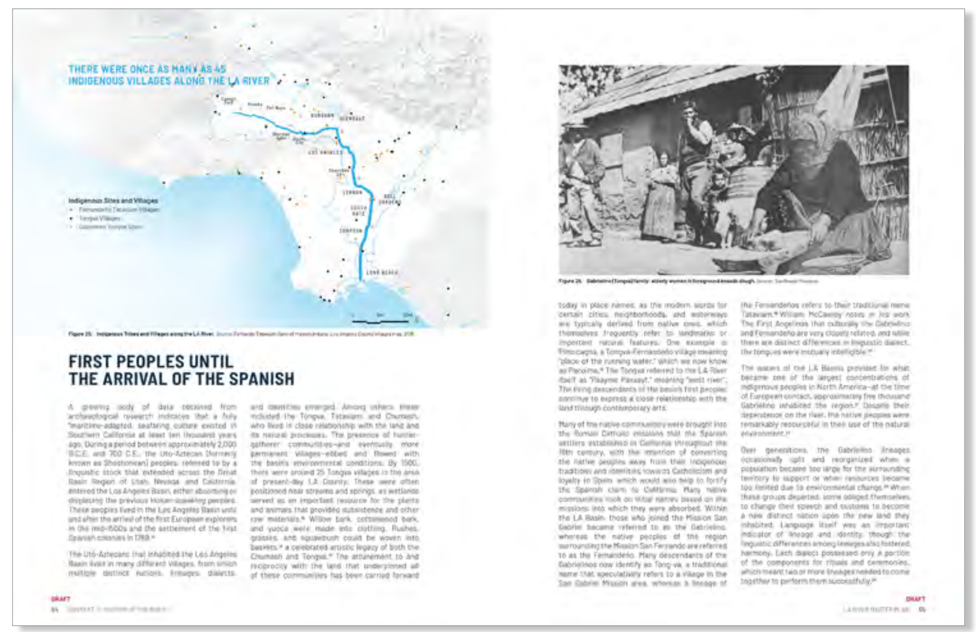
Figure 6. The LA River Master Plan builds on over two decades of planning to Reimagine the LA River. Source: OLIN. Gehry Partners. Geosyntec. 2019.


WHAT'S IN THE PLAN
CONTEXT
SECTION II:
CONTEXT

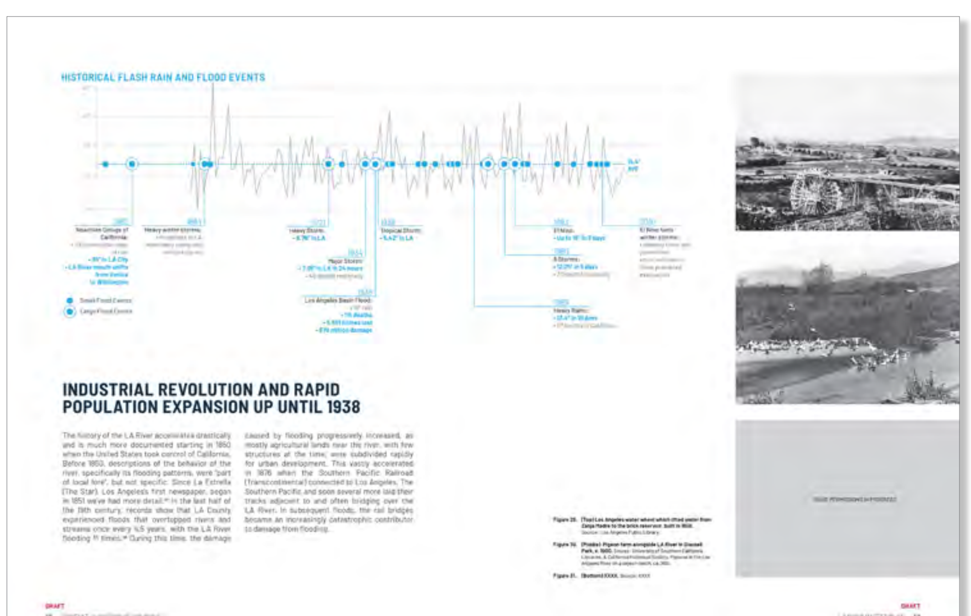

HISTORIC FLOODING AND RIVER PATHS
3.
HISTORY OF THE RIVER
MULTIPLE NARRATIVES
CULTURAL AND HYDROLOGICAL

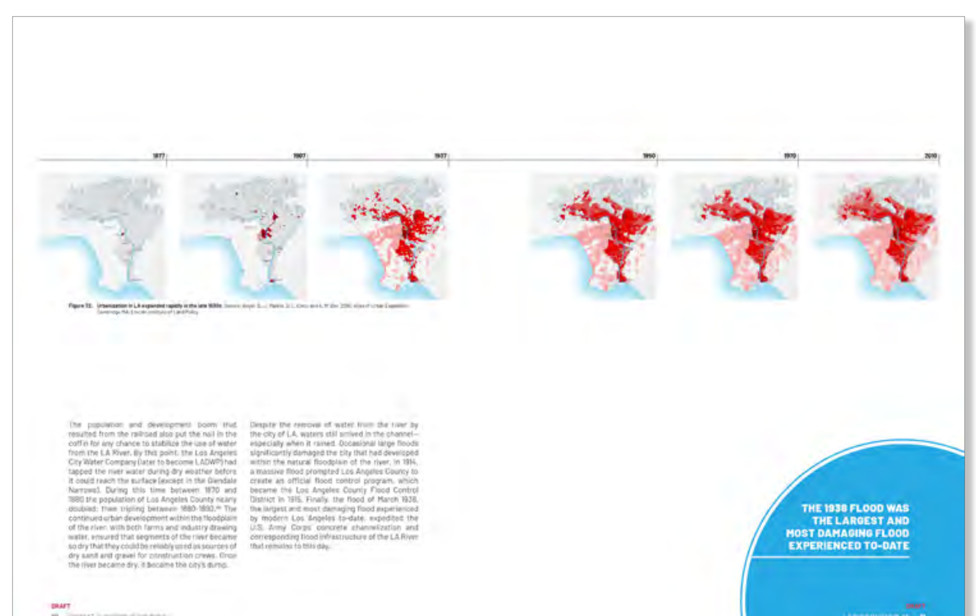

NATURAL HISTORY - BASIN FORMATION,
RIVER HYDROLOGY, AND NATIVE SPECIES


LA COUNTY BASE GEOLOGY
Historical Vegetation


THERE WERE ONCE AS MANY AS 45
INDIGENOUS VILLAGES ALONG THE LA RIVER
FIRST PEOPLES UNTIL
THE ARRIVAL OF THE SPANISH


SPANISH COLONIZATION UNTIL
CALIFORNIA STATEHOOD (1850)
THE FIRST MISSION
ESTABLISHED IN THE LOS
ANGELES BASIN WAS THE
MISSION SAN GABRIEL IN 1771


HISTORICAL FLASH RAIN AND FLOOD EVENTS
INDUSTRIAL REVOLUTION AND RAPID
POPULATION EXPANSION UP UNTIL 1938


THE 1938 FLOOD WAS
THE LARGEST AND
MOST DAMAGING FLOOD
EXPERIENCED TO-DATE


1938 UNTIL THE PRESENT

HISTORICAL CONTEXT

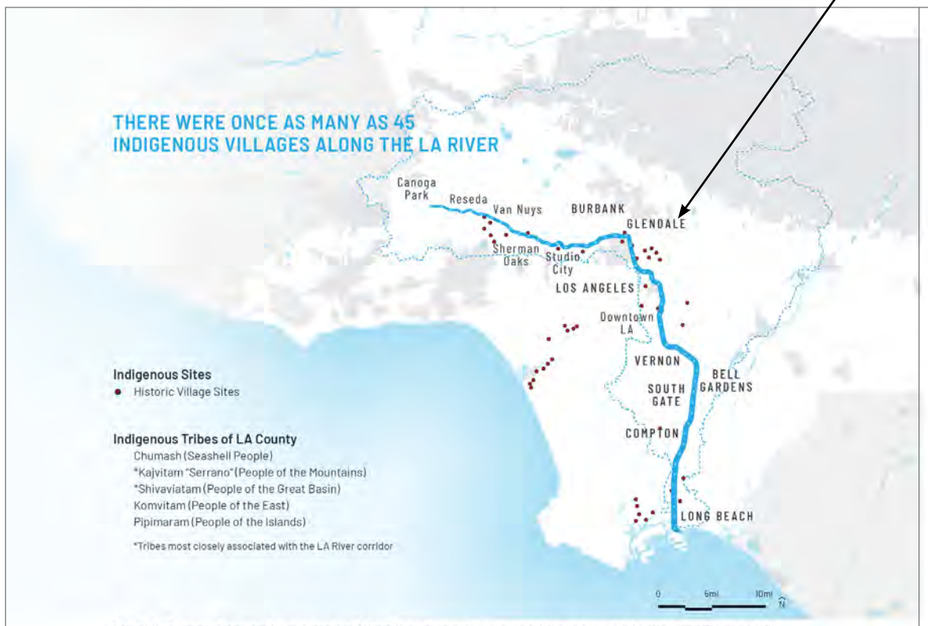


Figure 25. Indigenous Tribes and Villages along the LA River. Source: Fernando Tatavíam Band of Mission Indians, Los Angeles County Villages map, 2015

FIRST PEOPLES UNTIL THE ARRIVAL OF THE SPANISH

A growing body of data obtained from archaeological research indicates that a fully "maritime-adapted, seafaring culture existed in Southern California at least ten thousand years ago. During a period between approximately 2,000 B.C.E. and 700 C.E., the Uto-Aztecan (formerly known as Shoshonean) peoples, referred to by a linguistic stock that extended across the Great Basin Region of Utah, Nevada, and California, entered the Los Angeles Basin, either absorbing or displacing the previous Hokan-speaking peoples. These peoples lived in the Los Angeles Basin until and after the arrival of the first European explorers in the mid-1500s and the settlement of the first Spanish colonies in 1769.[14]

The Uto-Aztecans that inhabited the Los Angeles Basin lived in many different villages, from which multiple distinct nations, lineages, dialects, and identities emerged. Among others, these included the Tongva, Tataviam, and Chumash, who lived in close relationship with the land and its natural processes. The presence of hunter-gatherer communities—and eventually more permanent villages—ebbed and flowed with the basin's environmental conditions. By 1500, there were around 25 Tongva villages in the area of present-day LA County. These were often positioned near streams and springs as wetlands served as an important resource for the plants and animals that provided subsistence and other raw materials.[15] Willow bark, cottonwood bark, and yucca were made into clothing. Rushes, grasses, and squawbush could be woven into baskets,[16] a celebrated artistic legacy of both the Chumash and Tongva.[17] The attunement to and reciprocity with the land that underpinned all of these communities has been carried forward today in

Figure 26. Gabrielino (Tongva) family: elderly women in foreground kneads dough. Source: Southwest Museum.

place names, as the modern words for certain cities, neighborhoods, and waterways are typically derived from native ones, which themselves frequently refer to landmarks or important natural features. One example is Pimocagna, a Tongva-Fernandeño village meaning "place of the running water," which we now know as Pacoima.[18] The living descendants of the basin's first peoples also continue to express this relationship with the land through contemporary arts.

Many of the native communities were brought into the Roman Catholic missions that the Spanish settlers established in California throughout the 18th century, with the intention of converting the native peoples away from their indigenous traditions and identities towards Catholicism and loyalty to Spain, which would also help to fortify the Spanish claim to California. Many native communities took on tribal names based on the missions into which they were absorbed. Within the LA Basin, those who joined the Mission San Gabriel became referred to as the Gabrielino, whereas the native peoples of the region surrounding the Mission San Fernando are referred to as the Fernandeño. Many descendants of the Gabrielinos now identify as Tong-va, a traditional name that speculatively refers to a village in the San Gabriel Mission area, whereas a lineage of the Fernandeños refers to their traditional name Tataviam.[19] William McCawley notes in his work The First Angelinos that culturally the Gabrielino and Fernandeño are very closely related, and while there are distinct differences in linguistic dialect, the tongues were mutually intelligible.[20]

The waters of the LA Basins provided for what became one of the largest concentrations of indigenous peoples in North America—at the time of European contact, approximately five thousand Gabrielino inhabited the region.[21] Despite their dependence on the river, the native peoples were remarkably resourceful in their use of the natural environment.[22]

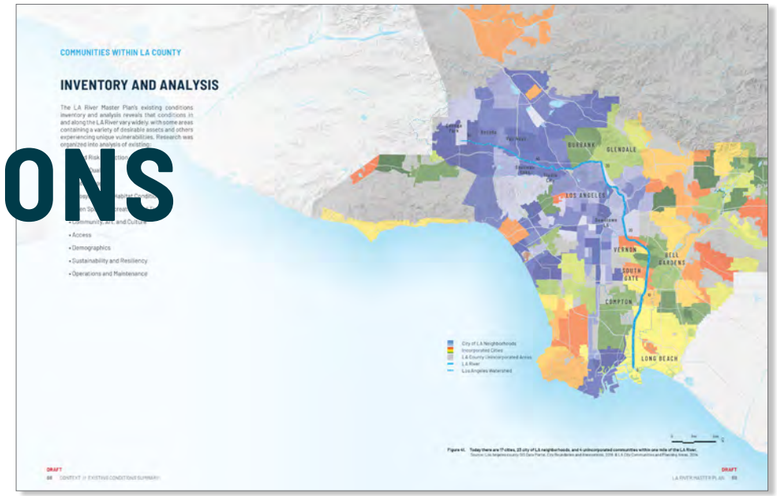
Over generations, the Gabrielino lineages occasionally split and reorganized when a population became too large for the surrounding territory to support or when resources became too limited due to environmental change.[23] When these groups departed, some obliged themselves to change their speech and customs to become a new distinct nation upon the new land they inhabited. Language itself was an important indicator of lineage and identity, though the linguistic differences among lineages also fostered harmony. Each dialect possessed only a portion of the components for rituals and ceremonies, which meant two or more lineages needed to come together to perform them successfully.[24]

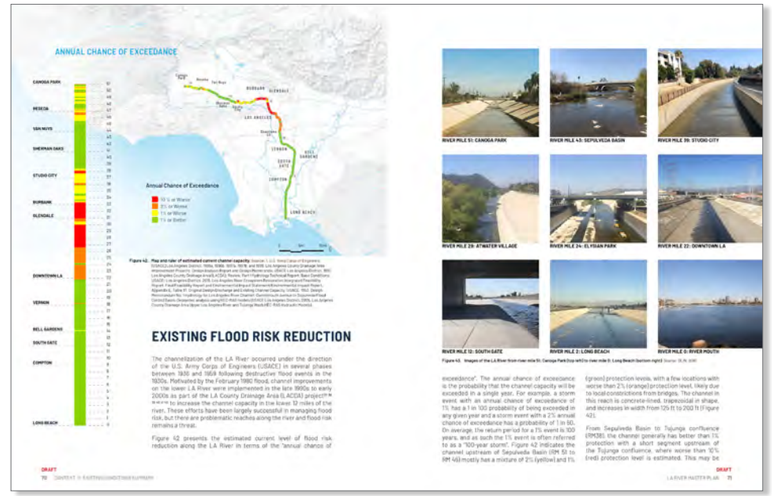
WHAT'S IN THE PLAN

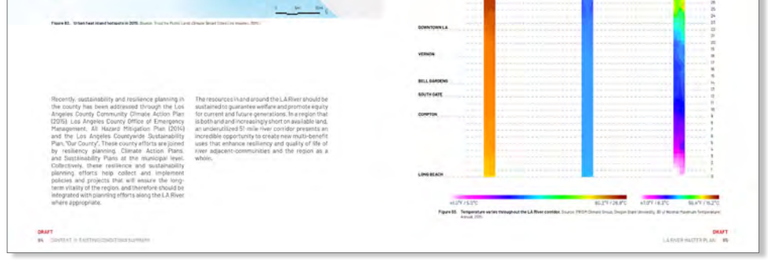
EXISTING CONDITIONS

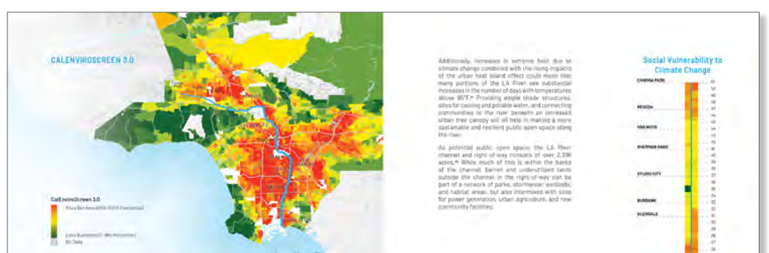
4.
EXISTING CONDITIONS SUMMARY

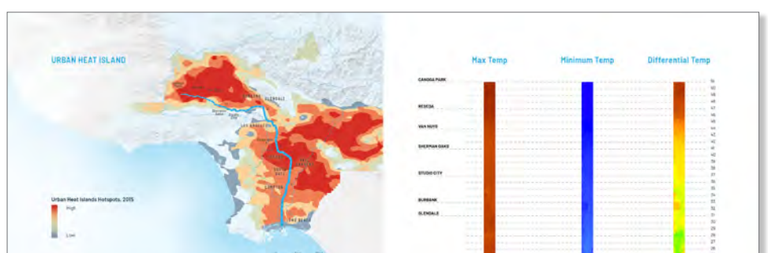
The LA River Master Plan, which was developed using a watershed- and community-based approach, explores existing conditions through a data-based methodology. This differs from previous efforts in that analytical studies of systemic and natural elements were conducted for the entire 834-square-mile watershed and communicated through comparable formats for ease of understanding. Recognizing that these systemic and natural elements cannot be studied in isolation, several studies also included information for areas outside the watershed.











ANALYSIS

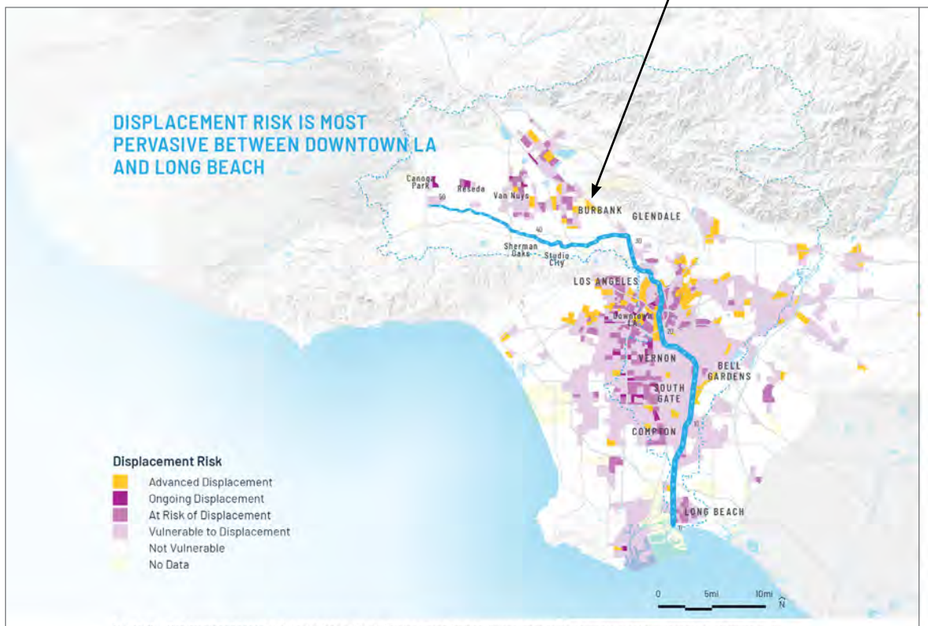


Figure 76. Map developed based on research by the Urban Displacement Project. Source: Chapple, K., Loukaitou-Sideris, A., Waddell, P., Chatman, D., & Ong, P. (2017). Developing a New Methodology for Analyzing Potential Displacement.

EXISTING DEMOGRAPHICS

The most populous county in the country, Los Angeles County is a patchwork of diverse communities. The socioeconomic characteristics of the people who live in neighborhoods along the LA River vary greatly in terms of race and ethnicity, income, health, and education. Implementation of this plan must be context-sensitive and respectful of local conditions.

Between 2000 and 2016, the Hispanic population in the county inched closer to making up half the population and the median age of residents increased from 32 to 36 years.[62] [63] The average household in the county is made up of 3 people, and the median household income is about $57,900, down about 2% since 2000.[64] [65] Households in communities along the LA River between Downtown LA and Compton tend to be larger (about 3.7 people per household) and have lower household incomes (around $43,000) than those along other parts of the river (about 3 people per household and around $67,000).[66]

While household incomes are going down, housing prices are going up. Since 2000, the median owner-occupied home value in LA County has gone up by more than 50%, and the share of income that renters spend on housing has gone up from 28% to 35%. [67] [68] About a third of renters in LA County are severely rent burdened, meaning they spend more than half of their income on rent.[69]

Using a methodology developed by the University of California, Berkeley, available data was used to map displacement risk based on past and current conditions. Many communities along the river between Downtown Los Angeles and Compton are vulnerable to displacement, while others are already in a state of advanced displacement.

Affordable housing makes up 6% of housing units in LA County, yet the county would need more than 568,000 additional affordable homes to meet current demand, and, despite a comprehensive set of programs, nearly 59,000 people in LA County are homeless.[70] [71] About three-quarters of this population is unsheltered, meaning they are not in traditional shelters, emergency shelters, or safe haven housing.

About $25 billion is spent on chronic disease in LA County every year, and about 60% of adults in the county are either obese or overweight.[72] [73] Chronic health conditions, including obesity and diabetes, are more acute between Compton and Long Beach.

The California Office of Environmental Health Hazard Assessment's CalEnviroScreen 3.0 ranks the burden of and vulnerability to pollution across California. Communities along the LA River in Canoga Park and from Burbank south are more burdened than 90% of communities across the state.

Between 2002 and 2015, the largest job sectors within one mile of the river have shifted. Manufacturing jobs declined 35%.[74] More than making up for this decline were the rise in public administration jobs and health care and social assistance jobs, which went up by 116% and 81%, respectively.[75]

Over 466,000 people work within one mile of the LA River. Most (88%) of the people who have these jobs commute to the river from other parts of LA County, Orange County, and beyond.[76] Similarly, of the 317,000 working people who live within one mile of the LA River, most (83%) work elsewhere—the largest job destinations being Downtown LA, the Bob Hope Airport, and the various studios along the river.[77] Few people both live and work within one mile of the river.

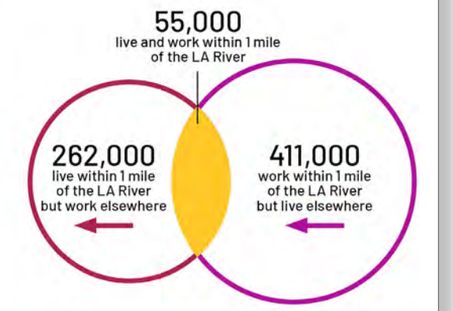


Figure 77. (Top) In underserved communities, playgrounds and shade structures are infrequent.
Source: LA County Public Works, 2018.

Figure 78. (Middle) 55,000 people live and work within 1 mile of the LA River.

Figure 79. (Bottom) The Hispanic population in LA County has neared 50% of the total population. In these communities, artistic expression and community building are paramount.
Source: LA County Public Works, 2018.

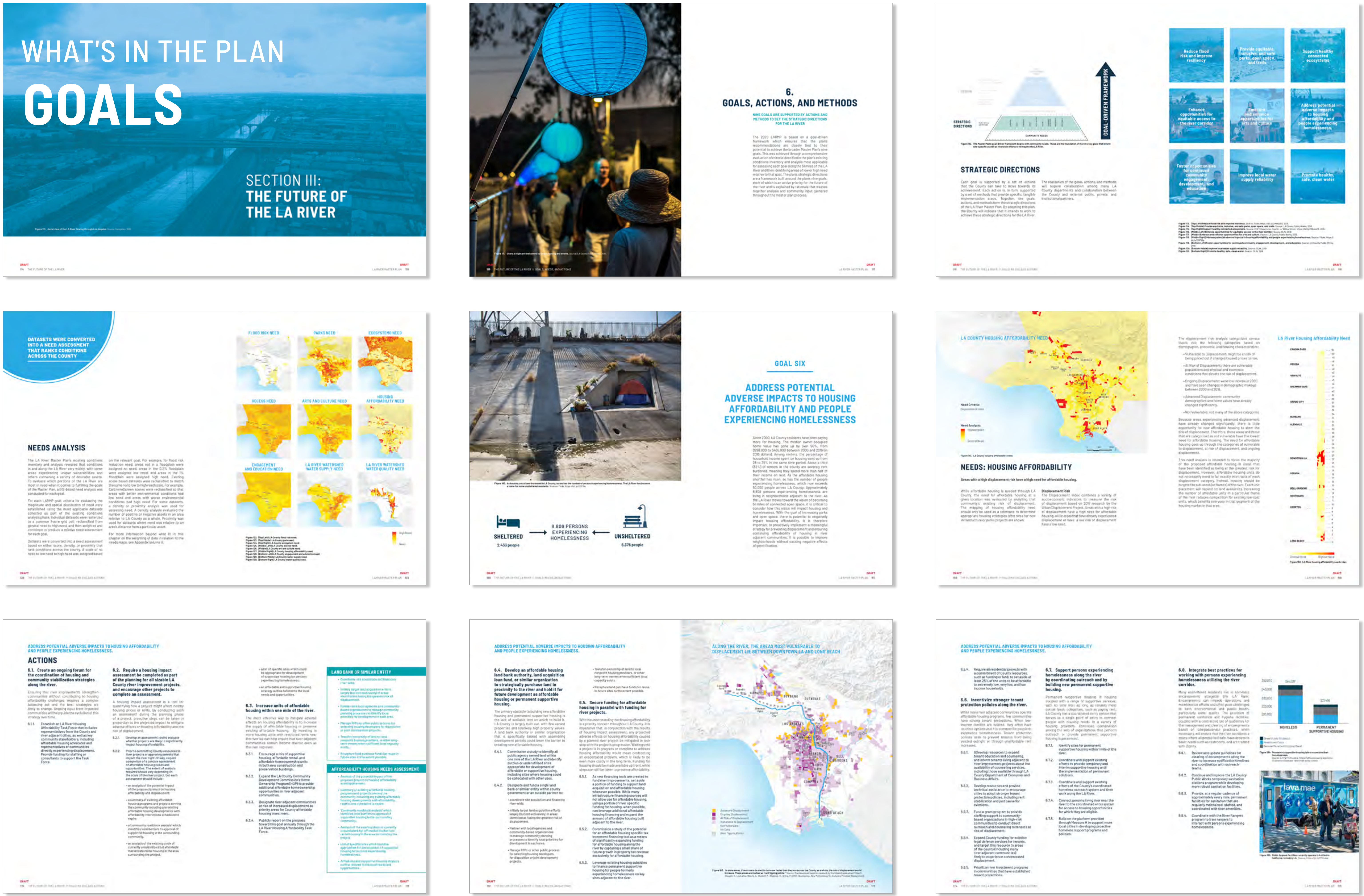

WHAT'S IN THE PLAN
GOALS
SECTION III:
THE FUTURE OF
THE LA RIVER
6.
GOALS, ACTIONS, AND METHODS
STRATEGIC DIRECTIONS
NEEDS ANALYSIS
GOAL SIX
ADDRESS POTENTIAL ADVERSE IMPACTS TO HOUSING AFFORDABILITY AND PEOPLE EXPERIENCING HOMELESSNESS
SHELTERED
UNSHELTERED
NEEDS: HOUSING AFFORDABILITY
ACTIONS

Figure 158. As housing costs have increased in LA County, so too has the number of persons experiencing homelessness. The LA River has become a home for some unsheltered residents. Sources: Flickr, https://bit.ly/2IDFIBg

GOAL

GOAL SIX

ADDRESS POTENTIAL ADVERSE IMPACTS TO HOUSING AFFORDABILITY AND PEOPLE EXPERIENCING HOMELESSNESS

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

NEEDS

EXISTING CONDITIONS

RULER

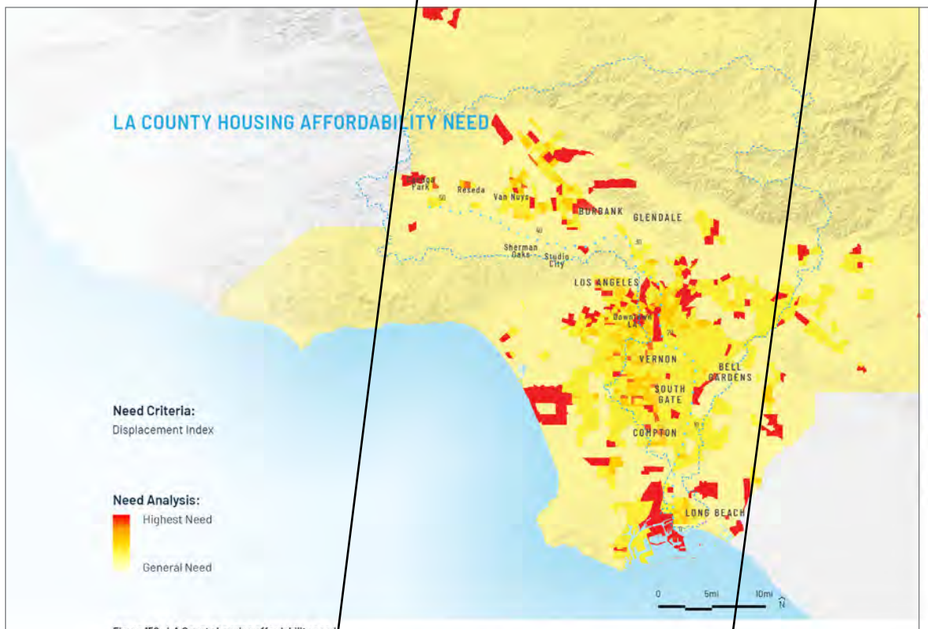


Figure 159. LA County housing affordability need.

NEEDS: HOUSING AFFORDABILITY

Areas with a high displacement risk have a high need for affordable housing.

While affordable housing is needed through LA County, the need for affordable housing at a given location was evaluated by analyzing that community's existing risk of displacement. The mapping of housing affordability need should only be used as a reference to determine appropriate housing strategies after sites for new infrastructure or parks projects are known.

Displacement Risk

The Displacement Index combines a variety of socioeconomic indicators to measure the risk of displacement based on 2017 research by the Urban Displacement Project. Areas with a high risk of displacement have a high need for affordable housing, while areas that have already experienced displacement or have a low risk of displacement have a low need.

The displacement risk analysis categorized census tracts into the following categories based on demographic, economic, and housing characteristics:

- Vulnerable to Displacement: might be at risk of being priced out if changes caused prices to rise.
- At Risk of Displacement: there are vulnerable populations and physical and economic conditions that elevate the risk of displacement.
- Ongoing Displacement: were low income in 2000 and have seen changes in demographic makeup between 2000 and 2016.
- Advanced Displacement: community demographics and home values have already changed significantly.
- Not Vulnerable: not in any of the above categories

Because areas experiencing advanced displacement have already changed significantly, there is little opportunity for new affordable housing to stem the tide of displacement. Therefore, these areas and those that are categorized as not vulnerable have the lowest need for affordable housing. The need for affordable housing goes up through the categories of vulnerable to displacement, at risk of displacement, and ongoing displacement.

This need analysis is intended to focus the majority of the proposed affordable housing in areas that have been identified as being at the greatest risk for displacement. However, affordable housing units do not necessarily need to fall exactly into tracts of each displacement category. Instead, housing should be targeted to sub-areas (or frames) of the river. Exact unit placement will depend on land availability. Increasing the number of affordable units in a particular frame of the river reduces competition for existing low-cost units, which benefits everyone in that segment of the housing market in that area.

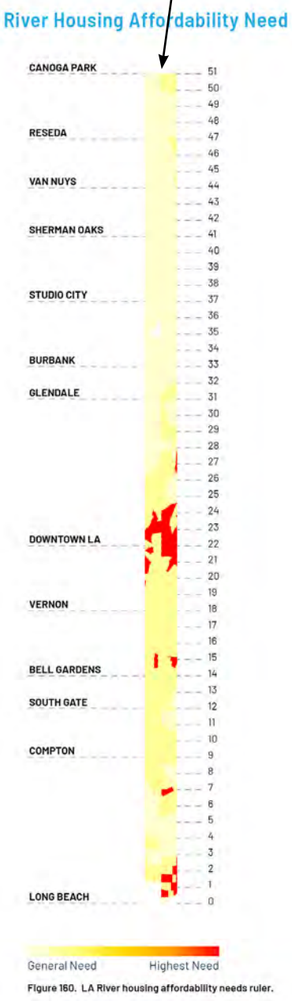


Figure 160. LA River housing affordability needs ruler.

ACTIONS

METHODS

ADDRESS POTENTIAL ADVERSE IMPACTS TO HOUSING AFFORDABILITY AND PEOPLE EXPERIENCING HOMELESSNESS.

ACTIONS

6.1. Create an ongoing forum for the coordination of housing and community stabilization strategies along the river.

Ensuring that river improvements strengthen communities without contributing to housing affordability challenges requires a complex balancing act and the best strategies are likely to change. Ongoing input from impacted communities will help guide the evolution of this strategy over time.

6.1.1. Establish an LA River Housing Affordability Task Force that includes representatives from the County and river adjacent cities, as well as key community stakeholders, including affordable housing advocates and representatives of communities directly experiencing displacement. Provide funding for staffing or consultants to support the Task Force.

6.2. Require a housing impact assessment be completed as part of the planning for all sizable LA County river improvement projects, and encourage other projects to complete an assessment.

A housing impact assessment is a tool for quantifying how a project might affect nearby housing prices or rents. By conducting such an assessment during the planning phase of a project, proactive steps can be taken in proportion to the projected impact to mitigate adverse effects on housing affordability and the risk of displacement.

6.2.1. Develop an assessment tool to evaluate whether projects are likely to significantly impact housing affordability.

6.2.2. Prior to committing County resources to river projects or approving permits that impact the river right-of-way, require completion of a concise assessment of affordable housing needs and opportunities. The extent of analysis required should vary depending on the scale of the river project, but each assessment should include:

- an analysis of the potential impact of the proposed project on housing affordability and displacement.
- a summary of existing affordable housing programs and projects serving the community including any existing affordable housing developments with affordability restrictions scheduled to expire.
- a 'community roadblock analysis' which identifies local barriers to approval of supportive housing in the surrounding community.
- an analysis of the existing stock of currently unsubsidized but affordable market rate rental housing in the area surrounding the project.
- a list of specific sites which could be appropriate for development of supportive housing for persons experiencing homelessness.
- an affordable and supportive housing strategy outline tailored to the local needs and opportunities.

6.3. Increase units of affordable housing within one mile of the river.

The most effective way to mitigate adverse effects on housing affordability is to increase the supply of affordable housing or preserve existing affordable housing. By investing in more housing units with restricted rents near the river we can help ensure that river adjacent communities remain income diverse even as the river improves.

6.3.1. Encourage a mix of supportive housing, affordable rental, and affordable homeownership units in both new construction and preservation buildings.

6.3.2. Expand the LA County Community Development Commission's Home Ownership Program (HOP) to provide additional affordable homeownership opportunities in river adjacent communities.

6.3.3. Designate river adjacent communities at risk of increased displacement as priority areas for County affordable housing investment.

6.3.4. Publicly report on the progress toward this goal annually through the LA River Housing Affordability Task Force.

LAND BANK OR SIMILAR ENTITY

- Coordinate site acquisition and financing river-wide.
- Initially target land acquisition efforts largely (but not exclusively) in areas identified as facing the greatest risk of displacement.
- Partner with local agencies and community-based organizations to manage community planning processes to identify local priorities for development in each area.
- Manage RFPs or other public process for selecting housing developers for disposition or joint development projects.
- Transfer ownership of land to local nonprofit housing providers, or other long-term owners when sufficient local capacity exists.
- Recapture land purchase funds for reuse in future sites to the extent possible.

AFFORDABILITY HOUSING NEEDS ASSESSMENT

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ADDITIONAL INFO TO SUPPORT METHODS

ADDRESS POTENTIAL ADVERSE IMPACTS TO HOUSING AFFORDABILITY AND PEOPLE EXPERIENCING HOMELESSNESS.

ACTIONS

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AFFORDABILITY HOUSING NEEDS ASSESSMENT

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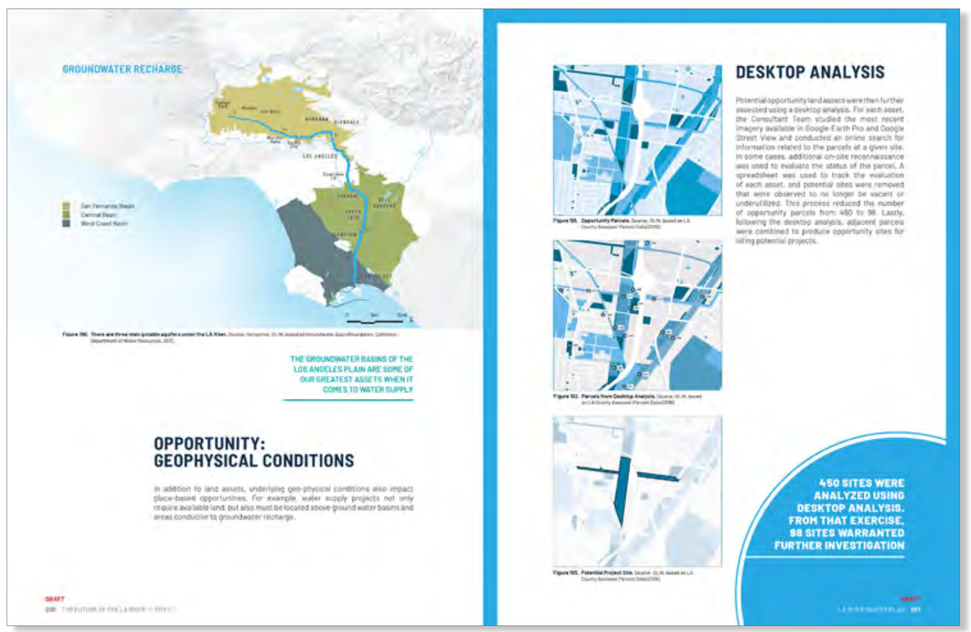
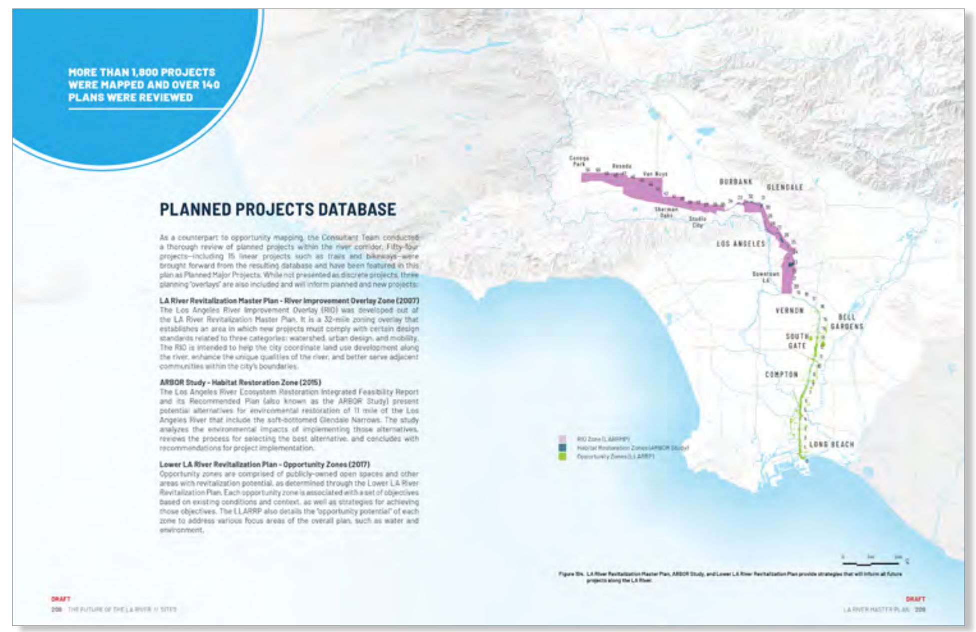
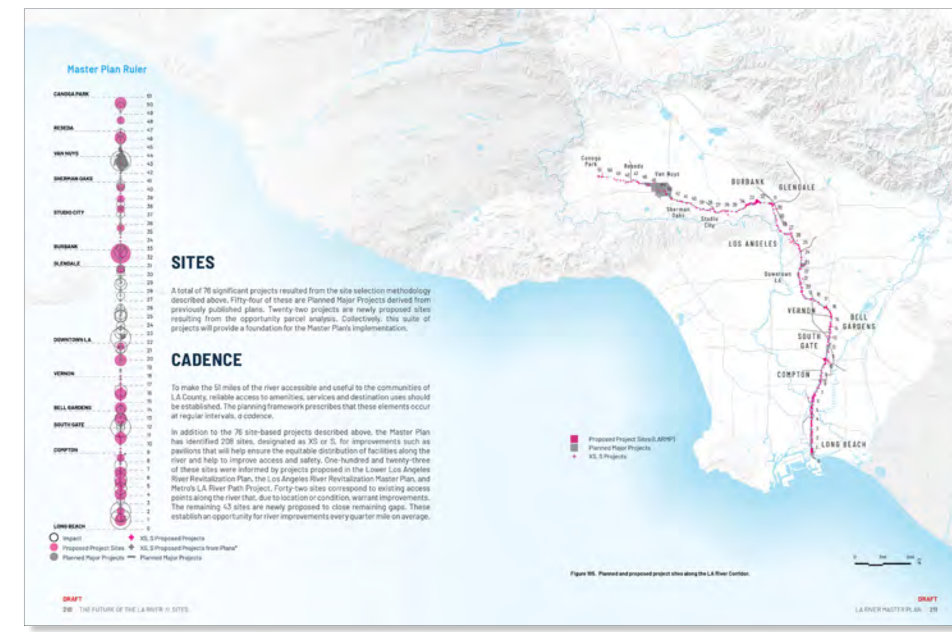
WHAT'S IN THE PLAN
SITES
7.
SITES


OPPORTUNITY: LAND ASSETS
LA RIVER RIGHT-OF-WAY
LA COUNTY OWNED PARCELS
OTHER PUBLICLY OWNED PARCELS
UNDERUTILIZED RIGHTS-OF-WAY
VACANT PARCELS
UNDERUTILIZED PRIVATE PARCELS
EXISTING PEDESTRIAN STREET NETWORK


LA RIVER RIGHT-OF-WAY

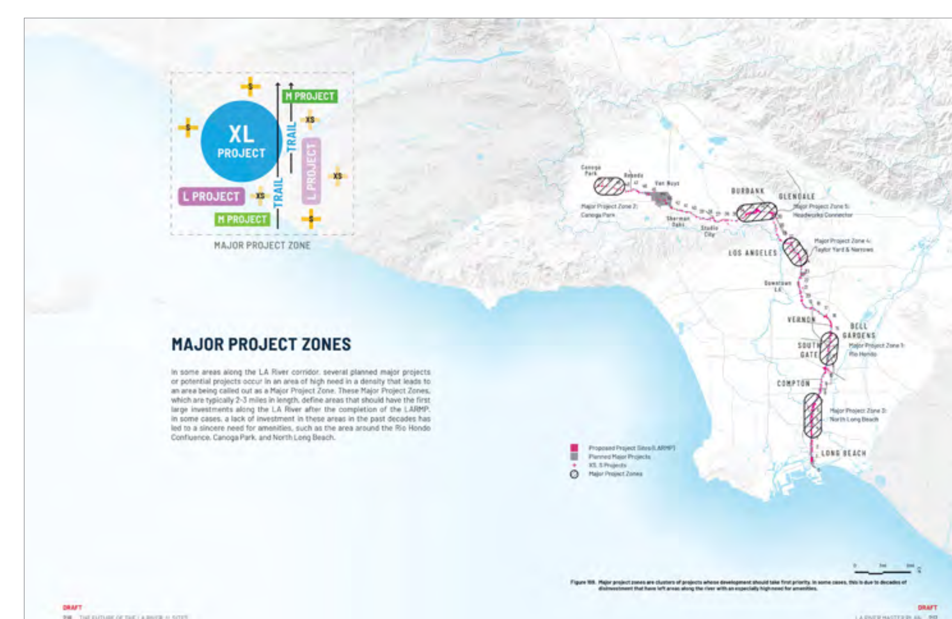

OPPORTUNITY:
GEOPHYSICAL CONDITIONS
DESKTOP ANALYSIS
450 SITES WERE ANALYZED USING DESKTOP ANALYSIS. FROM THAT EXERCISE, 88 SITES WARRANTED FURTHER INVESTIGATION


MORE THAN 1,800 PROJECTS WERE MAPPED AND OVER 140 PLANS WERE REVIEWED
PLANNED PROJECTS DATABASE

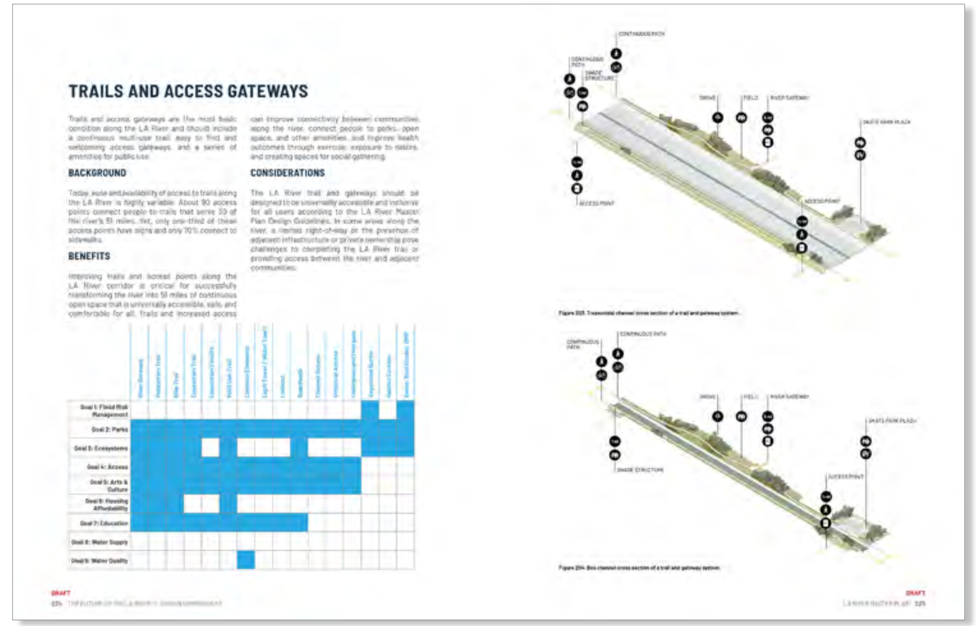

SITES
CADENCE

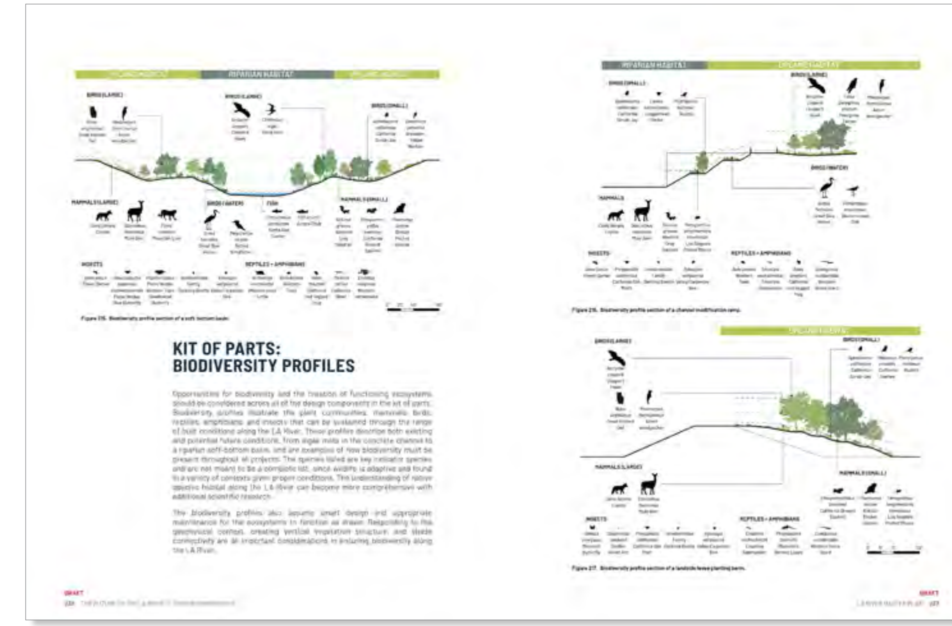

ACREAGE / LENGTH
IMPACT
PROPOSED PROJECT SITES*
PLANNED MAJOR PROJECTS
150+ acres / 10+ miles
XL
4
7
40 - 150 acres / 5-10 miles
L
12
18
< 40 acres / < 5 miles
M
10
29
n/a
S
42
41
n/a
XS
43
82
IMPACT
PLANNED MAJOR PROJECTS IMPACT

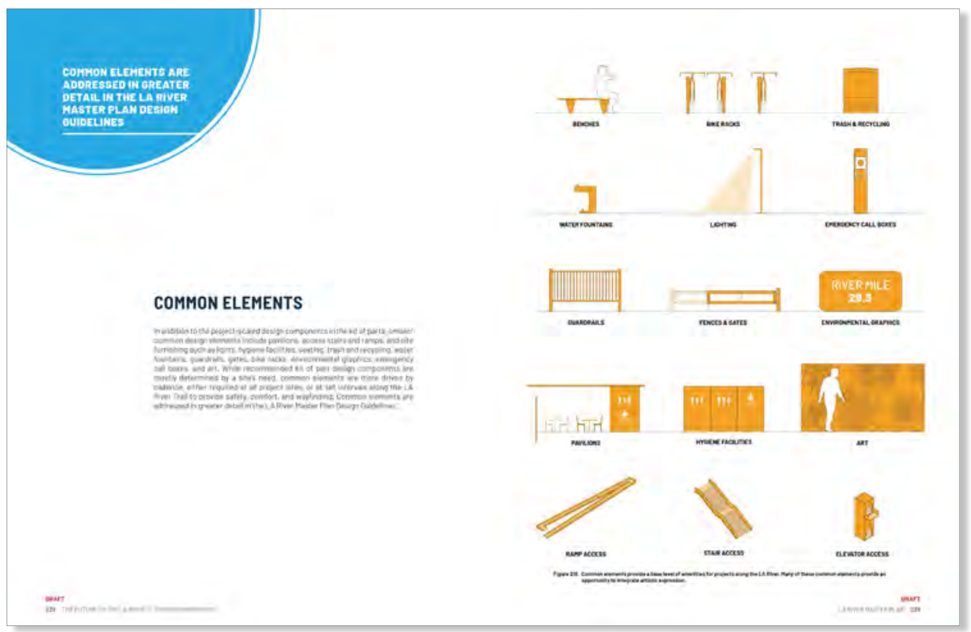

SITES AND LOCAL IMPACT


XL PROJECT
L PROJECT
M PROJECT
TRAIL
MAJOR PROJECT ZONE
MAJOR PROJECT ZONES

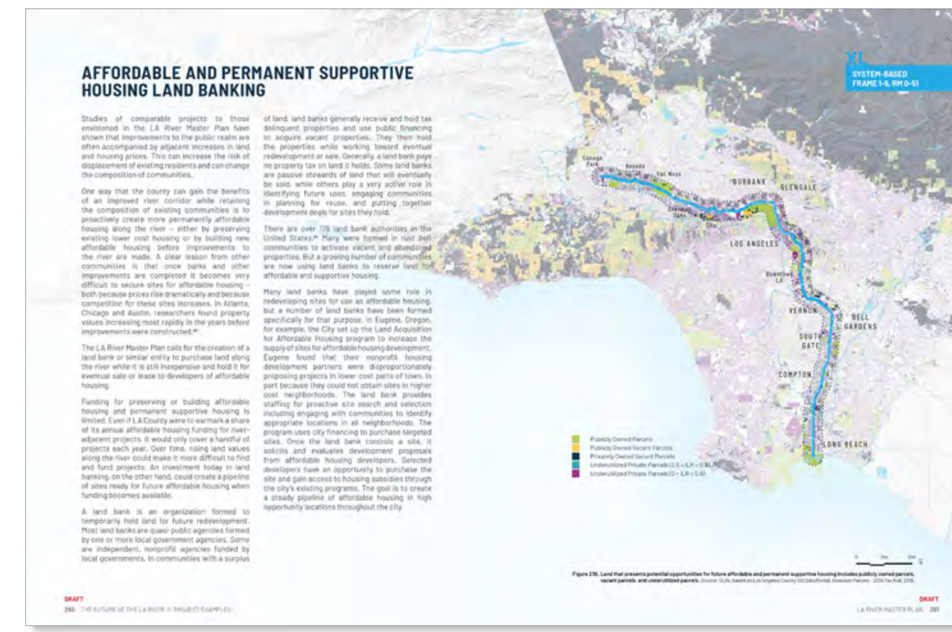

WHAT'S IN THE PLAN
DESIGN
8.
DESIGN COMPONENTS

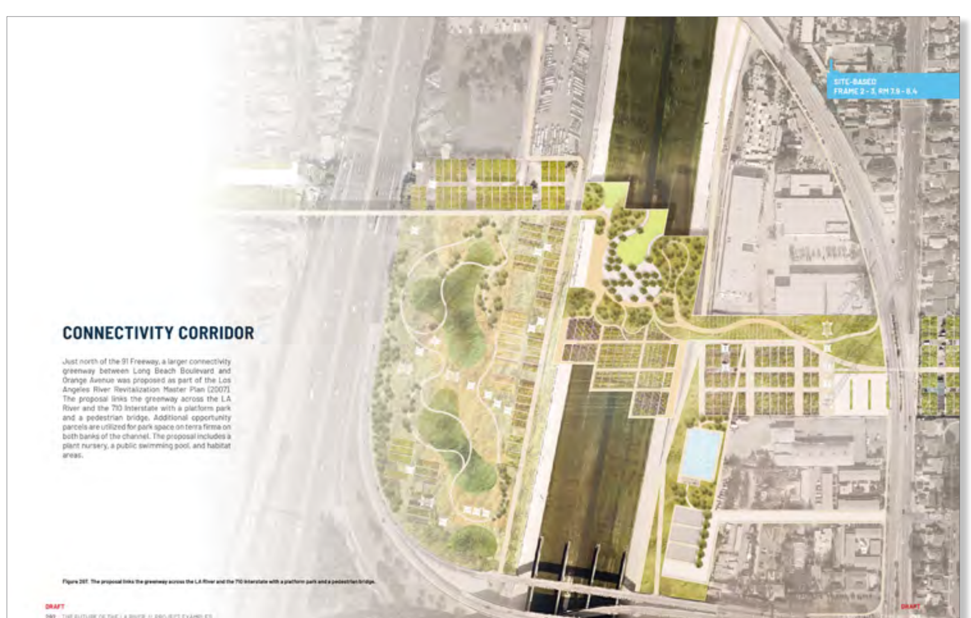

TRAILS AND ACCESS GATEWAYS

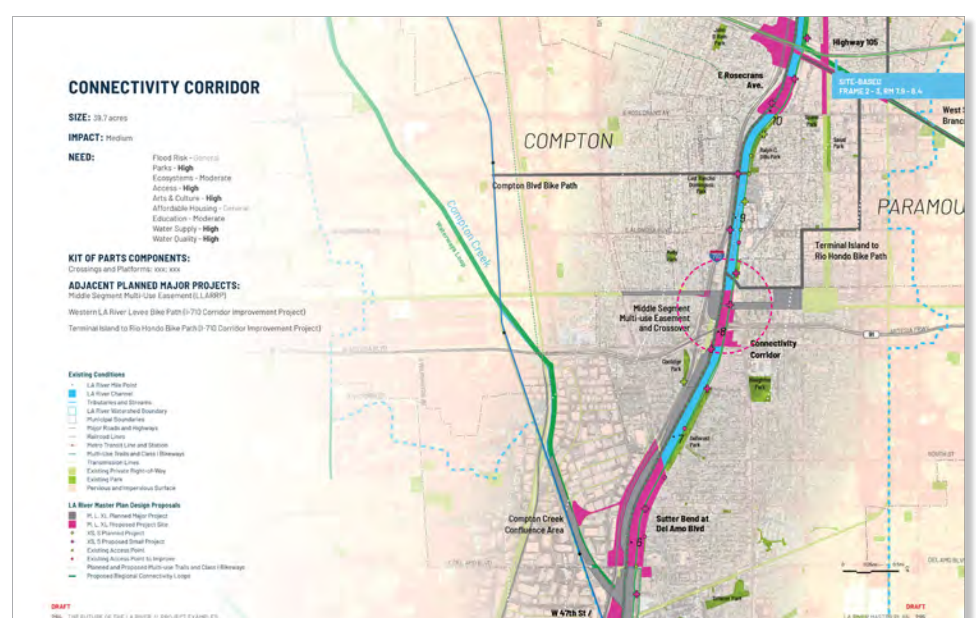

KIT OF PARTS:
BIODIVERSITY PROFILES


COMMON ELEMENTS


REGIONAL CONNECTIVITY


AFFORDABLE AND PERMANENT SUPPORTIVE HOUSING LAND BANKING


CONNECTIVITY CORRIDOR


CONNECTIVITY CORRIDOR
COMPTON

WHAT'S IN THE PLAN

IMPLEMENTATION

PUBLIC STEWARDSHIP

Public stewardship and collaboration is needed to make the Reimagined River a reality. Master plan documents succeed or fail based upon their political and public support, an understanding of how to implement goals, and access to the capital to realize opportunity. Complexity grows with increasing participation across communities and across jurisdictions, and champions are needed for each area of focus and each geographic area to make the plan a reality.

ADVOCACY ORGANIZATIONS

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ORGANIZATIONS

- Amigos de los Ríos
- Arahuak Youth Soccer Association
- Arroyo Seco Foundation
- Audubon Center at Debs Park
- The Bowtie Project
- The City Project
- Clockshop
- The Council for Watershed Health
- Current: LA
- Farmlab and Metabolic Studio
- How Project LA
- Friends of Alhambra Village
- Friends of the LA River (FoLAR)
- Film Lot to Spot
- Green LA Coalition
- Heal the Bay
- Industry's Hopscotch Opera
- LA Compost
- LA Creek Freak
- LA River Expeditions
- LA River Kayak Safari
- LA River Neighborhood Land Trust
- LA River Public Art Project
- LA River VR Experience
- LA Urban Rangers
- Leadership for Urban Renewal Network (LURN)
- Long Beach Conservation Corps
- Los Angeles Audubon Society
- Los Angeles Conservation Corps
- Los Angeles County Bicycle Coalition
- Los Angeles Waterkeeper
- Mountains Recreation and Conservation Authority
- Metabolic Studio
- Museo de la Tierra
- Natural Resources Defense Council
- The Nature Conservancy
- North East Trees
- Nur a Llorenfest
- Play the LA River
- River LA
- The River Project
- Save LA River Open Space
- The Third LA
- Tree People
- Trust for Public Land
- Turnaround Arts: California
- UCLA Interpretive Media Lab
- Urban Rivers Institute
- Urban Semillas
- Walnut LA
- William C. Velasquez Institute

HOW CAN I GET INVOLVED?

IN THE COMMUNITY

Use the River!
Walk, bike, or paddle along the river with your family and friends. Attend a festival or performance. The best way to create momentum for improvements to the LA River is to increase awareness of and advocates for the river.

Talk to a River Ranger!
River rangers are a direct connection to what is happening along the river. Learn them of any concerns you have and learn about new ways to get involved in your community.

Volunteer
From participating in a river clean up to working on public policy, there are myriad organizations that provide opportunities to take an active role in shaping the future of the LA River.

Contact Your Elected Officials
Elected officials along the LA River have the power to make the LA River a priority and to allocate funding to make it the reimagined river envisioned in this plan. Let them know this is a priority for you.

AT HOME

Reduce and Recycle Water
Install a rain barrel to reuse your rainwater for watering your plants. Plant a tree to absorb water. Every bit of water that can be kept out of the river saves capacity for flood events.

Prevent Contamination
Reduce contaminants that wash into the river. Pick up pet waste, keep your car maintained to reduce leaks, and dispose of hazardous waste properly.

Use Native Plants
Reduce the amount of lawn in your yard and plant native vegetation to reduce watering and the use of fertilizers.

Figure 282. [Trail Youth Summit]. Source: LA County Public Works, 2016.

Figure 284. [Festival] LA Arts Festival. Source: SLRA, 2016.

Figure 285. [Eastern] Youth Summit. Source: SLRA, 2016.

HOW CAN MY ORGANIZATION PLAY A ROLE?

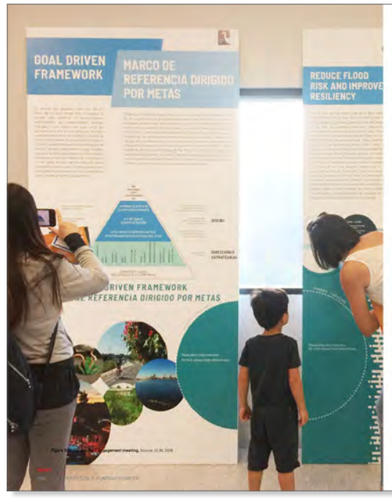
PLAN IMPLEMENTATION

Review the plan's implementation matrix. Look for actions, methods, or sites that your organization can assist with and contact the lead implementation agency to find out how your organization can be of assistance.

COMMON GROUND

Find places where your organizations mission aligns not only with elements of this plan but with the missions of other organizations. Elected and appointed officials are more likely to hear advocates who speak with one voice toward achieving a common purpose.

VISIT THE MASTER PLAN WEBSITE AT WWW.LARIVERMASTERPLAN.ORG



14. FUNDING SOURCES

EXISTING AND NEW FUNDING WILL BE NEEDED TO MEET THE MASTER PLAN GOALS

Achieving the goals of the LA River Master Plan will involve coordinated efforts among public, private, and nonprofit entities to implement a myriad of projects over the next 25 years. During that timeframe, physical, political, and financial conditions will change. The LA River spans several municipalities and communities that must provide ongoing financial and political support to secure the development, operations, and maintenance of projects within their jurisdictional limits. Moreover, it is critical to establish a framework for project funding beyond individual municipalities to enable support from federal, state, and LA County funding mechanisms. The unification of interests and goals among champions and stakeholders will help to realize the Master Plan's goal-driven implementation framework, ultimately revitalizing the LA River.

SEVERAL FUNDING SOURCES ARE IN PLACE THAT COULD SUPPORT THE WORK OF PROJECTS RELATED TO THIS MASTER PLAN.

EXISTING FUNDING SOURCES

Across LA County and the municipalities adjacent to the LA River, several funding sources are in place that could support the work of projects related to this Master Plan. Additionally, state and federal funding can be leveraged toward projects in this plan.

- Safe, Clean Water Program Wy Thousand ... an extra twenty improvement. Measure W was passed by LA County voters in 2018. The measure raises 285 million dollars ... available annually for projects with a focus on water quality improvement, and specifically prioritizes natural based solutions to ... stormwater quality challenges. The goals of Measure W are well aligned to many goals in the LA River Master Plan.
- Measure A
- Measure M
- Grants and Existing Funding: While there have been several successful bond measures and programs created in the last few years to support LA River like work, existing grant and programmatic funding streams are spread out through multiple agencies at different levels of government with varying project scopes and timeline requirements. Grants and existing funding are given opportunities for short term funding but unreliable for multi-decade implementation. During implementation, several of existing programs and bulletin funding at all levels can drive resources to be optimally accessed for full opportunity matched back to Master Plan goals and projects in the short term implementation.

Federal	State	Local
WIFIA - Stormwater Priorities	Prop 1 ($335+) Remaining Monies	Measure A - Park Districts Open Space
	Prop 3 (Nov midterm Ballot) ... $100 million earmark ($28.9 Billion total)	Measure M - Transportation (Sales Tax)
	Prop 68 (June 2018) - $4 Billion Statewide	Measure W - 2018 multi-benefit
	Prop 84 - $200 million left from 2006	
	Coastal Conservancy - Lower River / Estuary	
	Wildlife Conservation Board - Habitat	

*Select funding opportunities.

Figure 300. xxxx [policy name]

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15. IMPLEMENTATION AND FUNDING MATRIX

CALL OUTOFFICAE LANDUSAM, NOBITATUR, OPTUR MAIO. XIMENDUNTO TEM ET AUT AUT

This implementation and funding matrix lists every goal, action, and method in Section II and identifies for each action:

- an implementation lead: an LA County department or agency that will actively take responsibility for implementing the action
- potential partners: agencies and organizations both within LA County government and without that the implementation lead may request
- geographic boundaries: whether the action applies to the entire county, the LA River watershed, the LA River corridor and surroundings areas, or just the LA River channel
- potential funding sources

The matrix also lists for each action and method other related actions and methods.

HOW TO READ THE IMPLEMENTATION AND FUNDING MATRIX

The Implementation and Funding Matrix is a compilation of every goal, action, and method in Section II, stripped of the narrative text and with specific guidance added about who is responsible for implementation and where. It is meant to serve as a quick reference guide and checklist for those within and outside of LA County government responsible for implementation.

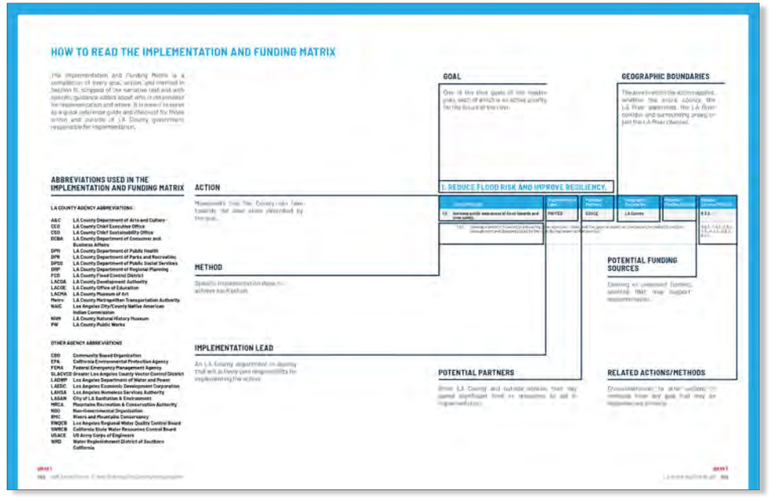
ABBREVIATIONS USED IN THE IMPLEMENTATION AND FUNDING MATRIX

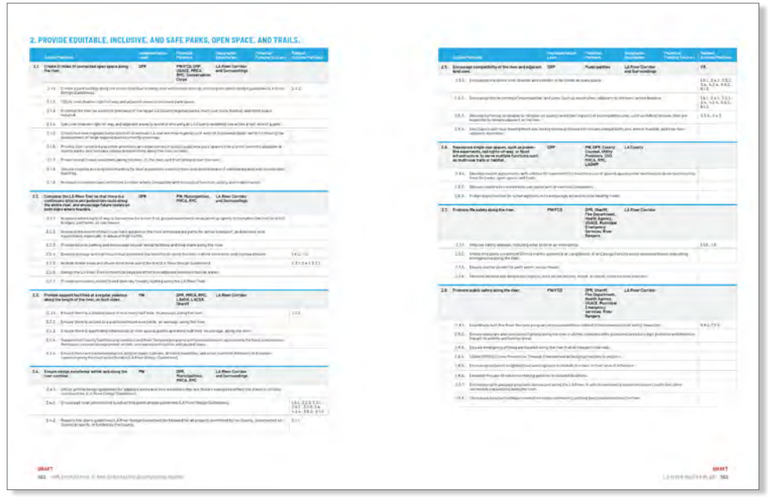
LA COUNTY AGENCY ABBREVIATIONS:

A&C	LA County Department of Arts and Culture
CEO	LA County Chief Executive Office
CSO	LA County Chief Sustainability Office
DCBA	LA County Department of Consumer and Business Affairs
DPH	LA County Department of Public Health
DPR	LA County Department of Parks and Recreation
DPSS	LA County Department of Public Social Services
DRP	LA County Department of Regional Planning
FCD	LA County Flood Control District
LACDA	LA County Development Authority
LACOE	LA County Office of Education
LACMA	LA County Museum of Art
Metro	LA County Metropolitan Transportation Authority
NAHC	Los Angeles City/County Native American Indian Commission
NHM	LA County Natural History Museum
PW	LA County Public Works

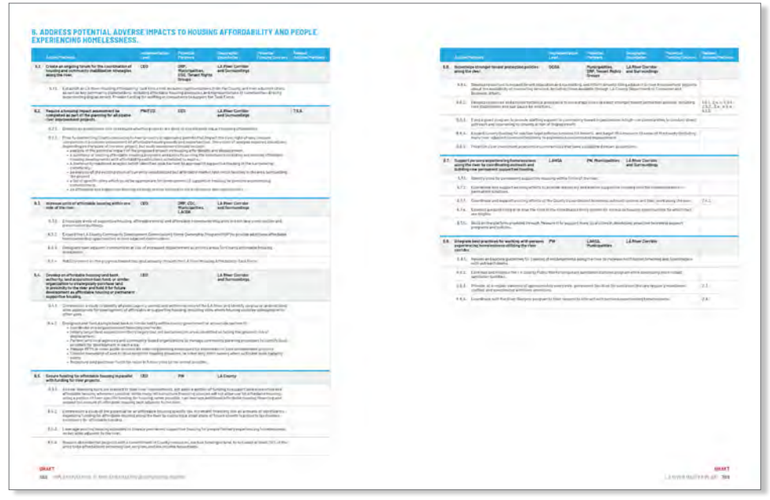
OTHER AGENCY ABBREVIATIONS:

CBO	Community Based Organization
EPA	California Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GLACRD	Greater Los Angeles County Vector Control District
LADWP	Los Angeles Department of Water and Power
LAHSA	Los Angeles Homeless Services Authority
LAHSA	Los Angeles Homeless Services Authority
LASAN	City of LA Sanitation & Environment
MRCA	Mountains Recreation & Conservation Authority
NGO	Non-Governmental Organization
RMC	Rivers and Mountains Conservancy
RWQCB	Los Angeles Regional Water Quality Control Board
SWRCB	California State Water Resources Control Board
USACE	US Army Corps of Engineers
WRD	Water Replenishment District of Southern California





2. PROVIDE EQUITABLE, INCLUSIVE, AND SAFE PARKS, OPEN SPACE, AND TRAILS.



9. ADDRESS POTENTIAL ADVERSE IMPACTS TO HOUSING AFFORDABILITY AND PEOPLE EXPERIENCING HOMELESSNESS.

ACTIONS

LEAD AGENCY

PARTNERS

FUNDING

6. ADDRESS POTENTIAL ADVERSE IMPACTS TO HOUSING AFFORDABILITY AND PEOPLE EXPERIENCING HOMELESSNESS.

	Action/Methods	Implementation Lead	Potential Partners	Geographic Boundaries	Potential Funding Sources	Related Actions/Methods
6.1.	**Create an ongoing forum for the coordination of housing and community stabilization strategies along the river.**	CEO	DRP, Municipalities, CSO, Tenant Rights Groups	LA River Corridor and Surroundings		
6.1.1.	Establish an LA River Housing Affordability Task Force that includes representatives from the County and river adjacent cities, as well as key community stakeholders, including affordable housing advocates and representatives of communities directly experiencing displacement. Provide funding for staffing or consultants to support the Task Force.					
6.2.	**Require a housing impact assessment be completed as part of the planning for all sizable river improvement projects.**	PW/FCD	CEO	LA River Corridor and Surroundings		7.5.8.
6.2.1.	Develop an assessment tool to evaluate whether projects are likely to significantly impact housing affordability.					
6.2.1.	Prior to committing County resources to river projects or approving permits that impact the river right-of-way, require completion of a concise assessment of affordable housing needs and opportunities. The extent of analysis required should vary depending on the scale of the river project, but each assessment should include: • analysis of the potential impact of the proposed project on housing affordability and displacement. • a summary of existing affordable housing programs and projects serving the community including any existing affordable housing developments with affordability restrictions scheduled to expire. • a community roadblock analysis which identifies local barriers to approval of supportive housing in the surrounding community. • an analysis of the existing stock of currently unsubsidized but affordable market rate rental housing in the area surrounding the project • a list of specific sites which could be appropriate for development of supportive housing for persons experiencing homelessness. • an affordable and supportive housing strategy outline tailored to the local needs and opportunities.					
6.3.	**Increase units of affordable housing within one mile of the river.**	CEO	DRP, CDC, Municipalities, LACDA	LA River Corridor and Surroundings		
6.3.1.	Encourage a mix of supportive housing, affordable rental, and affordable homeownership units in both new construction and preservation buildings.					
6.3.2.	Expand the LA County Community Development Commission's Home Ownership Program (HOP) to provide additional affordable homeownership opportunities in river adjacent communities.					
6.3.3.	Designate river adjacent communities at risk of increased displacement as priority areas for County affordable housing investment.					
6.3.4.	Publicly report on the progress toward this goal annually through the LA River Housing Affordability Task Force.					
6.4.	**Develop an affordable housing land bank authority, land acquisition loan fund, or similar organization to strategically purchase land in proximity to the river and hold it for future development as affordable housing or permanent supportive housing.**	CEO		LA River Corridor and Surroundings		
6.4.1.	Commission a study to identify all public agency owned land within one mile of the LA River and identify surplus or underutilized sites appropriate for development of affordable or supportive housing, including sites where housing could be collocated with other uses.					
6.4.2.	Designate and fund a single land bank or similar entity within county government or an outside partner to: • coordinate site acquisition and financing river-wide. • Initially target land acquisition efforts largely (but not exclusively) in areas identified as facing the greatest risk of displacement. • Partner with local agencies and community-based organizations to manage community planning processes to identify local priorities for development in each area. • Manage RFPs or other public process for selecting housing developers for disposition or joint development projects. • Transfer ownership of land to local nonprofit housing providers, or other long-term owners when sufficient local capacity exists • Recapture land purchase funds for reuse in future sites to the extent possible.					
6.5.	**Secure funding for affordable housing in parallel with funding for river projects.**	CEO	PW	LA County		
6.5.1.	As new financing tools are created to fund river improvements, set aside a portion of funding to support land acquisition and affordable housing whenever possible. While many infrastructure financing sources will not allow use for affordable housing, using a portion of river specific funding for housing, when possible, can leverage additional affordable housing financing and expand the amount of affordable housing built adjacent to the river.					
6.5.2.	Commission a study of the potential for an affordable housing specific tax increment financing tool as a means of significantly expanding funding for affordable housing along the river by capturing a small share of future growth in property tax revenue exclusively for affordable housing.					
6.5.3.	Leverage existing housing subsidies to finance permanent supportive housing for people formerly experiencing homelessness on key sites adjacent to the river.					
6.5.4.	Require all residential projects with a commitment of County resources, such as funding or land, to set aside at least 25% of the units to be affordable to extremely low, very low, and low income households.					

	Action/Methods	Implementation Lead	Potential Partners	Geographic Boundaries	Potential Funding Sources	Related Actions/Methods
6.6.	**Incentivize stronger tenant protection policies along the river.**	DCBA	Municipalities, DRP, Tenant Rights Groups	LA River Corridor and Surroundings		
6.6.1.	Develop resources to expand tenant education and counseling, and inform tenants living adjacent to river improvement projects about the availability of counseling services, including those available through LA County Department of Consumer and Business Affairs.					
6.6.2.	Develop resources and provide technical assistance to encourage cities to adopt stronger tenant protection policies, including rent stabilization and just cause for evictions.					1.6.1., 2.4.1., 2.5.1., 2.5.2., 3.4., 4.2.4., 8.1.3.
6.6.3.	Fund a grant program to provide staffing support to community-based organizations in high-risk communities to conduct direct outreach and counseling to tenants at risk of displacement.					
6.6.4.	Expand County funding for eviction legal defense services for tenants, and target this resource to areas of the county (including many river adjacent communities) likely to experience concentrated displacement.					
6.6.5.	Prioritize river investment programs in communities that have established tenant protections.					
6.7.	**Support persons experiencing homelessness along the river by coordinating outreach and building new permanent supportive housing.**	LAHSA	PW, Municipalities	LA River Corridor and Surroundings		
6.7.1.	Identify sites for permanent supportive housing within 1 mile of the river.					
6.7.2.	Coordinate and support existing efforts to provide temporary and interim supportive housing until the implementation of permanent solutions.					
6.7.3.	Coordinate and support existing efforts of the County's coordinated homeless outreach system and their work along the river.					7.4.2.
6.7.4.	Connect persons living in or near the river to the coordinated entry system for access to housing opportunities for which they are eligible.					
6.7.5.	Build on the platform provided through Measure H to support more local cities in developing proactive homeless support programs and policies.					
6.8.	**Integrate best practices for working with persons experiencing homelessness utilizing the river corridor.**	PW	LAHSA, Municipalities	LA River Corridor		
6.8.1.	Review and update guidelines for clearing of encampments along the river to increase notification timelines and coordination with outreach teams.					
6.8.2.	Continue and improve the LA County Public Works temporary sanitation stations program while developing more robust sanitation facilities.					
6.8.3.	Provide, at a regular cadence of approximately every mile, permanent facilities for sanitation that are regularly maintained, staffed, and coordinated with river amenities.					7.3
6.8.4.	Coordinate with the River Rangers program to train rangers to interact with persons experiencing homelessness.					2.8.1

APPENDICES

DESIGN GUIDELINES

- Plant Species
- Soils Guidelines
- Trail Widths Requirements
- Environmental Graphics
- Permitting Overview
- O&M Planning
- Integration of Arts and Culture
- Project Scale and Programming

TECHNICAL DOCUMENT

- Additional River Rulers
- Hydrology and Hydraulics Analysis
- Needs Mapping and Weighting
- Project Database / Library of Sources and Data Catalog

STEERING COMMITTEE DRAFT SCHEDULE

- SUBCOMMITTEES TO RECEIVE FULL DRAFT BY: **JANUARY 6 2020**
  (ESTIMATED 5 WEEKS FOR REVIEW)

- FINAL DRAFT FOR PUBLIC COMMENT: **ESTIMATED: MAY 2020**

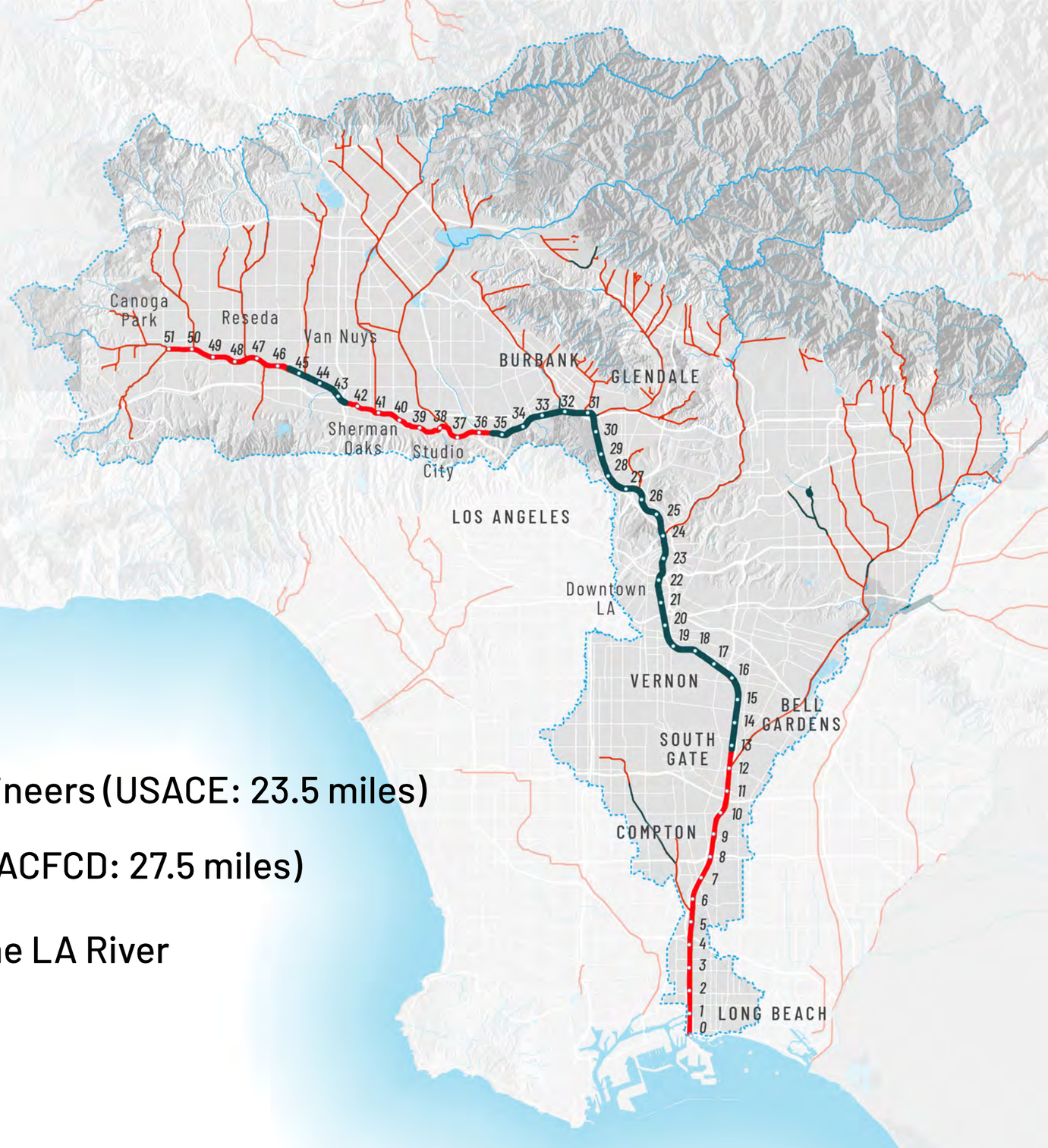
Q & A AND DISCUSSION

Source: OLIN

RESILIENCE & ADAPTATION

Source: OLIN

MAJOR MAINTENANCE RESPONSIBILITIES ARE SPLIT BETWEEN LACFCD AND USACE



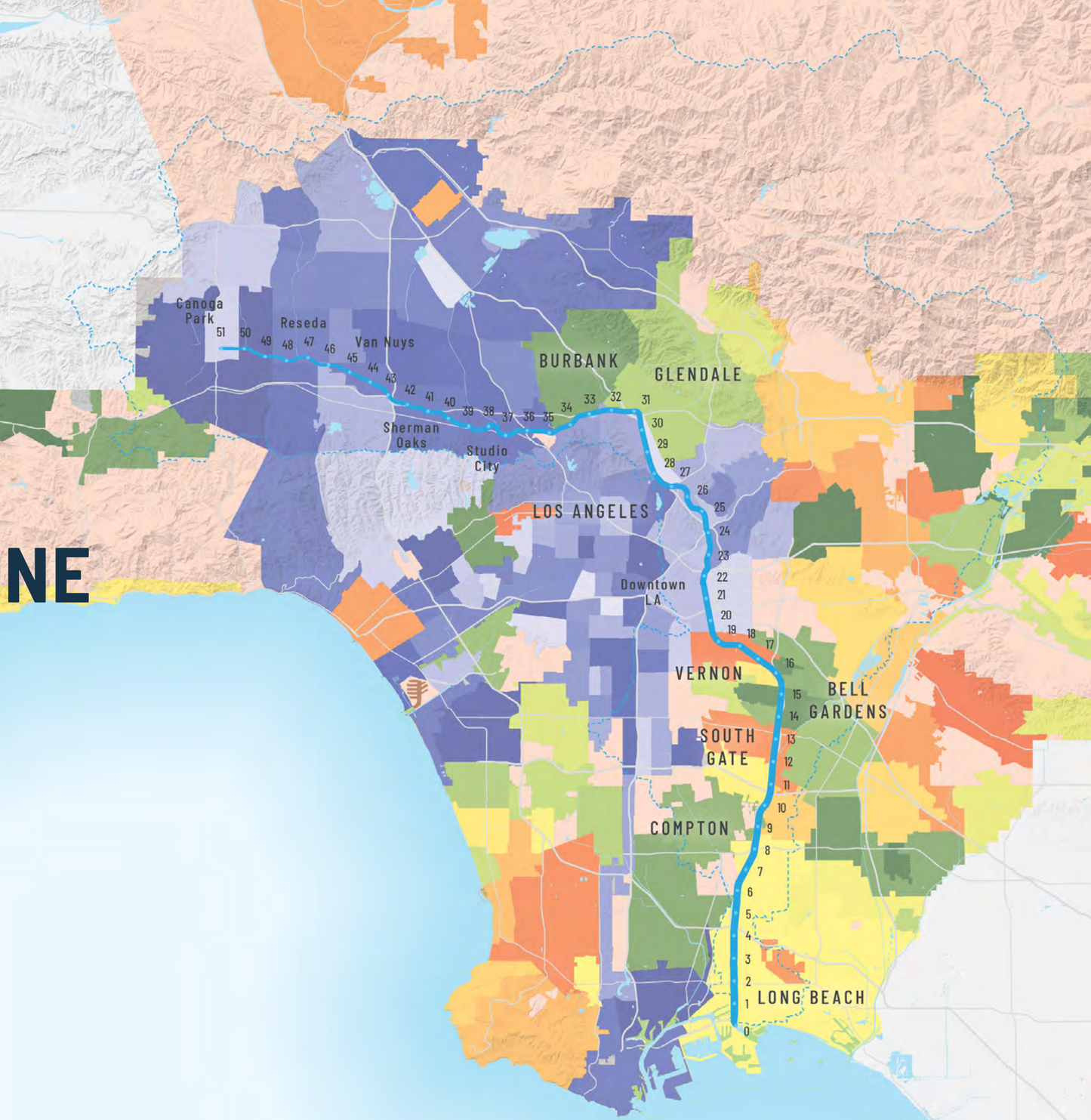
Agency:

- Los Angeles District, U.S. Army Corps of Engineers (USACE: 23.5 miles)
- Los Angeles County Flood Control District (LACFCD: 27.5 miles)

Note: River Miles shown are for the mainstem of the LA River

Source: Los Angeles County Public Works, GIS Maintenance Map, 2016

TODAY THERE ARE 17 CITIES, 23 CITY OF LA NEIGHBORHOODS, AND 4 UNINCORPORATED COMMUNITIES WITHIN ONE MILE OF THE LA RIVER



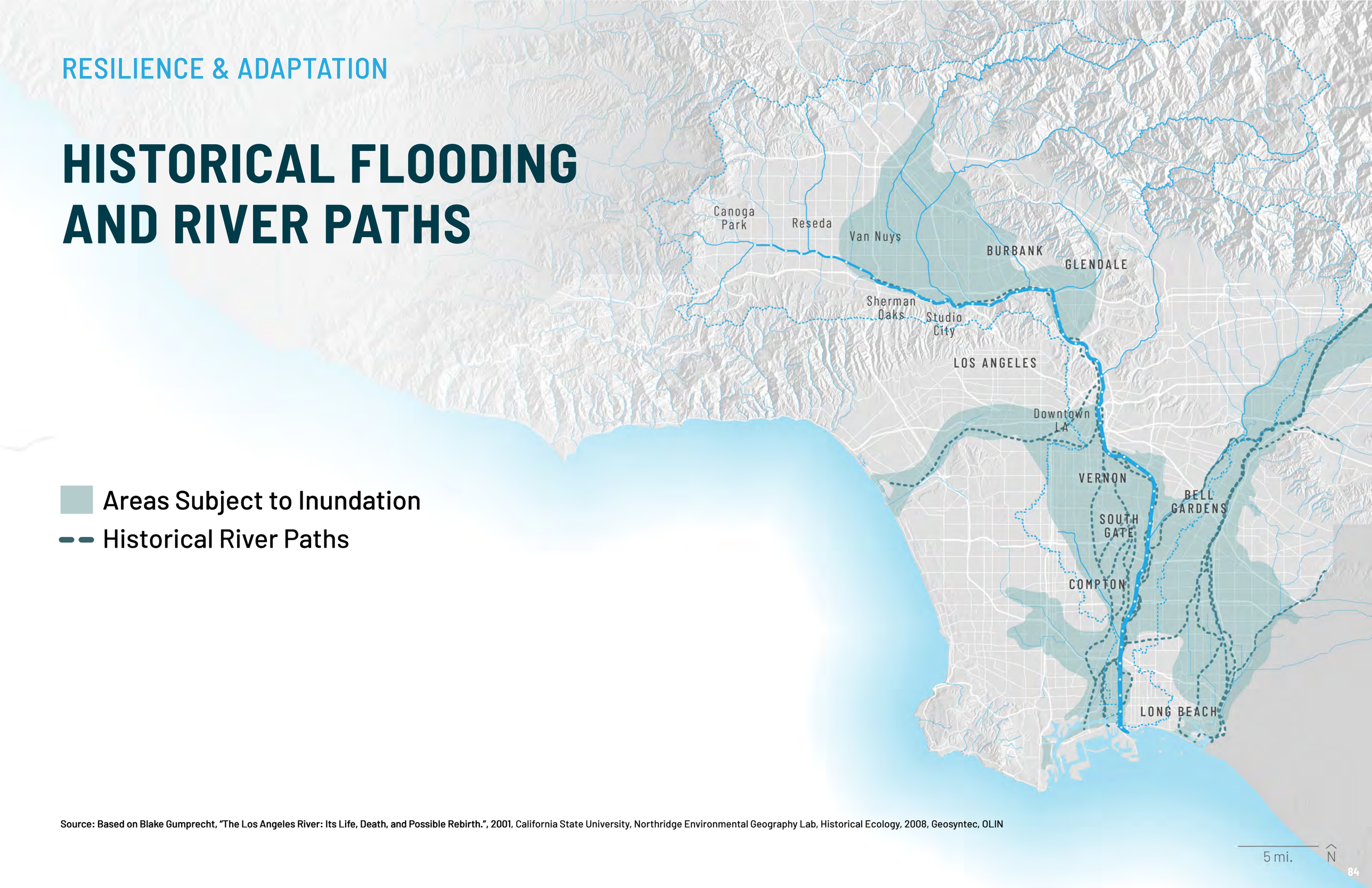
- City of LA Neighborhoods
- Incorporated Cities
- LA County Unincorporated Areas
- LA River
- Los Angeles Watershed

Source: Los Angeles county GIS Data Portal, City Boundaries and Annexations, 2016 & LA City Communities and Planning Areas, 2014.

HISTORICAL WETLAND ECOLOGY (1870)

Source: Adapted from: Charles Rairdan, 1998. Regional restoration goals for wetland resources in the Greater Los Angeles Drainage Area: A landscape-level comparison of recent historic and current conditions using Geographical Information Systems. Dissertation. UCLA

HISTORICAL FLOODING AND RIVER PATHS



Source: Based on Blake Gumprecht, "The Los Angeles River: Its Life, Death, and Possible Rebirth.", 2001, California State University, Northridge Environmental Geography Lab, Historical Ecology, 2008, Geosyntec, OLIN

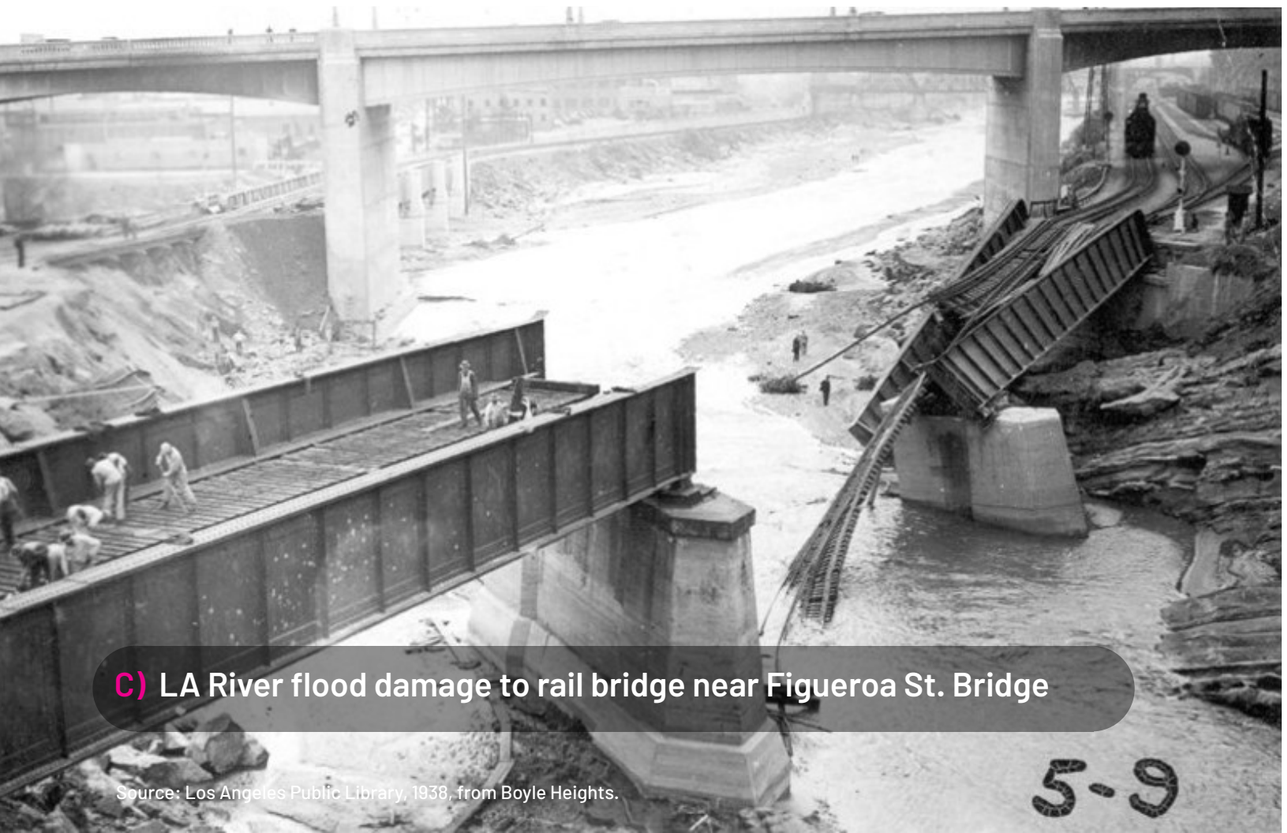
1938 FLOOD

A) LA River flood damage to rail bridge near Figueroa St. Bridge

Source: Los Angeles Times, https://www.vintag.es/2014/12/35-black-and-white-photos-of-1938-los.html

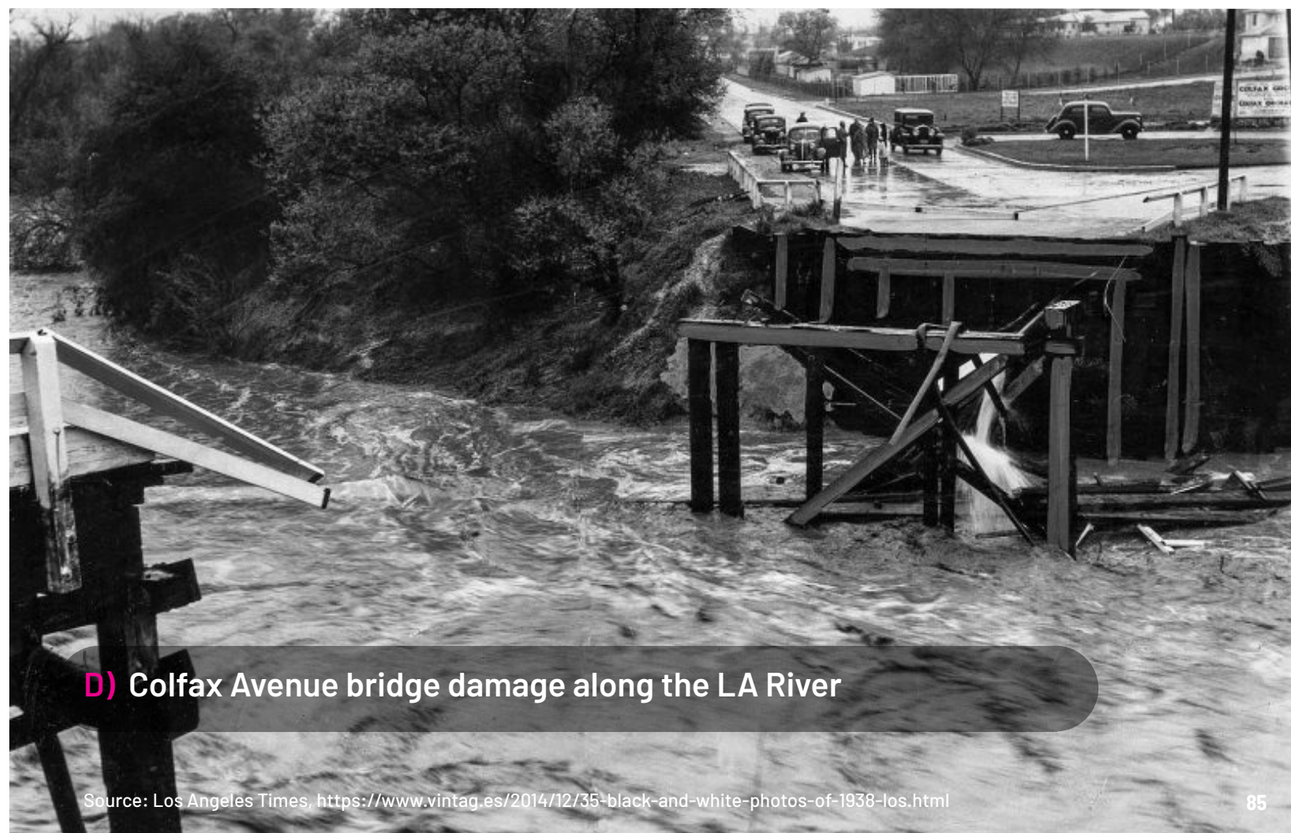
B) Flooding damage along the LA River near Griffith Park

Source: Army Corps of Engineers, 1938, Griffith Park



C) LA River flood damage to rail bridge near Figueroa St. Bridge

Source: Los Angeles Public Library, 1938, from Boyle Heights.



D) Colfax Avenue bridge damage along the LA River

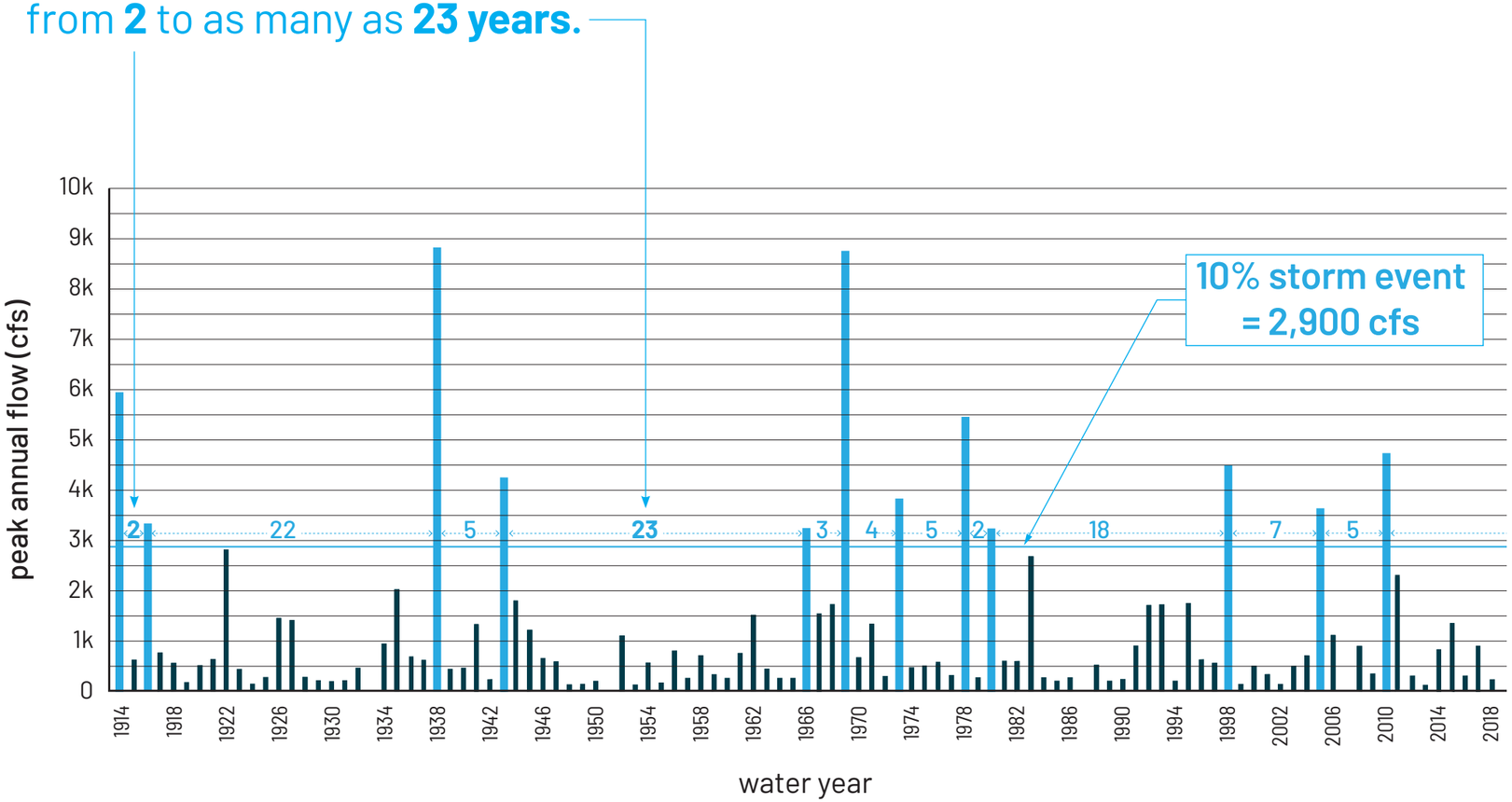
Source: Los Angeles Times, https://www.vintag.es/2014/12/35-black-and-white-photos-of-1938-los.html

STORM PROBABILITY

Defining the 1% storm:

- A storm that has a 1% probability of happening in any given year.
- A storm that happens once every 100 years (i.e., a "100-year" storm) on average.
- 1% (i.e., 100-year) events can happen in back-to-back years or even the same year.
- Over 30 years (i.e., the length of standard home mortgage), the probability of having a 1% event is 25%.
- Climate change is likely to increase the frequency of extreme events.

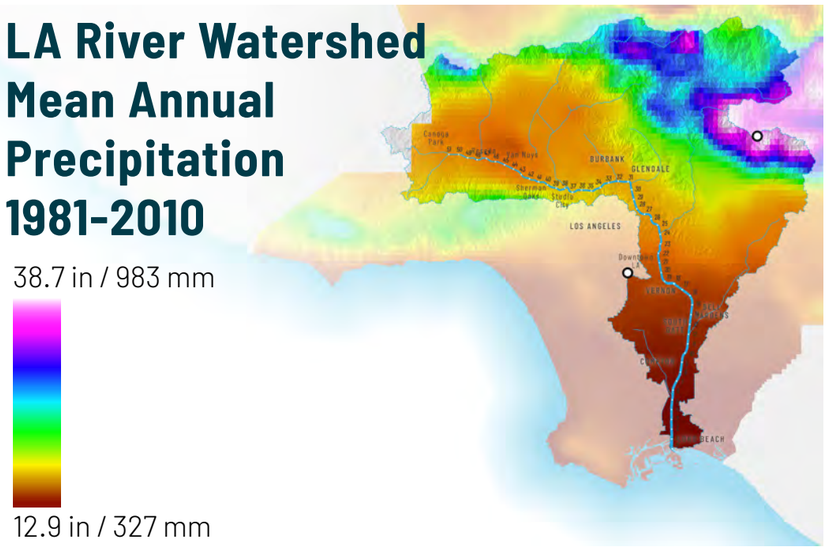
The 10% storm occurs on average once every 10 years. However, the time between 10% storm events varies and in this example ranges from **2** to as many as **23 years**.



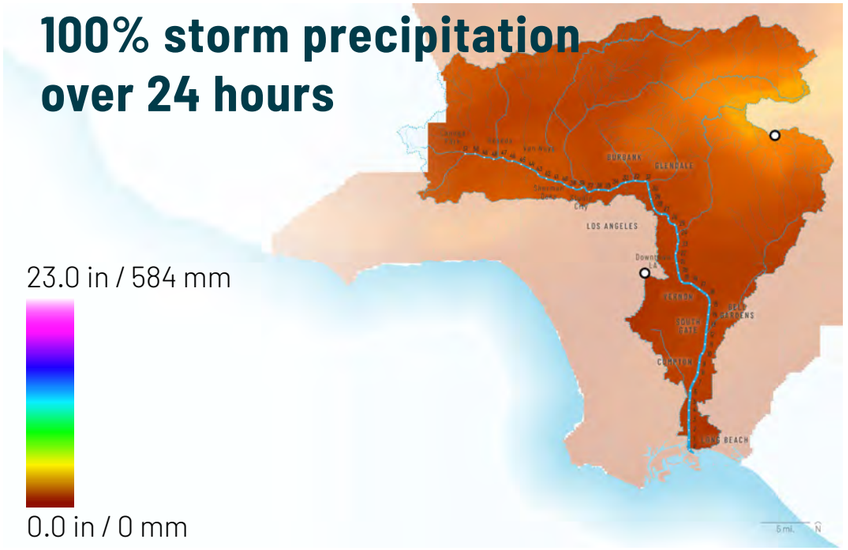
Incidence of the 10% storm event for the Arroyo Seco near Pasadena, CA, (USGS 11098000)

Source: Geosyntec

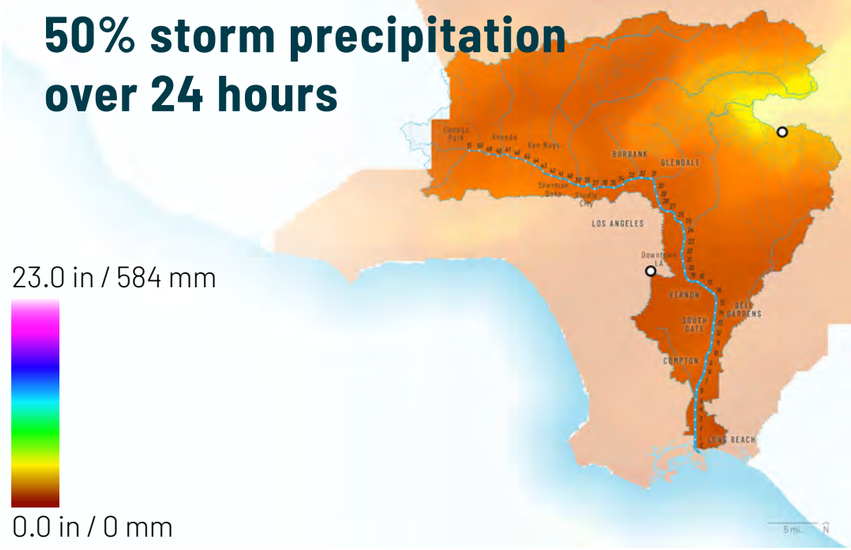
LA River Watershed Mean Annual Precipitation 1981-2010



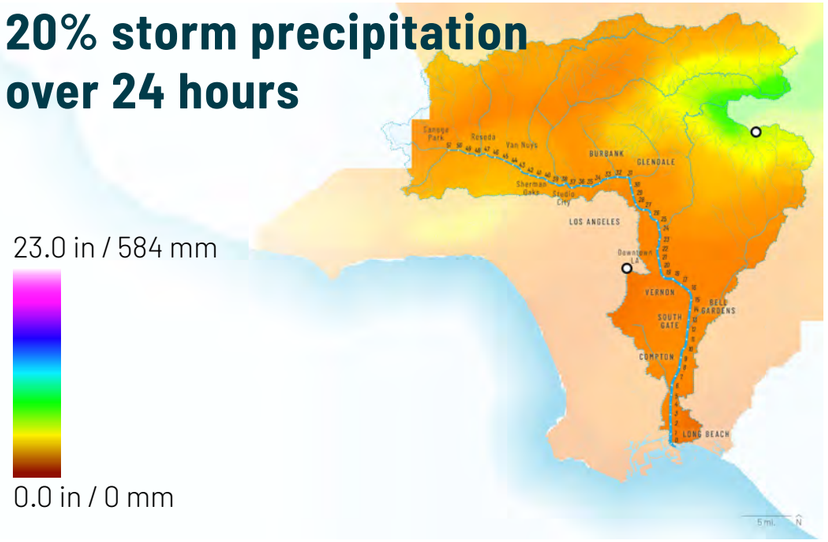
100% storm precipitation over 24 hours



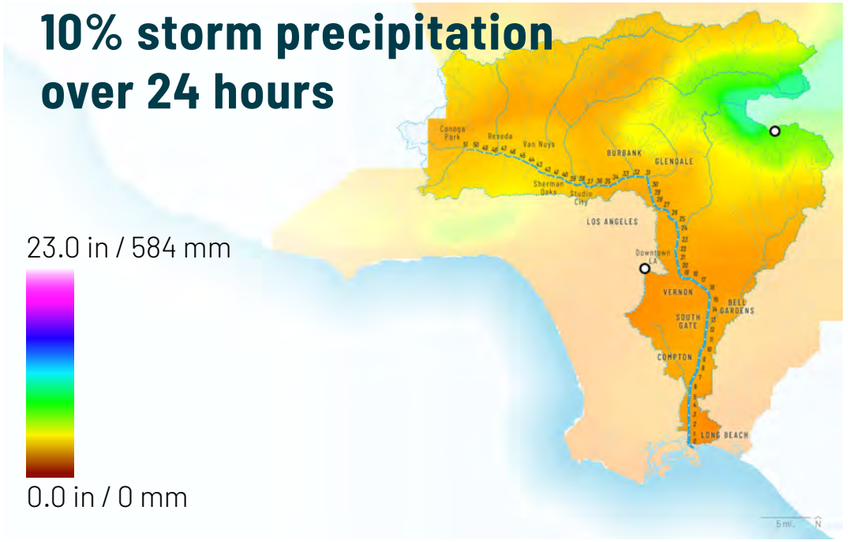
50% storm precipitation over 24 hours



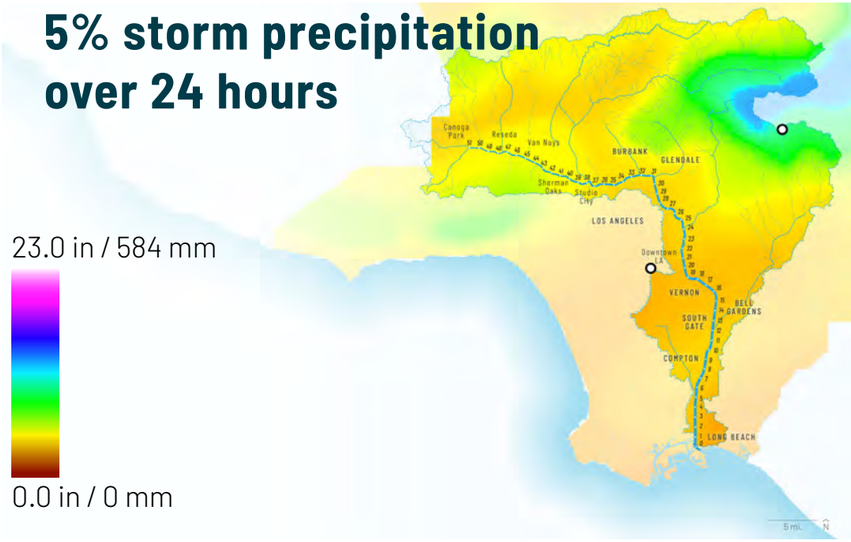
20% storm precipitation over 24 hours



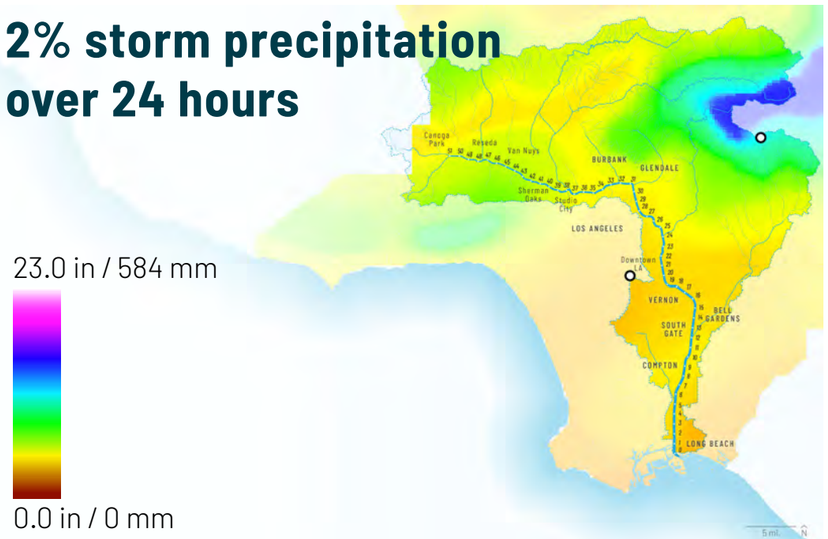
10% storm precipitation over 24 hours



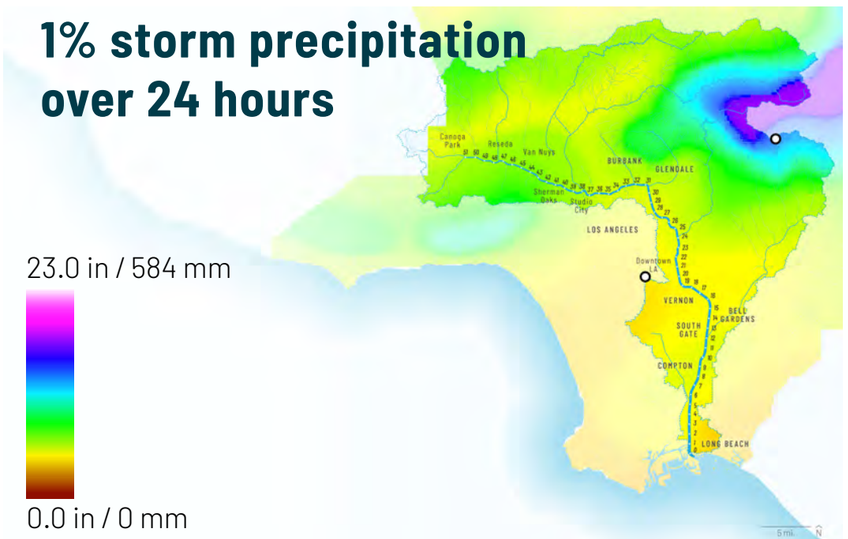
5% storm precipitation over 24 hours



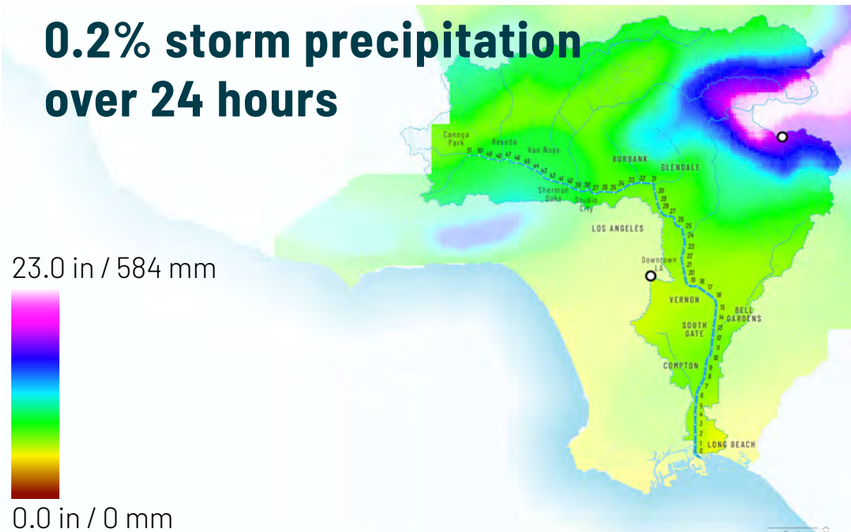
2% storm precipitation over 24 hours



1% storm precipitation over 24 hours

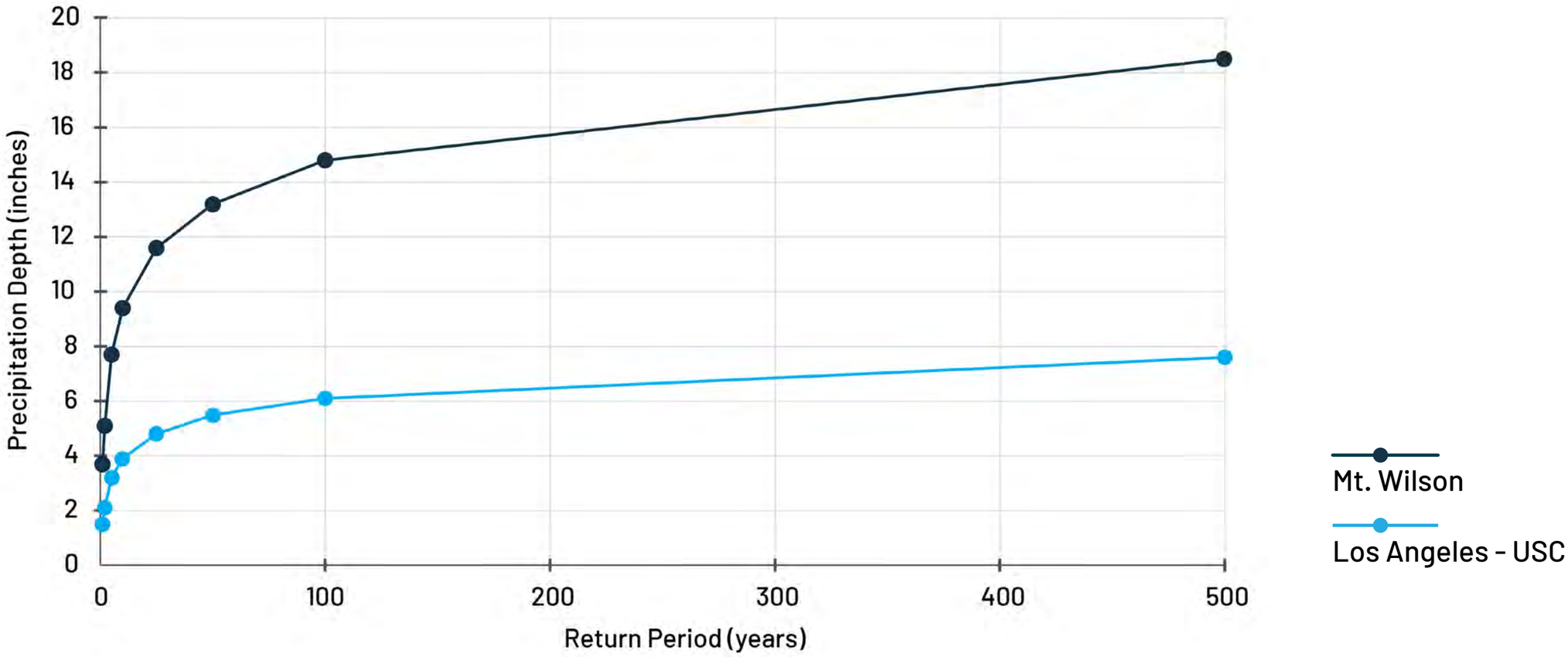


0.2% storm precipitation over 24 hours



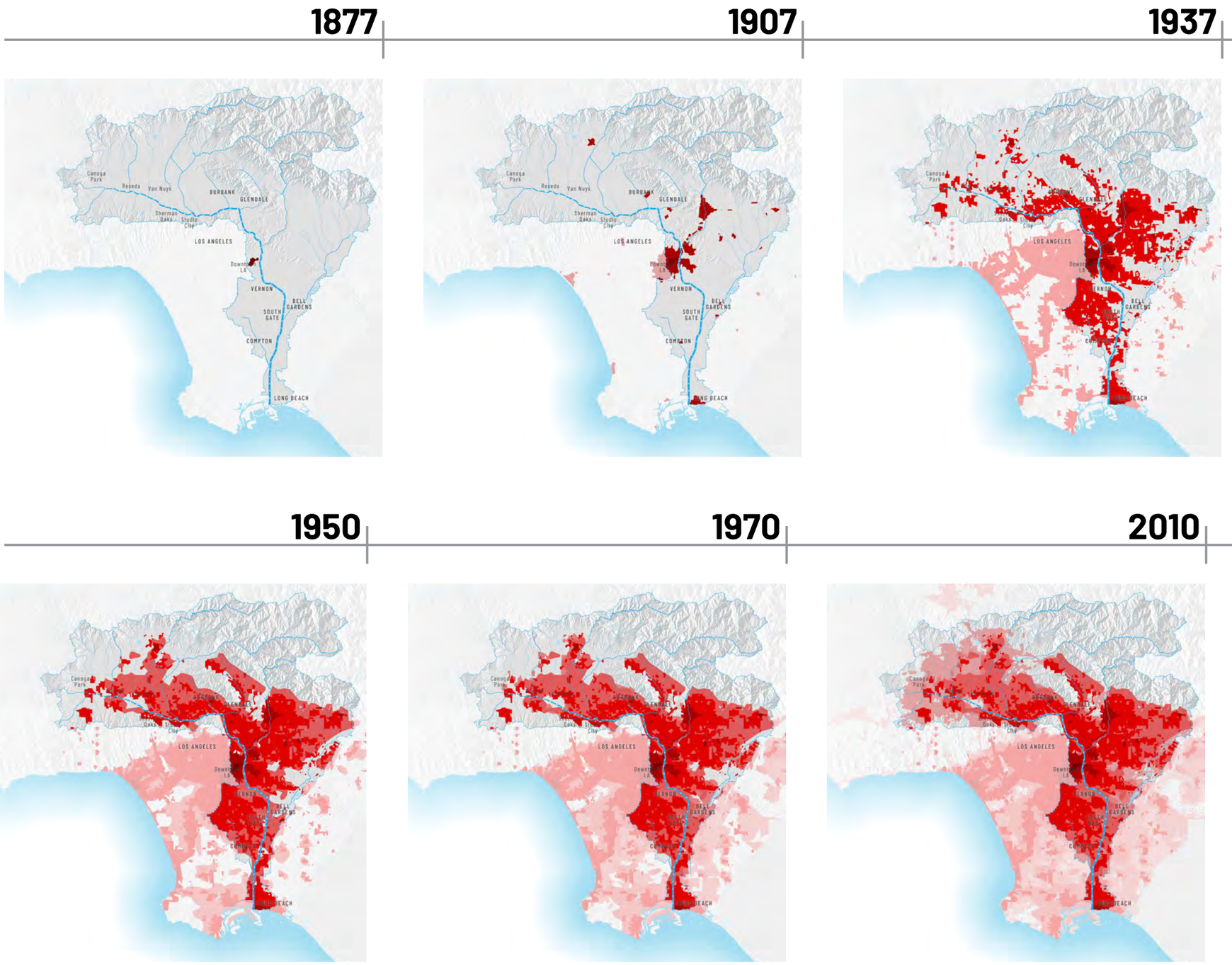
STORM RETURN PERIODS

24-hour Precipitation Depth versus Return Period



Source: Los Angeles County GIS Data Portal, Rainfall Intensity, 2011

NEARLY ALL OF THE LA RIVER CORRIDOR IS DEVELOPED



EXTREME EVENTS HAPPEN

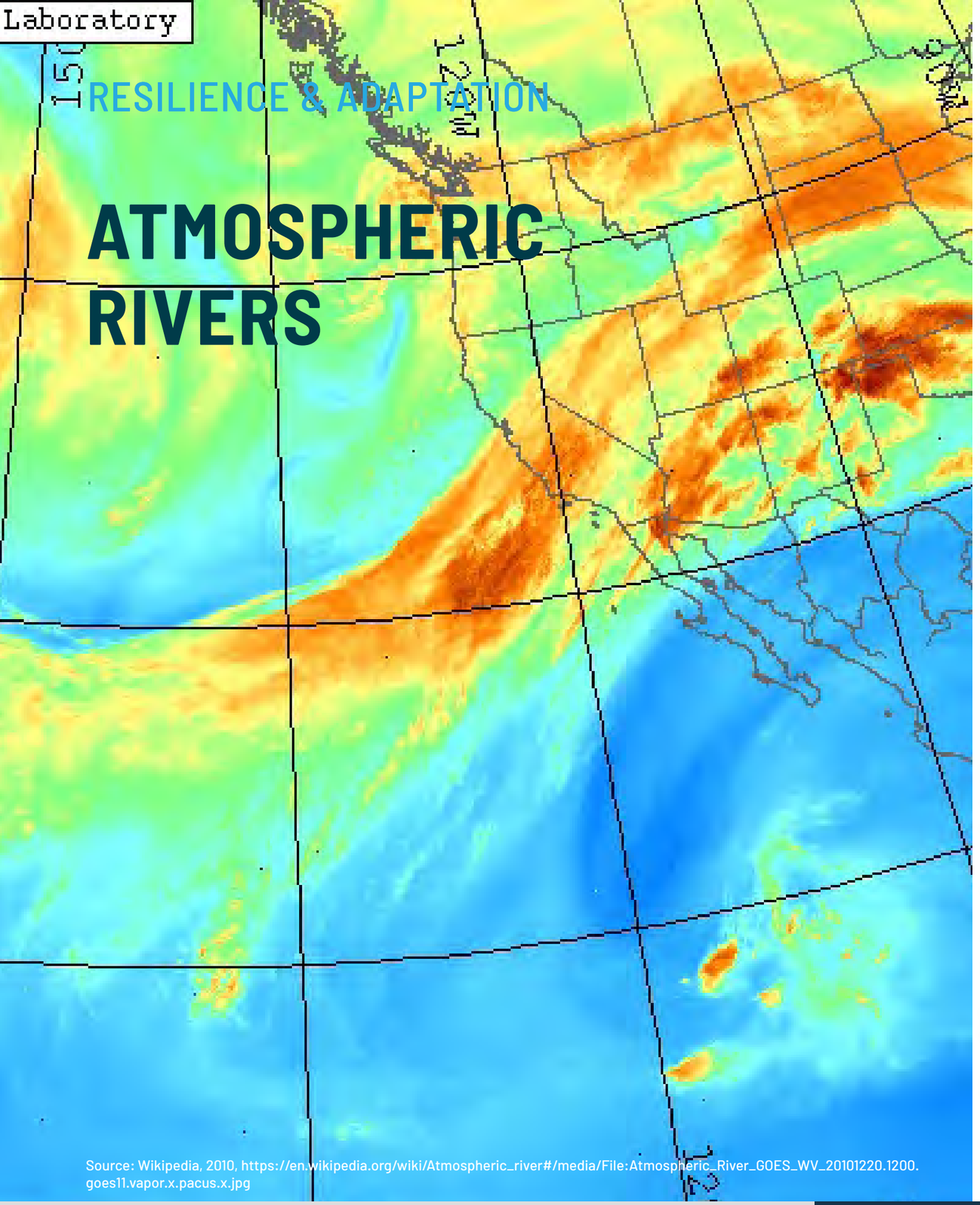
SUPERSTORM SANDY

Source: Jolliffe, R., Flickr User, 2012, https://flic.kr/p/dpcGmB

HURRICANE HARVEY

Source: Chandler, J., Flickr User, 2017, https://flic.kr/p/Y487SD

ATMOSPHERIC RIVERS



Source: Wikipedia, 2010, https://en.wikipedia.org/wiki/Atmospheric_river#/media/File:Atmospheric_River_GOES_WV_20101220.1200.goes11.vapor.x.pacus.x.jpg

Los Angeles Times

$2.75 DESIGNATED AREAS HIGHER © 2019 WSCE MONDAY, FEBRUARY 18, 2019 latimes.com

Plans for pot go up in smoke

TRUMP WAIVES LAWS TO BUILD WALL

ALLEN J. SCHABEN Los Angeles Times

CHILDREN play at the Whittier Narrows Recreation Area. Officials with the U.S. Army Corps of Engineers say that the 60-year-old Whittier Narrows Dam could fail in the event of a very large, very rare storm.

This could leave us all wet

California's 'other big one' — a mega-storm of biblical scope — could swamp cities in the L.A. Basin, experts say

BY LOUIS SAHAGUN

Scientists call it California's "other big one," and they say it could cause three times as much damage as a major earthquake ripping along the San Andreas fault.

Although it might sound absurd to those who still recall five years of withering drought and mandatory water restrictions, researchers and engineers warn that California may be due for rain of biblical proportions — or what experts call an ARkStorm.

This rare mega-storm — which some say is rendered all the more inevitable because of climate change — would last for weeks and send more than 1.5 million people fleeing as floodwaters inundated cities and formed lakes in the Central Valley and Mojave Desert, according to the U.S. Geological Survey. Officials estimate the structural and economic damage from an ARkStorm (for Atmospheric River 1,000) would amount to more than $725 billion statewide.

In heavily populated areas of the Los Angeles Basin, epic runoff from the San Gabriel Mountains could rapidly overwhelm a flood control dam on the San Gabriel River and unleash floodwaters from Pico Rivera to Long Beach, according to a recent analysis by the U.S. Army Corps of Engineers.

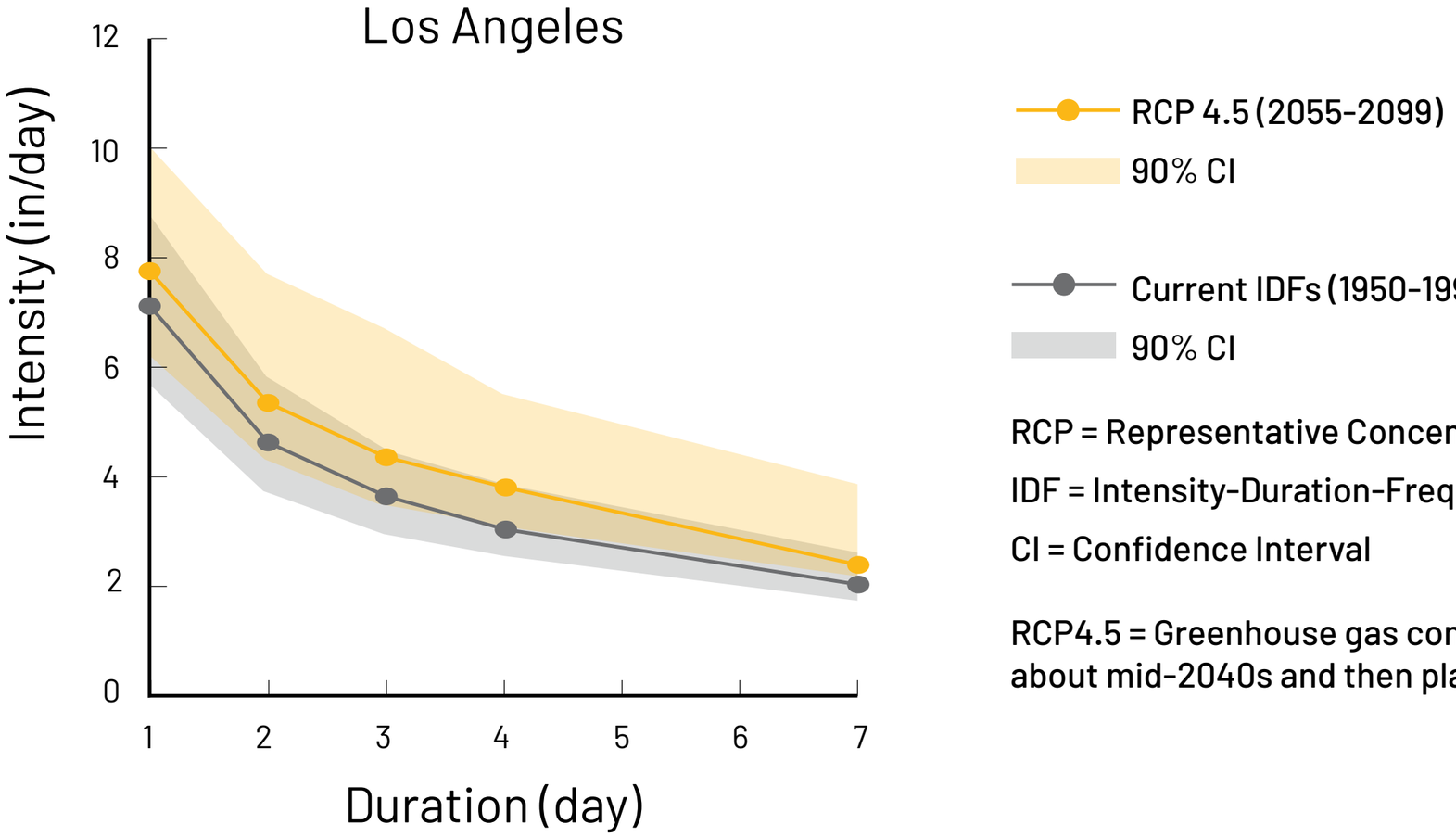
In a series of recent public hearings, corps officials told residents that the 60-year-old Whittier Narrows Dam no longer met the agency's tolerable-risk guidelines and could fail in the event of a very large, very rare storm, such as the one that devastated California more than 150 years ago.

Specifically, federal engi- [See **Mega-storm,** A10]

Source: Sahagun, L. LA Times. February 2019, https://www.latimes.com/local/california/la-me-ln-mega-storm-dam-failure-20190218-story.html

CLIMATE CHANGE

Current rainfall design frequencies may underestimate future climate conditions.



RCP = Representative Concentration Pathways

IDF = Intensity-Duration-Frequency

CI = Confidence Interval

RCP4.5 = Greenhouse gas concentrations continue upward until about mid-2040s and then plateau.

Source: Modified from AghaKouchak, Amir, Elisa Ragno, Charlotte Love, and Hamed Moftakhari. (University of California, Irvine). 2018. Projected changes in California's precipitation intensity-duration-frequency curves. California's Fourth Climate Change Assessment, California Energy Commission. Publication Number: CCCA4-CEC-2018-005, Geosyntec, OLIN

CHANNEL CAPACITY[1]

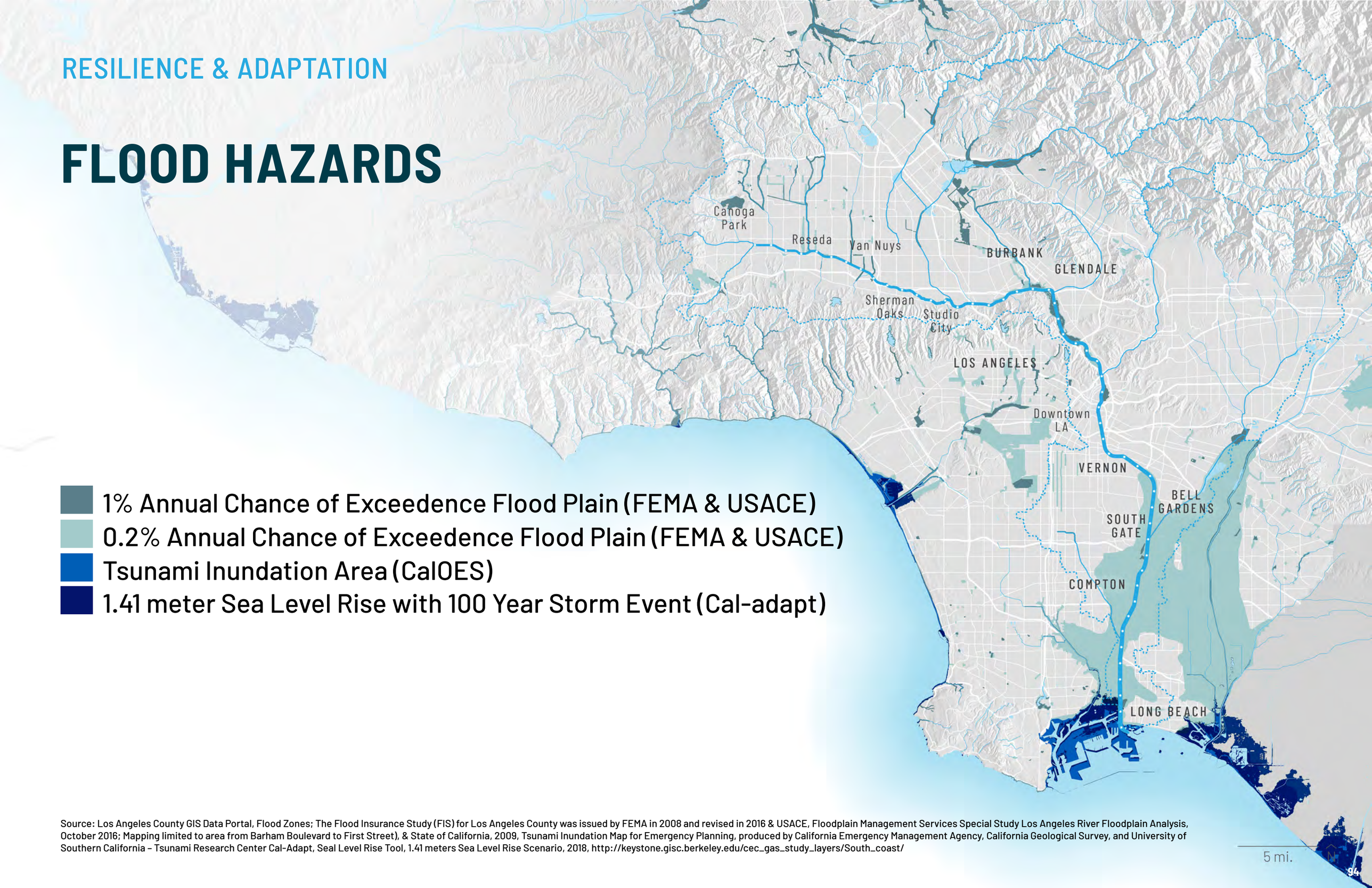
Annual Chance of Exceedance

- 10% or Worse
- 2% or Worse
- 1% or Worse
- 1% or Better

Footnotes:
1. U.S. Army Corps of Engineers (USACE) Los Angeles District. 1996a, 1996b, 1997a, 1997b, and 1999. Los Angeles County Drainage Area Improvement Projects. Design Analysis Report and Design Memoranda; USACE Los Angeles District. 1991. Los Angeles County Drainage Area (LACDA): Review, Part I Hydrology Technical Report: Base Conditions; USACE: Los Angeles District. 2015. Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Final Feasibility Report and Environmental Impact Statement/ Environmental Impact Report, Appendix E. Table 17: Original Design Discharge and Existing Channel Capacity; USACE. 1953. Design Memorandum No. 1 Hydrology for Los Angeles River Channel, Owensmouth Avenue to Sepulveda Flood Control Basin; Geosyntec analysis using HEC-RAS models (USACE Los Angeles District. 2005. Los Angeles County Drainage Area Upper Los Angeles River and Tujunga Wash HEC-RAS Hydraulic Models).

Source: Geosyntec, OLIN

FLOOD HAZARDS



- 1% Annual Chance of Exceedence Flood Plain (FEMA & USACE)
- 0.2% Annual Chance of Exceedence Flood Plain (FEMA & USACE)
- Tsunami Inundation Area (CalOES)
- 1.41 meter Sea Level Rise with 100 Year Storm Event (Cal-adapt)

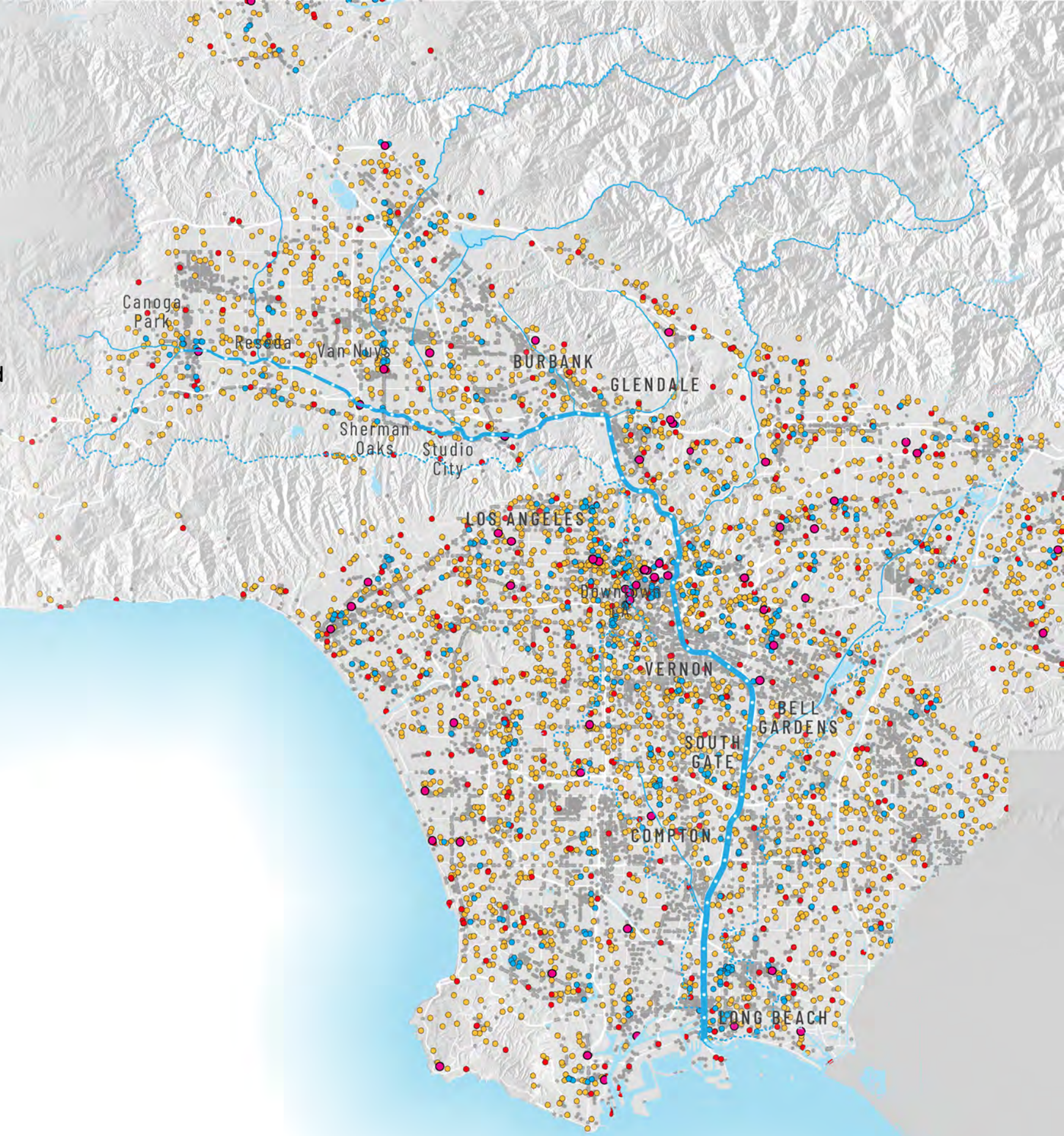
Source: Los Angeles County GIS Data Portal, Flood Zones; The Flood Insurance Study (FIS) for Los Angeles County was issued by FEMA in 2008 and revised in 2016 & USACE, Floodplain Management Services Special Study Los Angeles River Floodplain Analysis, October 2016; Mapping limited to area from Barham Boulevard to First Street), & State of California, 2009, Tsunami Inundation Map for Emergency Planning, produced by California Emergency Management Agency, California Geological Survey, and University of Southern California – Tsunami Research Center Cal-Adapt, Seal Level Rise Tool, 1.41 meters Sea Level Rise Scenario, 2018, http://keystone.gisc.berkeley.edu/cec_gas_study_layers/South_coast/

CRITICAL FACILITIES

A structure or other improvement that, because of its function, size, service area, or uniqueness, has the potential to cause serious bodily harm, extensive property damage, or disruption of vital socioeconomic activities if it is destroyed or damaged or if its functionality is impaired.

Critical facility types based on:
Los Angeles County Comprehensive Floodplain Management Plan, September 2016

- Disaster and Emergency Operations Center
- Police and Fire Stations
- Medical Facilities
- Schools
- Hazardous Facilities

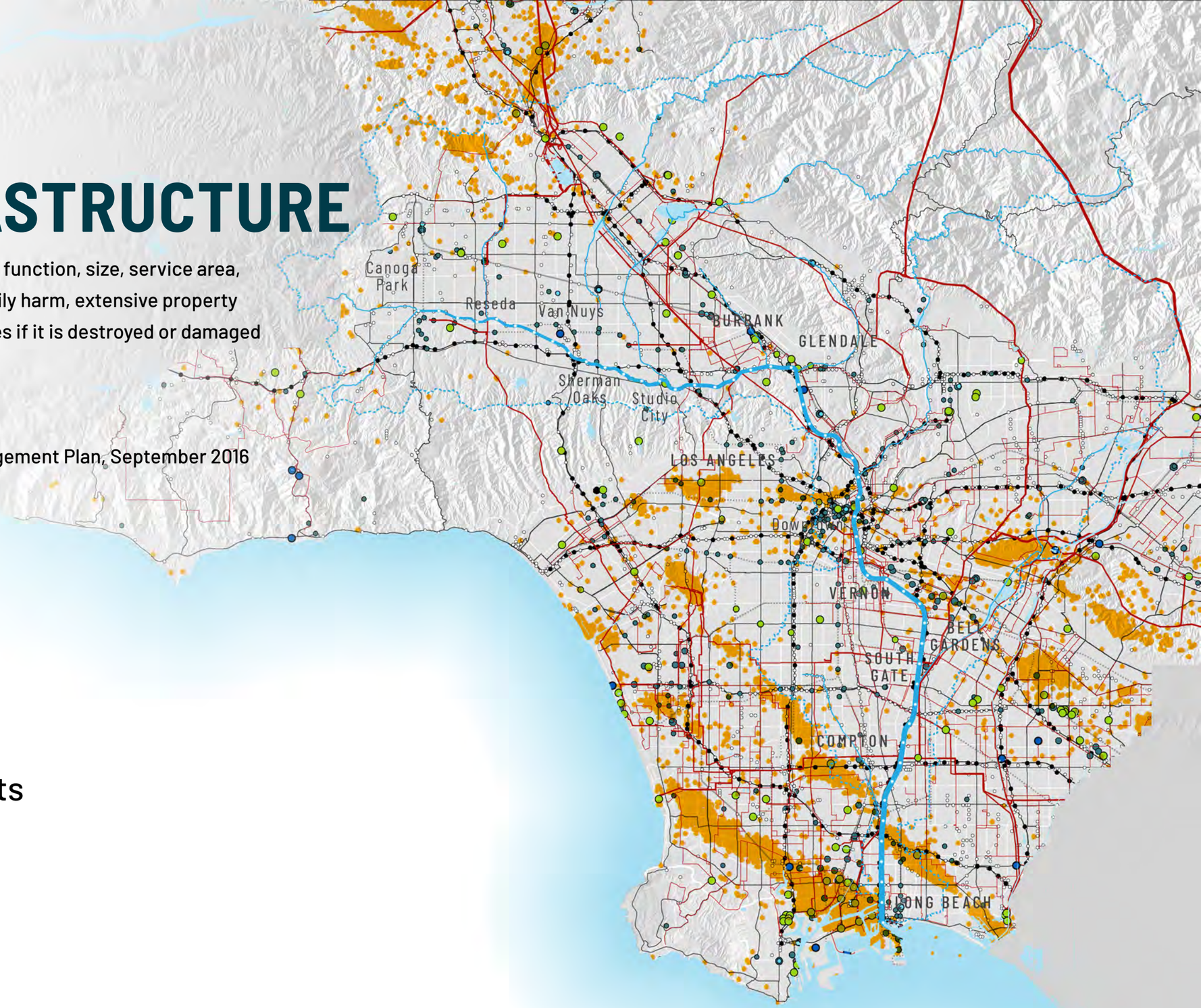


Source: Los Angeles County GIS Data Portal, Points of Interest, 2016 & EPA, FRS Geospatial Data, 2018

CRITICAL INFRASTRUCTURE

A structure or other improvement that, because of its function, size, service area, or uniqueness, has the potential to cause serious bodily harm, extensive property damage, or disruption of vital socioeconomic activities if it is destroyed or damaged or if its functionality is impaired.

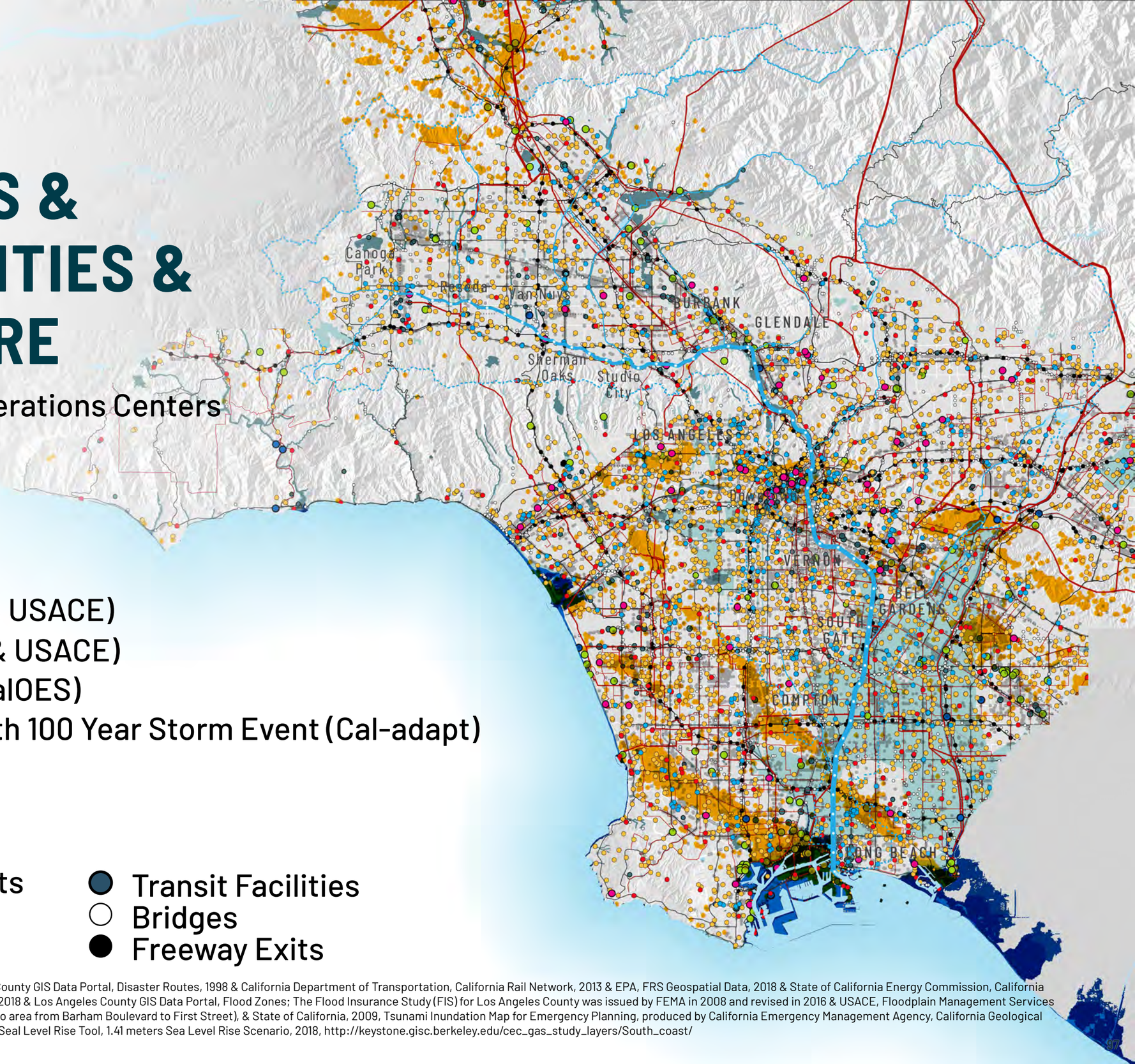
Critical infrastructure types based on:
Los Angeles County Comprehensive Floodplain Management Plan, September 2016



- Evacuation Routes
- Transition Lines
- Passenger Rail
- Wastewater Treatment Plants
- Electric Power Facility
- Oil and Gas Facilities
- Public Transit Facilities
- Bridges
- Freeway Exits

Source: Los Angeles County GIS Data Portal, Points of Interest, 2016 & Los Angeles County GIS Data Portal, Disaster Routes, 1998 & California Department of Transportation, California Rail Network, 2013 & EPA, FRS Geospatial Data, 2018 & State of California Energy Commission, California Electric Transmission Line, 2018 & California Department of Conservation, All Wells, 2018

FLOOD HAZARDS & CRITICAL FACILITIES & INFRASTRUCTURE



- Disaster and Emergency Operations Centers
- Police and Fire Stations
- Medical Facilities
- Schools
- Hazardous Facilities
- 100 Year Floodplain (FEMA & USACE)
- 500 Year Floodplain (FEMA & USACE)
- Tsunami Inundation Area (CalOES)
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- Evacuation Routes
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- Oil and Gas Facilities
- Electric Power Facilities
- Transit Facilities
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Source: Los Angeles County GIS Data Portal, Points of Interest, 2016 & Los Angeles County GIS Data Portal, Disaster Routes, 1998 & California Department of Transportation, California Rail Network, 2013 & EPA, FRS Geospatial Data, 2018 & State of California Energy Commission, California Electric Transmission Line, 2018 & California Department of Conservation, All Wells, 2018 & Los Angeles County GIS Data Portal, Flood Zones; The Flood Insurance Study (FIS) for Los Angeles County was issued by FEMA in 2008 and revised in 2016 & USACE, Floodplain Management Services Special Study Los Angeles River Floodplain Analysis, October 2016; Mapping limited to area from Barham Boulevard to First Street), & State of California, 2009, Tsunami Inundation Map for Emergency Planning, produced by California Emergency Management Agency, California Geological Survey, and University of Southern California – Tsunami Research Center Cal-Adapt, Seal Level Rise Tool, 1.41 meters Sea Level Rise Scenario, 2018, http://keystone.gisc.berkeley.edu/cec_gas_study_layers/South_coast/

SYSTEM: 1% FLOOD RISK REDUCTION AREAS[1]

Short-Term Priorities:

1. Improve channel areas under 1% flood capacity.
2. Improve resiliency of critical infrastructure and facilities in the 1% and 0.2% floodplains by developing and implementing specific flood risk reduction strategies.

Long-Term Policies:

1. Improve community and system resilience through strategic adaptation planning


100 Year Flood Plain (FEMA & USACE)[1]

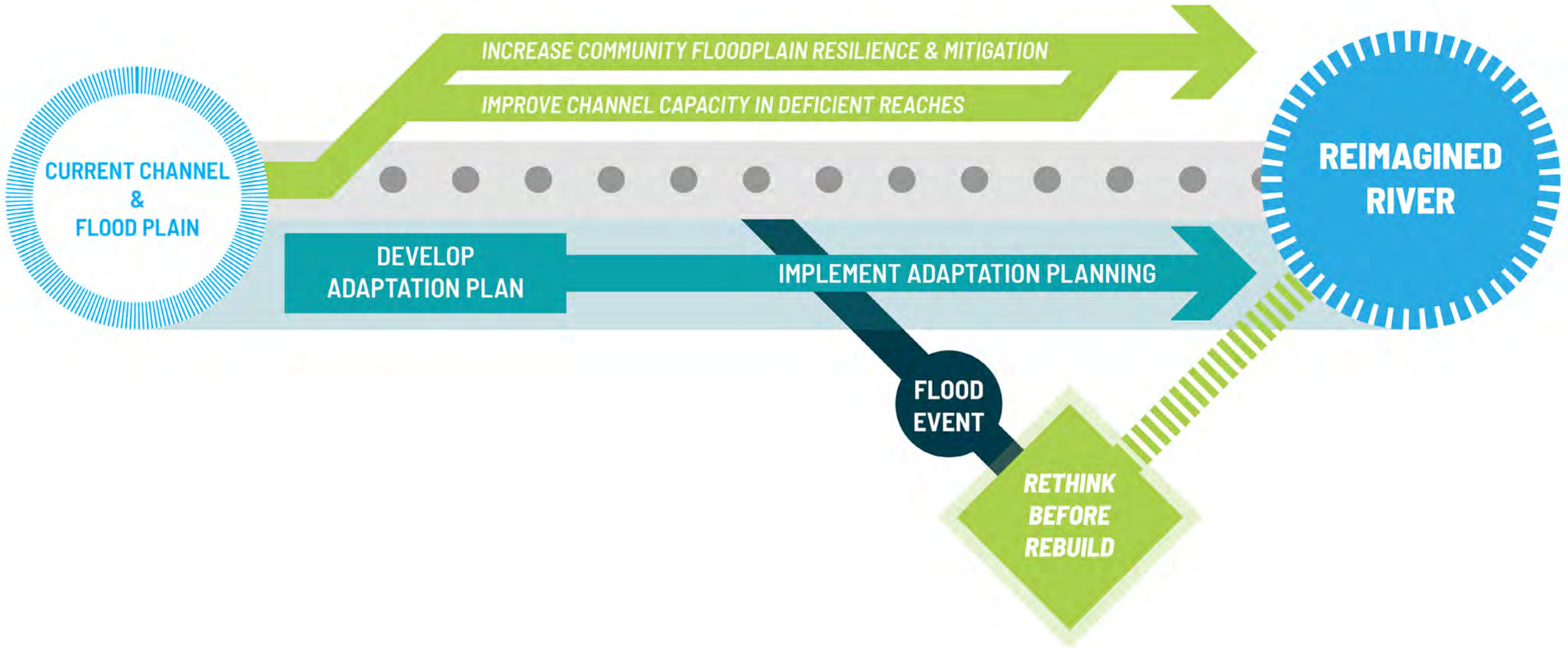
500 Year Flood Plain (FEMA & USACE)[1]


Areas that do not meet 1% flood capacity needs[1]

Footnotes:
1. U.S. Army Corps of Engineers (USACE) Los Angeles District. 1996a, 1996b, 1997a, 1997b, and 1999. Los Angeles County Drainage Area Improvement Projects. Design Analysis Report and Design Memoranda; USACE Los Angeles District. 1991. Los Angeles County Drainage Area (LACDA): Review, Part I Hydrology Technical Report: Base Conditions; USACE: Los Angeles District. 2015. Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Final Feasibility Report and Environmental Impact Statement/ Environmental Impact Report, Appendix E. Table 17: Original Design Discharge and Existing Channel Capacity; USACE. 1953. Design Memorandum No. 1 Hydrology for Los Angeles River Channel, Owensmouth Avenue to Sepulveda Flood Control Basin; Geosyntec analysis using HEC-RAS models (USACE Los Angeles District. 2005. Los Angeles County Drainage Area Upper Los Angeles River and Tujunga Wash HEC-RAS Hydraulic Models).

Source: Geosyntec, OLIN

RESILIENCE & ADAPTATION STRATEGY



RETHINK BEFORE REBUILD

POST-DISASTER RECOVERY FRAMEWORK

HOUSTON 2017 (HURRICANE HARVEY)

Source: Wikicommons

NEW YORK 2012 (HURRICANE SANDY)

Source: David Shankbone, https://www.flickr.com/photos/shankbone/8139676602

PUERTO RICO 2017 (HURRICANE MARIA)

Source: Wikicommons

COLORADO FRONT RANGE 2013

Source: Staff Sgt. Keoda Geffre, https://www.dvidshub.net/image/1000746833/

MITIGATION SAVES MONEY

National Benefit-Cost Ratio Per Peril **BCR numbers in this study have been rounded*	Federally Funded	Beyond Code Requirements
Overall Hazard Benefit-Cost Ratio	**6:1**	**4:1**
Riverine Flood	**7:1**	**5:1**

Footnotes:
1. Benefit-cost ratio for riverine flooding based on modeling of the 1% annual chance flood

Source: Multihazard Mitigation Council (2017) *Natural Hazard Mitigation Saves 2017 Interim Report: An Independent Study*.

Q & A AND DISCUSSION

Source: Joe Mabel, 2001. Wikipedia. https://commons.wikimedia.org/wiki/File:Los_Angeles_River_aerial_01.jpg

ENVIRONMENTAL GRAPHICS

Source: OLIN

APPENDICES

DESIGN GUIDELINES

- Plant Species
- Soils Guidelines
- Trail Widths Requirements
- Environmental Graphics
- Permitting Overview
- O&M Planning
- Integration of Arts and Culture
- Project Scale and Programming

TECHNICAL DOCUMENTS

- Additional River Rulers
- Hydrology and Hydraulics Analysis
- Needs Mapping and Weighting
- Project Database / Library of Sources and Data Catalog

VALUES FOR ENVIRONMENTAL GRAPHICS UPDATE

LEGIBILITY

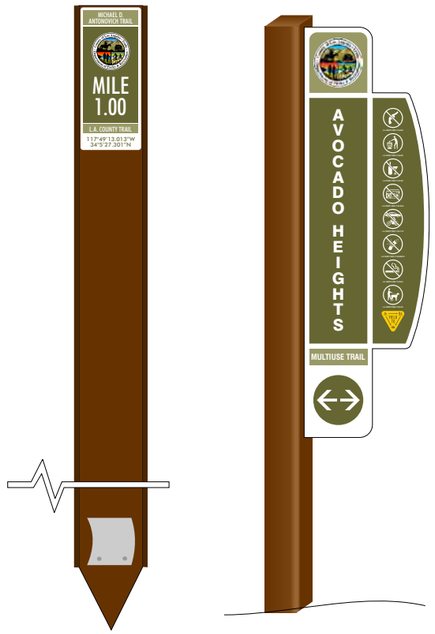
GRAPHIC CLARITY

SIMPLE, TIMELESS AESTHETIC

COORDINATION WITH STAKEHOLDERS

LATERAL WAYFINDING TO THE RIVER

PRECEDENTS - PARKS & REC TRAIL SIGNAGE



INFO

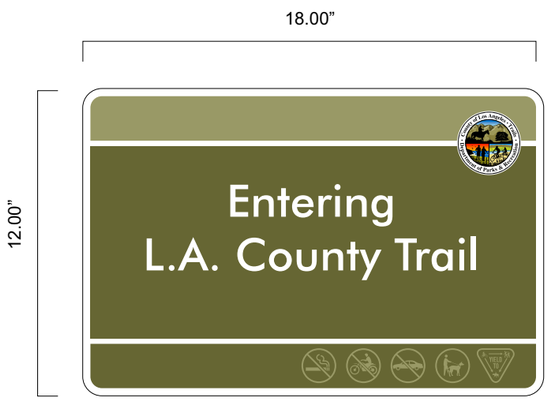
- Developed by LA County Dept. of Parks and Rec, adopted in 2018
- For use on all county trails - often along mountain trails

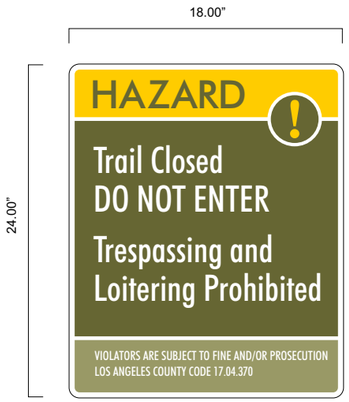
PROS

- Clear and clean layout
- Sans serif font (ADA compliant)
- Icons for multi-trail use

CONS

- Low relative contrast - can blend into planting
- Materials and construction may not be suitable for an urban context



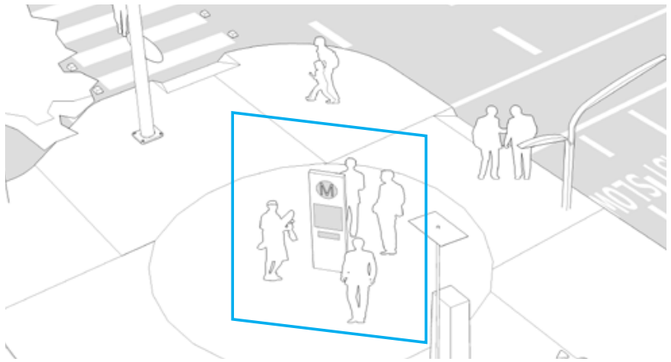


Source: Los Angeles County Department of Parks and Recreation, Los Angeles County Trail Signage Handbook, 2018.

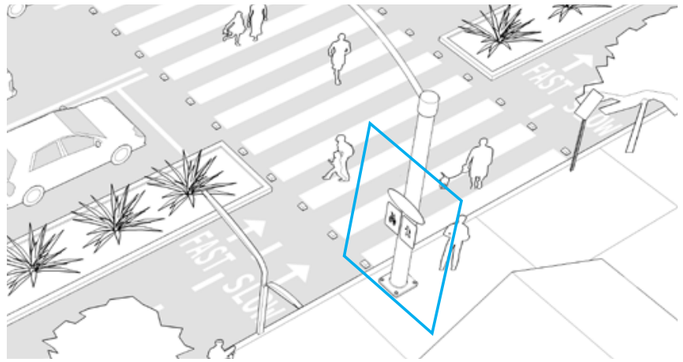
PRECEDENTS - METRO SIGNAGE

SIGNAGE AND WAYFINDING

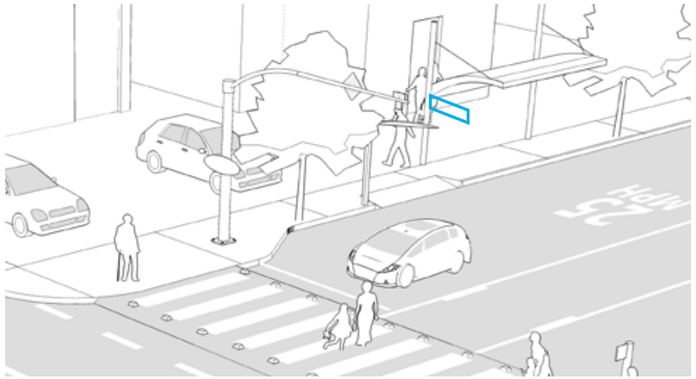
Metro Signage and Maps



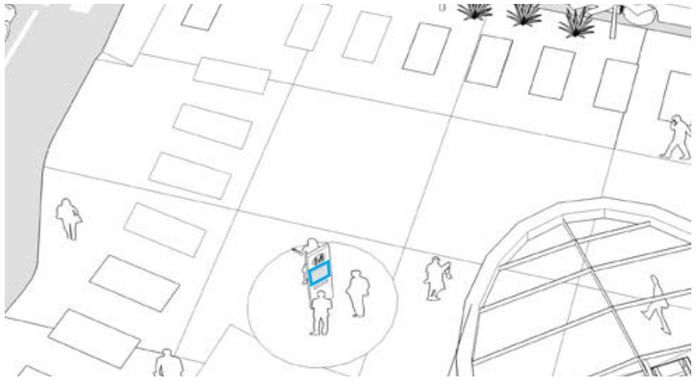
Medallion Signage



Time-to-Station Signage



Real-Time Signage Adjacent to Station



Source: Los Angeles County Metropolitan Transportation Authority and Alta Planning Design. First and Last Mile Strategic Plan, March 2014. pg 34-37.

INFO

- Strategic Plan developed for Metro in 2014
- Guidelines for overall transit network

PROS

- Emphasis on lateral wayfinding
- Strong visual identity and branding
- Guidelines allow for flexibility in use

CONS

- No mention of coordination with signage of other jurisdictions

INTERNATIONAL SIGNAGE PRECEDENTS

LEGIBLE LONDON

LEGIBLE SYDNEY

ATLANTA BELTLINE

NYC BEACHES

SYRACUSE CONNECTIVE CORRIDOR

Sources: ***Legible London:*** Flickr Creative Commons. "To Make Your Transit System Easier to Navigate, Use a Better Font." Mobility Lab, September 13, 2018. https://mobilitylab.org/2018/09/13/use-a-better-font/. Accessed 07/31/2019. ***Legible Sydney:*** *Copyright Photo, not for posting. City of Sydney, Legible Sydney Design Manual, 2016. https://www.cityofsydney.nsw.gov.au/vision/sustainable-sydney-2030/transport-and-access/liveable-green-network/wayfinding-signage#page-element-dload. Accessed 07/31/19. ***Atlanta Beltline:*** *Copyright Photo, not for posting. Merje, Atlanta Beltline Wayfinding Program, https://merjedesign.com/projects/atlanta-beltline/. Accessed 07/31/19. ***NYC Beaches:*** *Copyright Photo, not for posting. Pentagram, NYC Beaches, 2013; https://www.pentagram.com/work/nyc-beaches/story; Accessed 07/31/19. ***Syracuse Connective Corridor:*** OLIN / Sahar Coston-Hardy, 2013.

OVERVIEW OF EXISTING WAYFINDING SURVEY

51 MILES

17 CITIES VISITED

24 PARKS VISITED

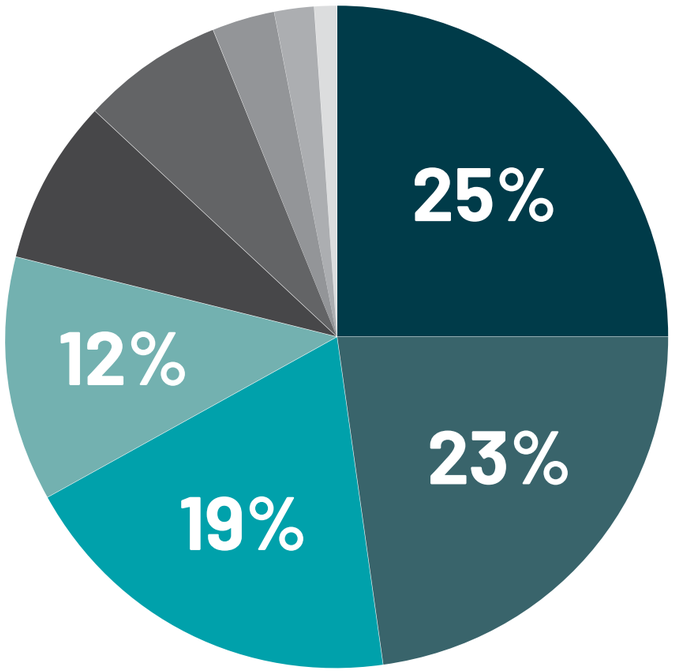
222 LOCATIONS SURVEYED

953 IMAGES TAKEN

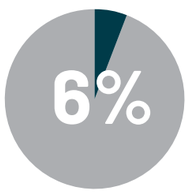
307 SIGNS INVENTORIED

INVENTORY OVERVIEW

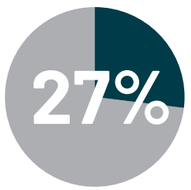
OF THE 307 TOTAL SIGNS SURVEYED:



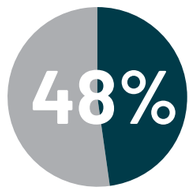
- **25% Informational**
- **23% Regulatory**
- **19% Interpretive Signage and Displays**
- **12% Warning and Safety**
- **8% Bikeway Signage**
- **7% Directional**
- **3% Other**
- **2% Destination**
- **1% Bikeway Distance Markers**



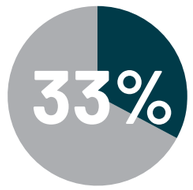
ARE BILINGUAL



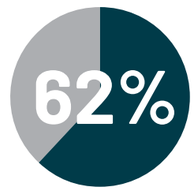
ARE ALL CAPS



MEET ADA TEXT SIZE



USE SAN SERIF FONT

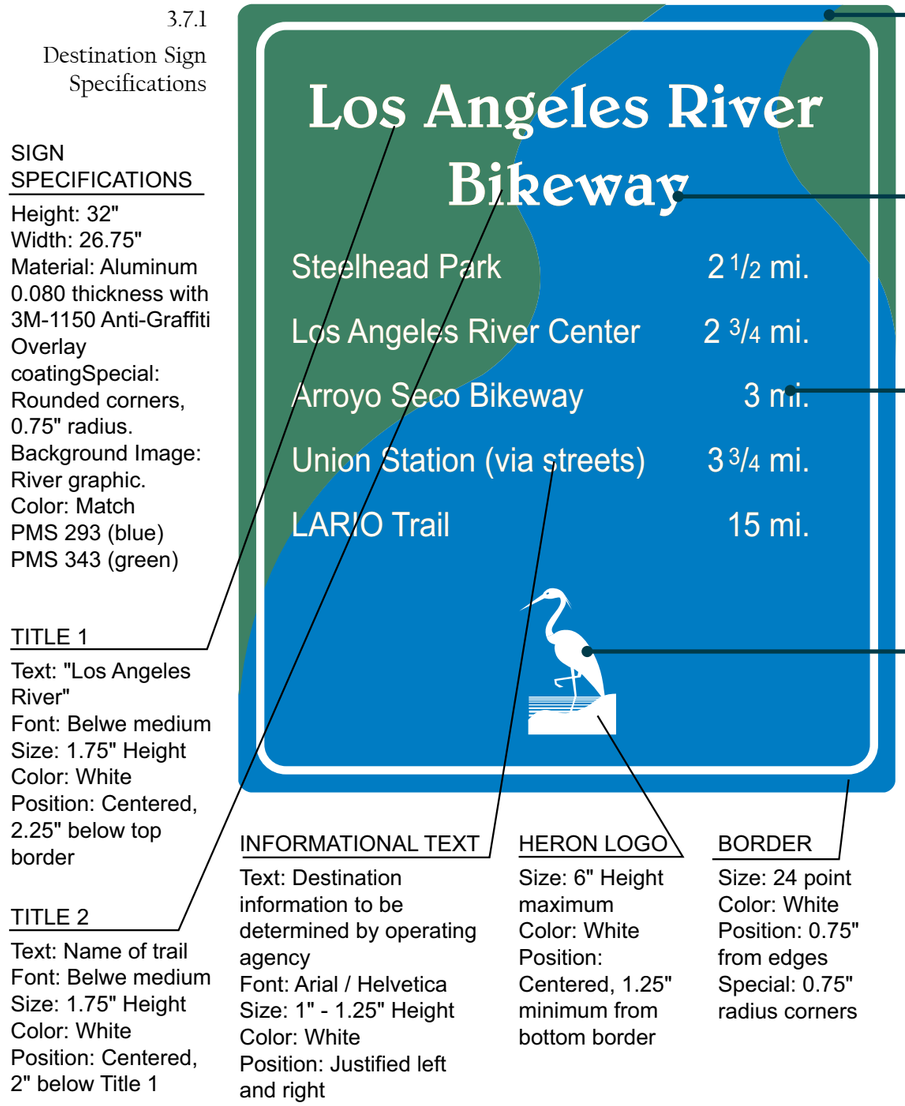


USE HIGH CONTRAST COLORS

OVERALL OBSERVATIONS:

- Informational, regulatory, interpretive signage and displays, and warning and safety signage are the most commonly found type of signage along the LA River, typically located near existing access points.
- Directional, destination, and bikeway signage are the least commonly found signage, highlighting the lack of lateral wayfinding and wayfinding along the trail once entered.
- There is a lack of continuity in signage from upper to lower river and throughout parks. Various forms and graphics standards are used between cities and Parks & Rec.
- There is a lack of maintenance of signs and surrounding contexts - many were in poor condition or covered with graffiti.
- There is inconsistent sign placement, sequence, and orientation at access points.

EXISTING SIGNS - ACCESSIBILITY ANALYSIS



Blue and green hard to distinguish, graphic segments text in a distracting way

ADA Standard: *"Characters shall be uppercase"; "[Characters] shall not be highly decorative or any other unusual forms"*

Need to confirm font size based on viewing distance

Heron logo - becomes distracting on the sign because of its position and amount of white space, takes focus away from text

Source: Diagram on page 24, Figure 3.7.1, of the 2003 LARMP Sign Guidelines.

EXISTING HERON LOGO EXPRESSION

HERON LOGO EXPRESSION

EXISTING TERMINOLOGY

Los Angeles River

L.A. RIVER

LA RIVER

TERMINOLOGY

LA RIVER

ENVIRONMENTAL GRAPHICS

RIVER MILES

ENVIRONMENTAL GRAPHICS IN GUIDELINES UPDATE

1. INFORMATIONAL

2. REGULATORY

3. CONFIRMATION

4. DIRECTIONAL (LATERAL WAYFINDING TO THE RIVER)

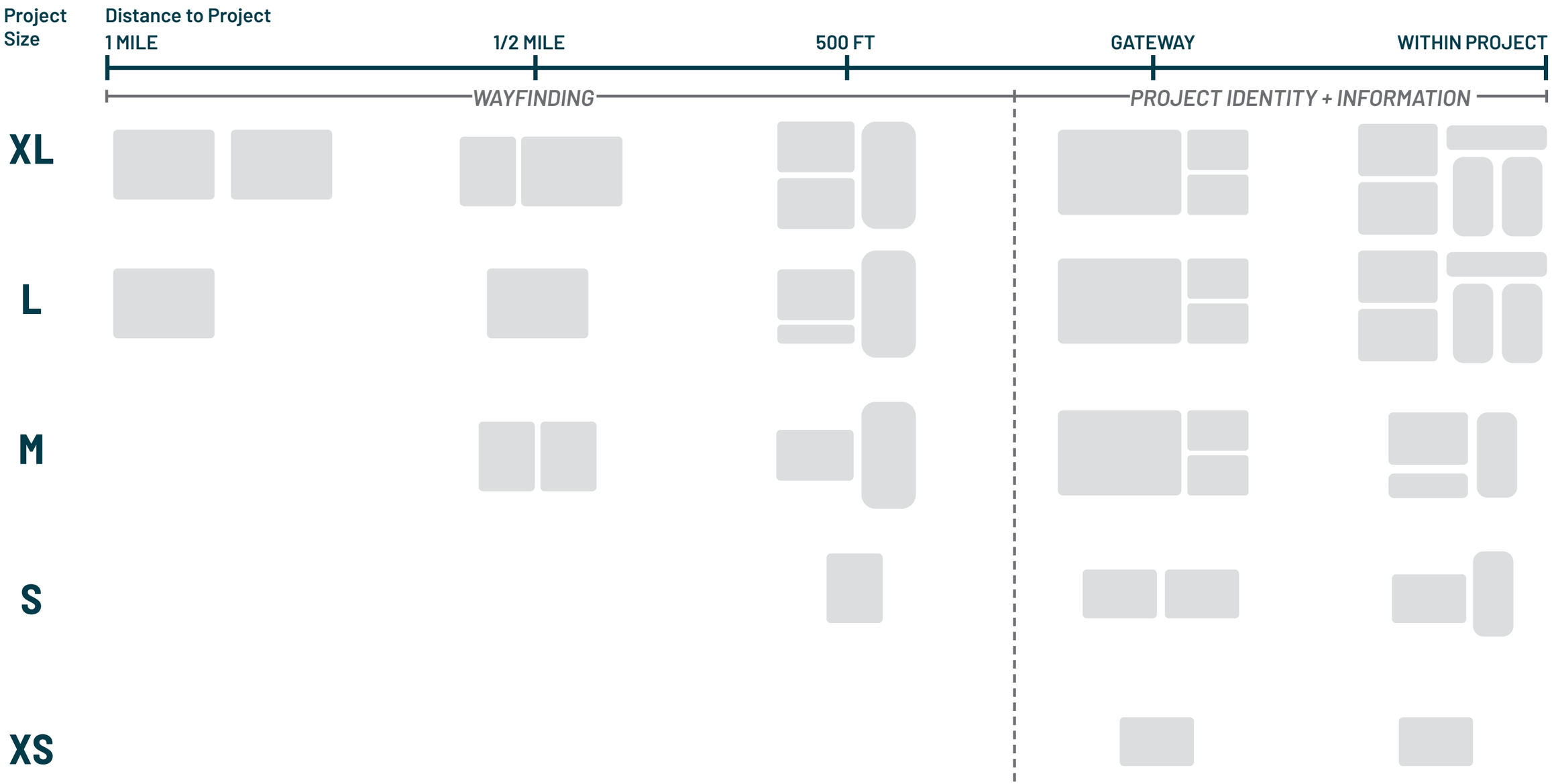
5. MILE MARKERS

6. PAVEMENT MARKINGS

7. INTERPRETIVE SIGNS AND DISPLAYS

8. LARGE SCALE ICON GRAPHICS

SUITE OF LA RIVER ENVIRONMENTAL GRAPHICS



ENVIRONMENTAL GRAPHICS
PARAMETERS FOR APPLYING GUIDELINES

	INFORMATIONAL	REGULATORY	CONFIRMATION	DIRECTIONAL	MILE MARKERS	PAVEMENT MARKINGS	INTERPRETIVE SIGNS AND DISPLAYS	LARGE SCALE ICON GRAPHICS
ADA SIZE Size to be determined by height of sign and viewing distance as outlined in ADA standards	**YES**	**SOMETIMES** Yellow public safety signs meet this requirement, park rule signs do not	**YES** Exception is the trail map sign, which has text that is meant to be read up close	**YES**	**YES**	**YES** Mile numbers will be big enough, but ADA standards do not apply to graphics on pavement	**NO**	**NO** Any text will likely be big enough, but ADA standards do not apply to graphics in murals or other artwork
ADA FONT San serif font, capitalized as necessary per ADA standards - use open-source Barlow font	**YES**	**YES**	**YES**	**YES**	**YES**	**YES** Mile numbers will be Barlow font, but ADA standards do not apply to graphics on pavement	**YES**	**NO** Text is not required, but if used Barlow is encouraged but not mandatory
CONTRAST Recommended contrast ratio is 7.0:1 - achieved when recommended colors of white and RAL 5003 are used	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**NO** Guidelines color is not required, choices are to artist's discretion
BILINGUAL Language dependent on neighborhood Example: Spanish, Chinese, Korean, Russian	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**	**YES**	**STRONGLY ENCOURAGED** Ensure that an accessible path of travel leads to sign and that braille is within reach if used
UNIVERSAL DESIGN Include braille or audio components for environmental graphics	**STRONGLY ENCOURAGED** Ensure that an accessible path of travel leads to sign and that braille is within reach if used	**STRONGLY ENCOURAGED** Ensure that an accessible path of travel leads to sign and that braille is within reach if used	**STRONGLY ENCOURAGED** Ensure that an accessible path of travel leads to sign and that braille is within reach if used	**SOMETIMES** Encouraged for wayfinding along pedestrian paths of travel	**NO**	**NO**	**STRONGLY ENCOURAGED** Ensure that an accessible path of travel leads to sign and that braille is within reach if used	**STRONGLY ENCOURAGED** Ensure that an accessible path of travel leads to sign and that braille is within reach if used
NATIVE AMERICAN PLACE NAMES & REFERENCES Content dependent site location along the LA River - reference tribal nation zone map in Design Guidelines, p. XXX	**STRONGLY ENCOURAGED** Contact appropriate Native Community representative per site location and River Mile	**NO**	**STRONGLY ENCOURAGED** Contact appropriate Native Community representative per site location and River Mile	**STRONGLY ENCOURAGED** Contact appropriate Native Community representative per site location and River Mile	**NO**	**NO**	**STRONGLY ENCOURAGED** Contact appropriate Native Community representative per site location and River Mile	**STRONGLY ENCOURAGED** Contact appropriate Native Community representative per site location and River Mile

INFORMATIONAL

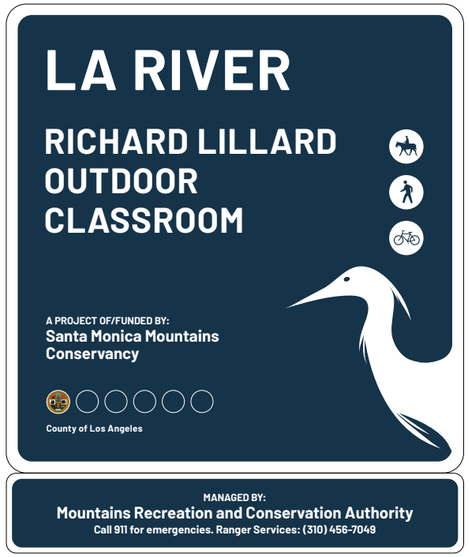
40x48" same as 2003 LARMP Sign Guidelines

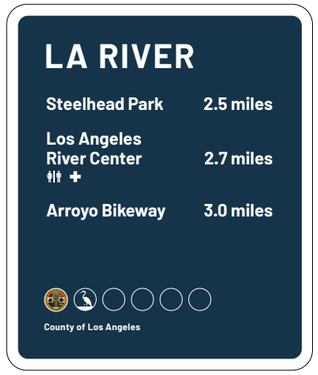
ADA Standard met for imperative information
If hung between 70" and 120" off the ground, minimum 2" high type

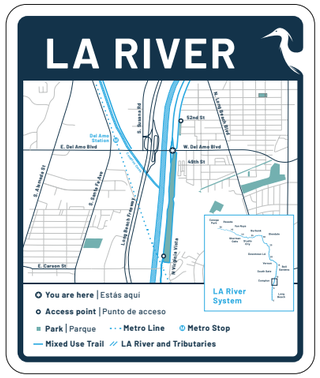
PURPOSE AND PLACEMENT

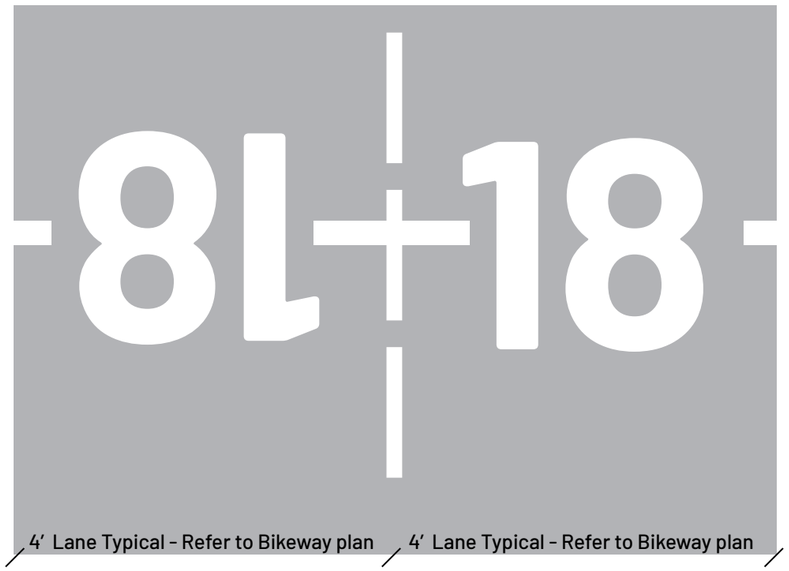
- Informs visitors about a park or trail, including the owner, funding source(s), and agencies and organizations involved with the project.
- Place one at the primary entrance of the park or trail, with as little other signage as possible.

ENVIRONMENTAL GRAPHICS ALONG THE RIVER

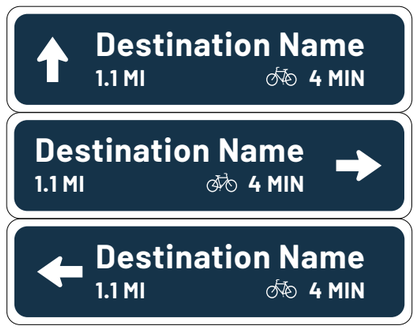


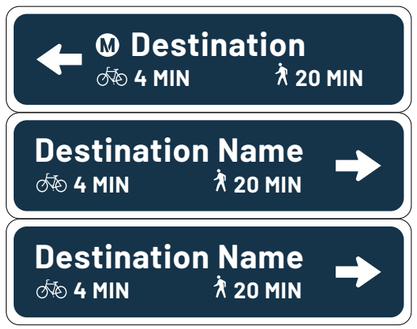






ENVIRONMENTAL GRAPHICS ON THE WAY TO THE RIVER

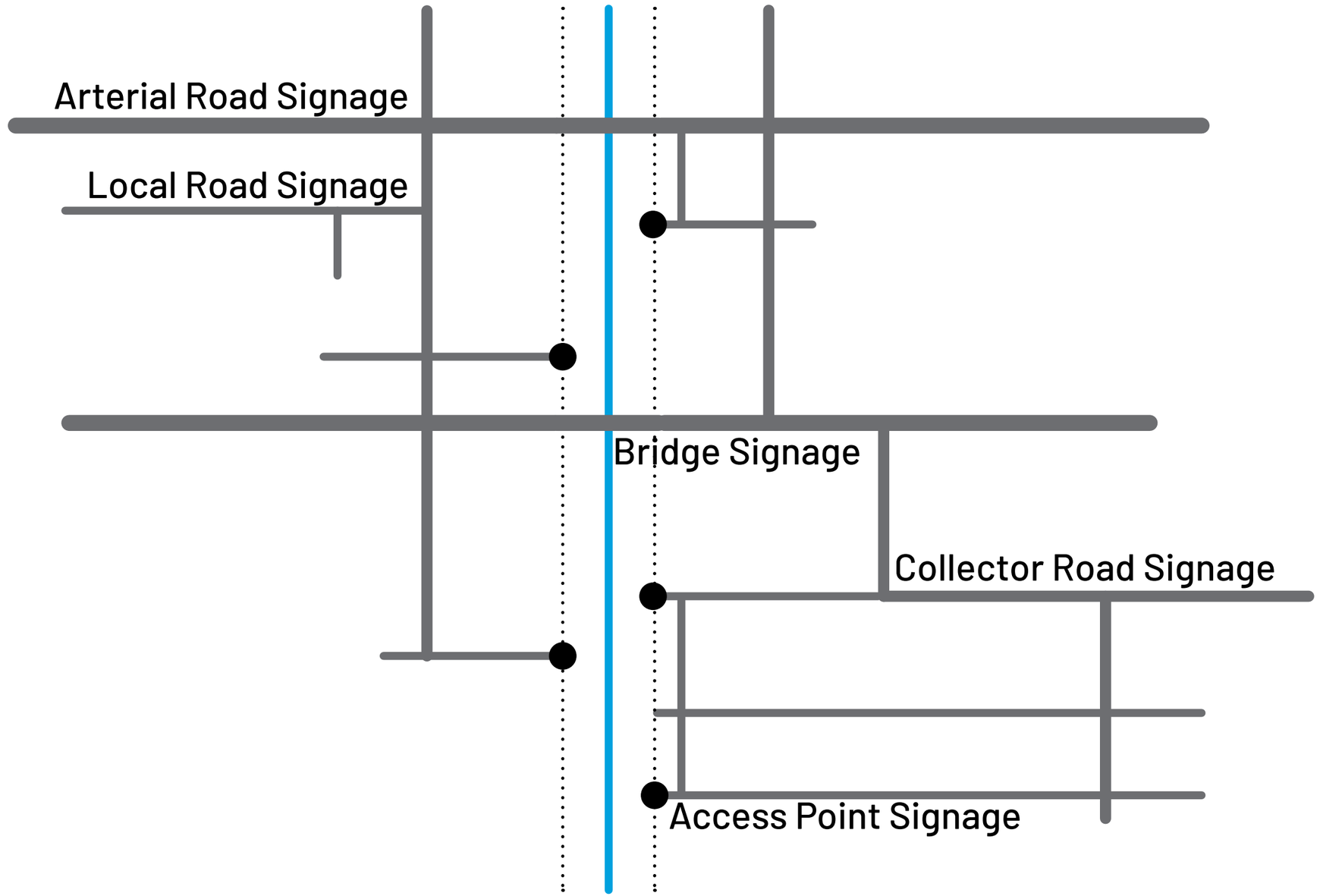




PURPOSE AND PLACEMENT

- Alerts travelers to the location of the river and trail. Will set traffic patterns to and from the river.
- Jurisdictionally, these signs will be located in the CalTrans ROW, City of LA DOT ROW, unincorporated LA County, or other individual cities.
- Placement should follow jurisdictional and traffic standards, establishing preferred routes to the river.

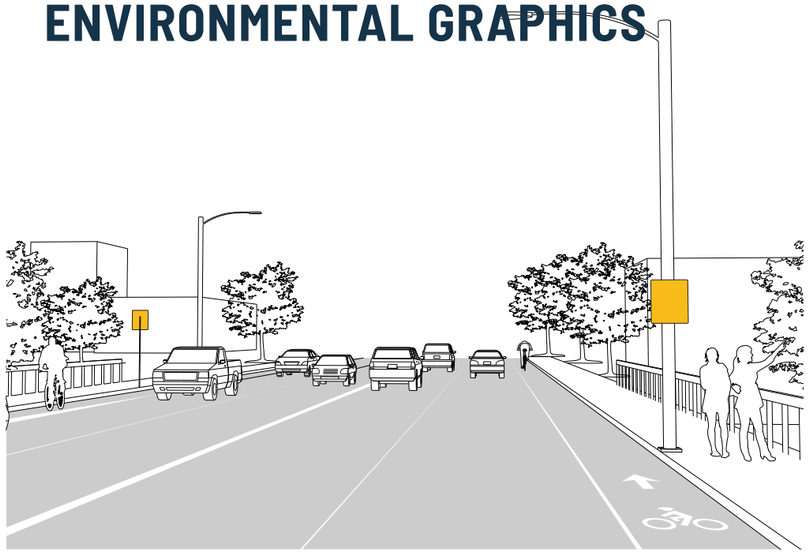
LATERAL WAYFINDING



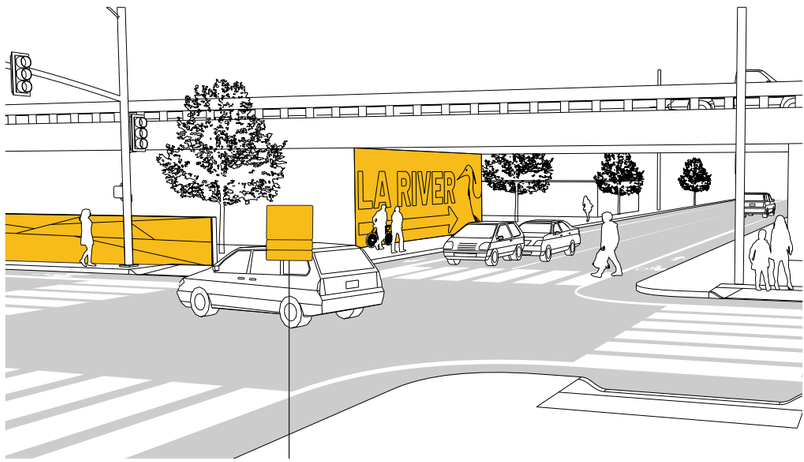
PLACEMENT

ARTERIAL ROAD ENVIRONMENTAL GRAPHICS

BRIDGE ENVIRONMENTAL GRAPHICS

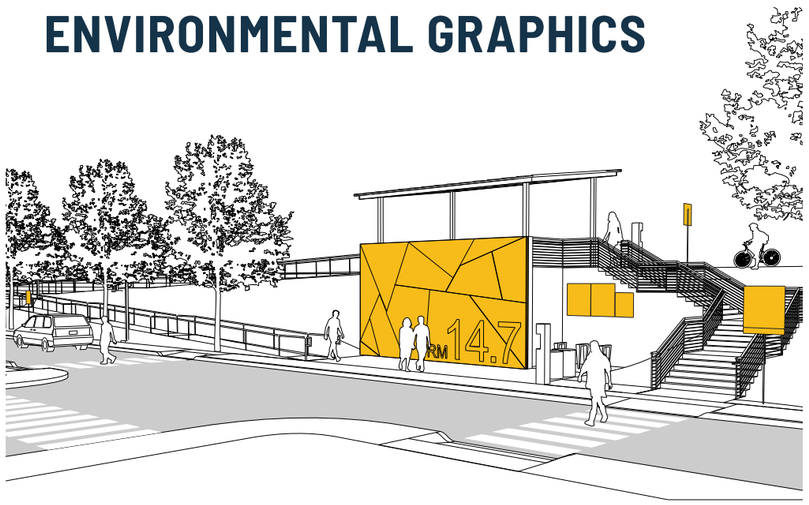


COLLECTOR ROAD ENVIRONMENTAL GRAPHICS

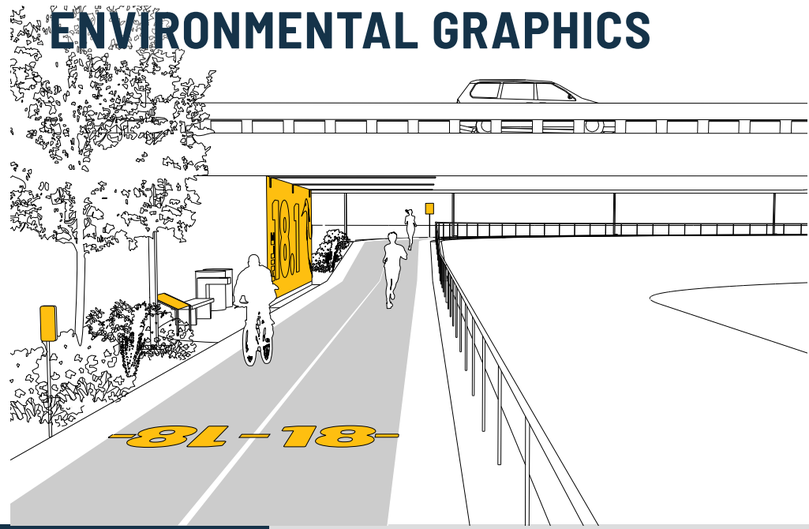


LOCAL ROAD ENVIRONMENTAL GRAPHICS

ACCESS POINT ENVIRONMENTAL GRAPHICS



RIVERSIDE / TRAIL ENVIRONMENTAL GRAPHICS



SUITE OF LA RIVER ENVIRONMENTAL GRAPHICS

Project Size

Distance to Project

2 MILES | 1 MILE | 500 FT | GATEWAY | WITHIN PROJECT

WAYFINDING — *PROJECT IDENTITY + INFORMATION*

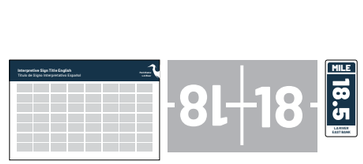
XL

L

M

S

XS



ENVIRONMENTAL GRAPHICS - COMMUNITY EXPRESSION

CAN BE MODIFIED

- INFORMATIONAL
- INTERPRETIVE SIGNS AND DISPLAYS
- LARGE SCALE ICON GRAPHICS

CONSISTENT

- REGULATORY
- CONFIRMATION
- DIRECTIONAL
- MILE MARKERS
- PAVEMENT MARKINGS

Q & A AND DISCUSSION

Source: OLIN

PUBLIC COMMENT

Source: OLIN

PUBLIC COMMENT OPTIONS

- **Verbal comments**
  - Speakers to be called in order of speaker cards submitted (optional)
  - Up to 15 minutes total for the Public Comment item
    - Total time per person will depend on number of speaker cards received
- **Comment cards**
- **Email comments to LARiver@dpw.lacounty.gov**

WRAP UP

Source: Barron Bixler, View under the Olympic Street Bridge, 2014; from Project 51, Play the LA River

Important Upcoming Dates:

- SubCommittees to Receive Full Draft - January 6, 2020
- Final Draft for Public Comment - May 2020
- Community Event - Summer 2020

STAY TUNED!

INPUT, QUESTIONS, IDEAS?
Contact Genevieve Osmeña at (626) 458-4322
or LARiver@dpw.lacounty.gov

LARiverMasterPlan.org

APPENDIX

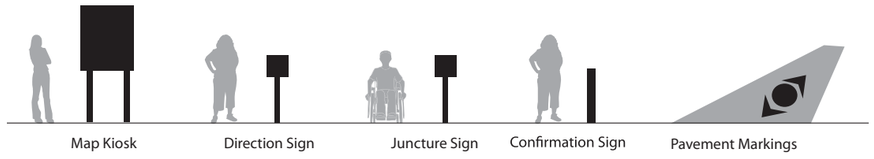
ENVIRONMENTAL GRAPHICS

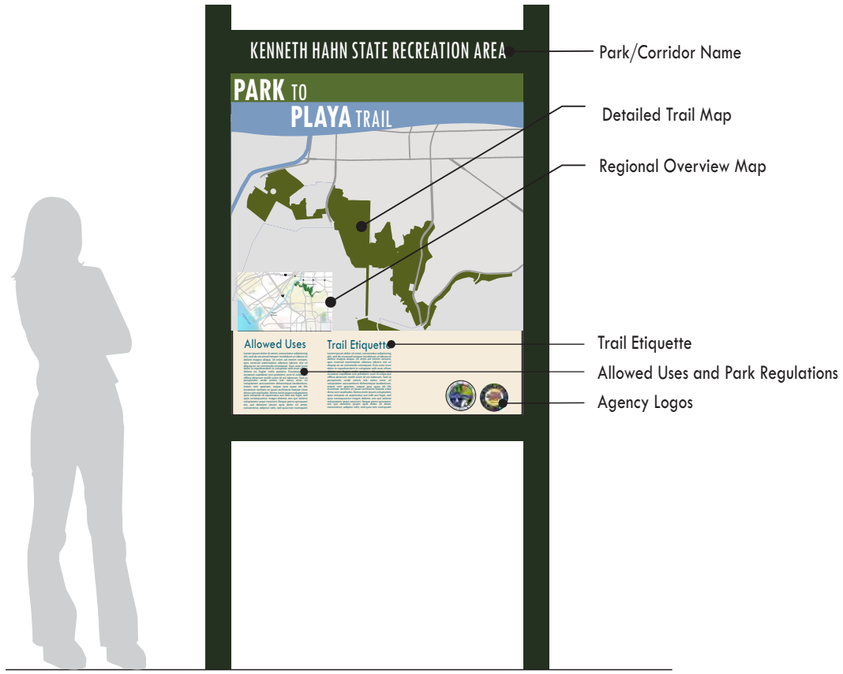
Source: OLIN

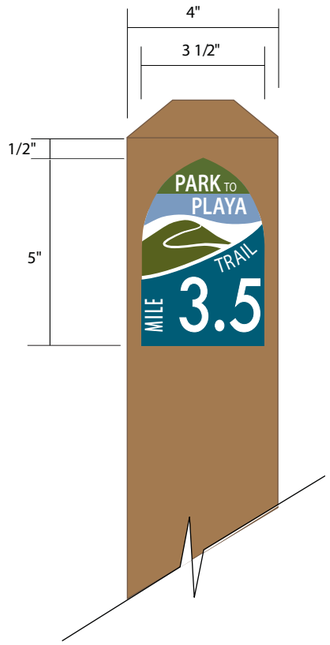
PRECEDENTS - PARK TO PLAYA TRAIL SIGNAGE

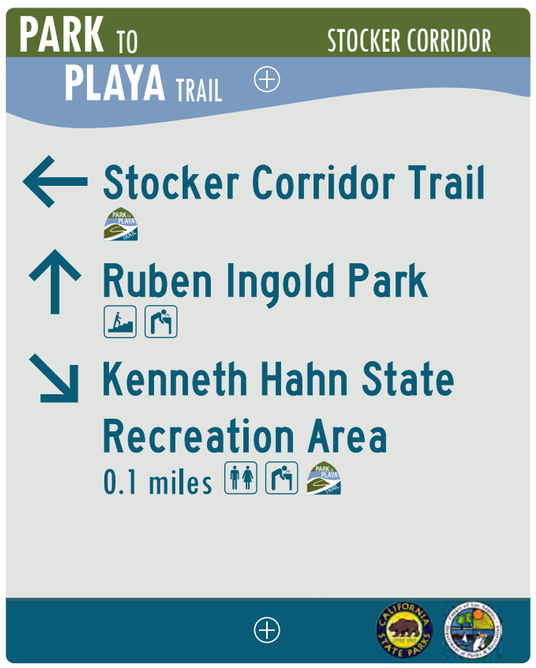
OFF SITE ELEMENTS

ON TRAIL ELEMENTS









INFO

- Developed for MRCA in the Park to Playa Trail Feasibility Study and Wayfinding Plan in 2011
- For use on specific trails connecting Baldwin Hills to the Pacific Ocean

PROS

- Identification of both lateral wayfinding and on-trail signage families
- Strong visual identity and branding
- Sans serif font (ADA compliant)

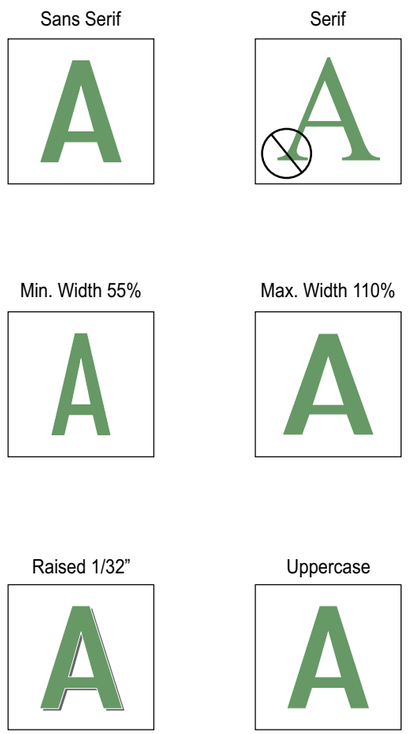
CONS

- Low relative contrast between blue and green color in signs
- High amount of information and graphic clutter on each sign

ADA SIGN REQUIREMENTS: FONT

Characters / Fonts

Fonts for room and area identification are required to be sans serif and shall not be italic, oblique, script or decorative. Characters should be raised a minimum of 1/32” and between 5/8” and 2” in height.

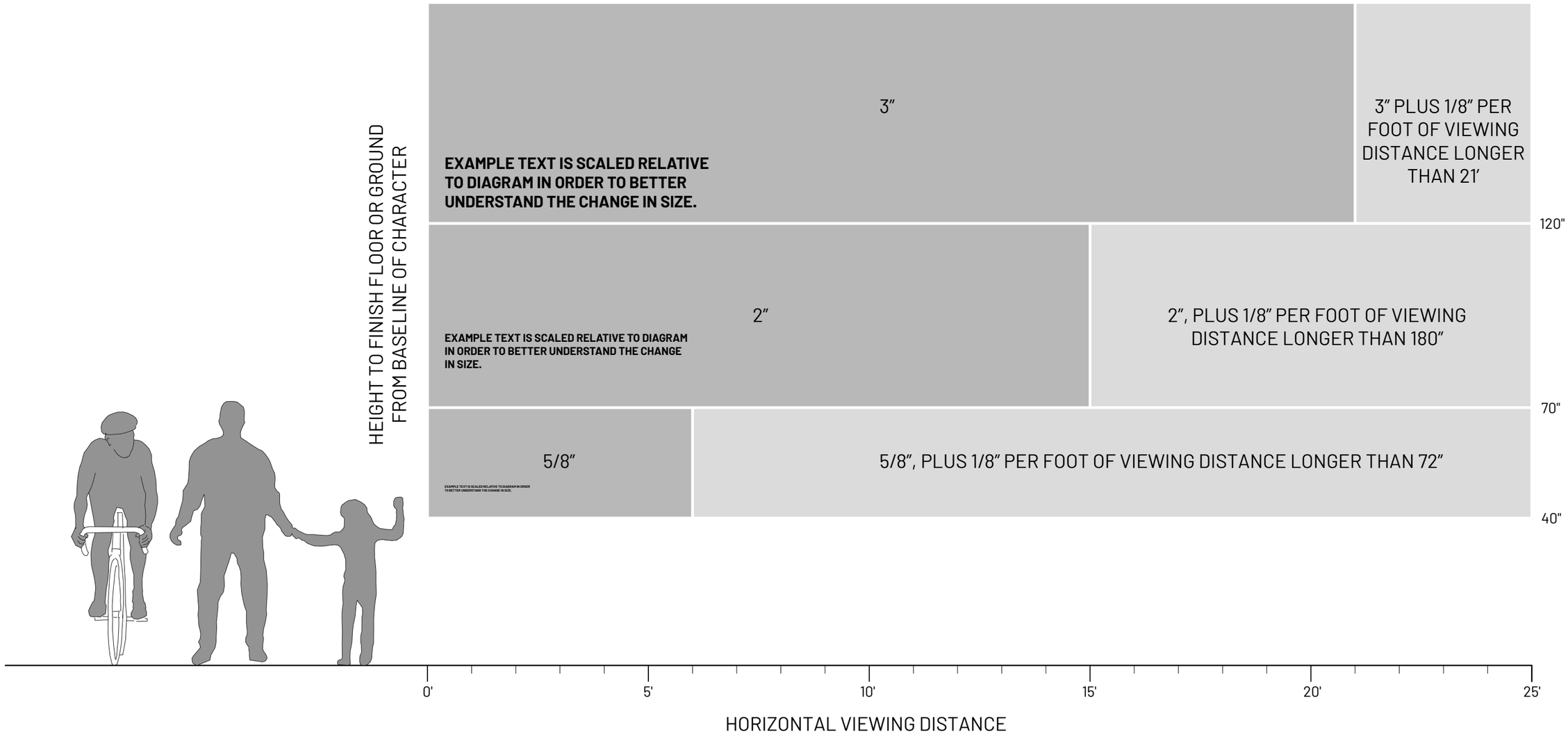


ADA Compliant	Not Compliant
FUTURA MEDIUM 123	TIMES ROMAN
FRUTIGER BOLD 123	GARAMOND
LUCIDA DEMIBOLD 123	*TIMES ROMAN*
TREBUCHET BOLD 123	Times Roman
HELVETICA 123	

Maximum letter stroke for a tactile signs is 15% of character height → ← .15”
as measured by the top of a beveled character.

Source: Signs of Our Times, Inc. *ADA Sign Regulations.* https://signsofourtimes.com/resource-center (2019).

ADA SIGN REQUIREMENTS: CHARACTER HEIGHT



Source: OLIN diagram, standards from U.S. Department of Justice. (2010). *2010 ADA Standards for Accessible Design*. Washington, DC: U.S. Department of Justice.

SYMBOLS

MUTCD

REGULATORY

40x48” same as 2003 LARMP Sign Guidelines

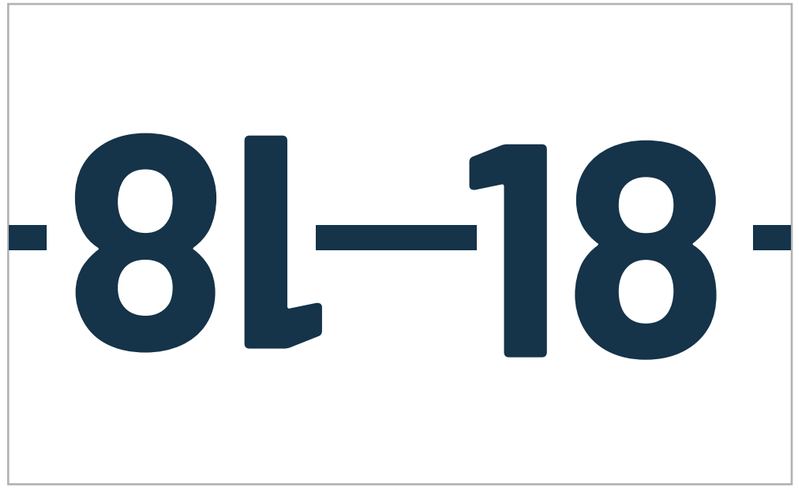
PURPOSE AND PLACEMENT

- Alerts user to the rules and regulations of the park or trail. Also informs users about safety best practices along the river channel.
- Place one set of rules near the entrance. Other signage about the channel should be placed at regular intervals along the channel trail itself.

PAVEMENT MARKINGS

Mile Pavement Marking on the trail
white on asphalt

Mile Pavement Marking on the trail
blue on lighter concrete

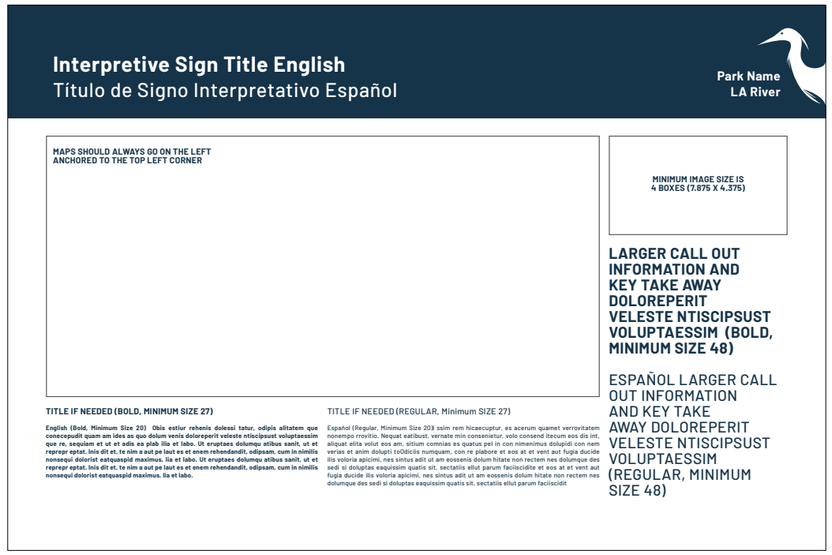


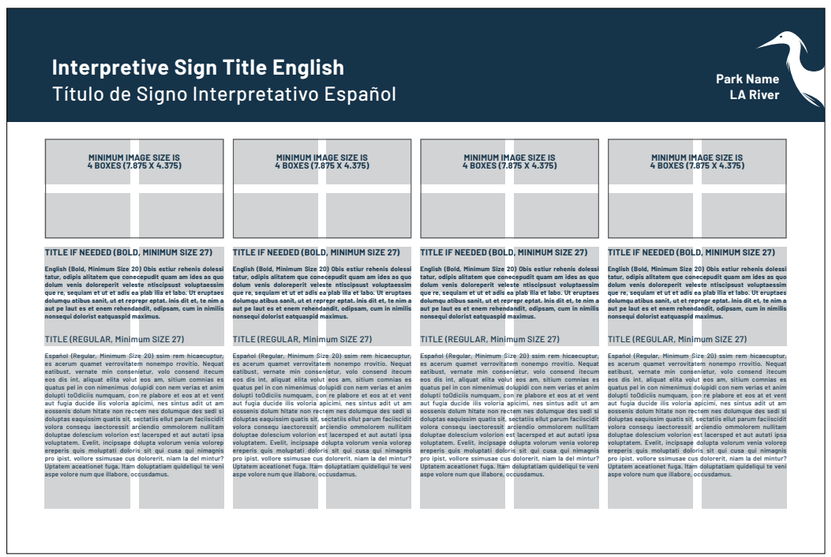
PURPOSE AND PLACEMENT

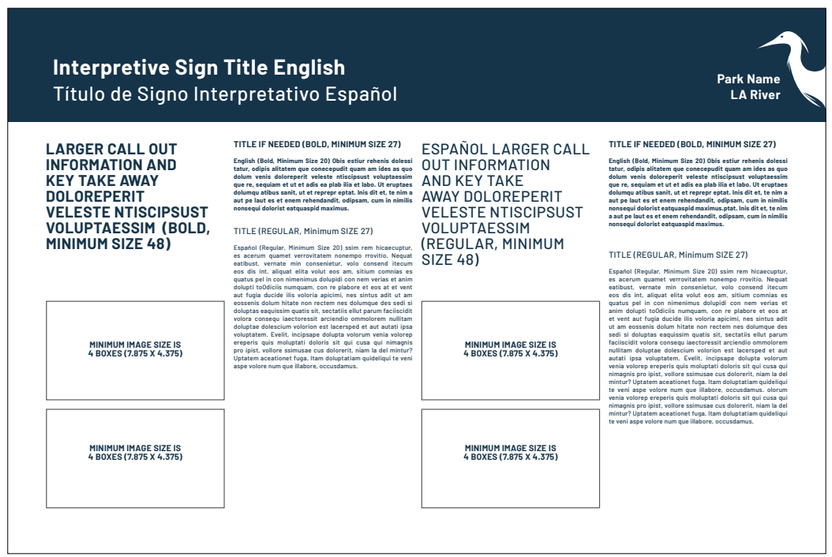
- Demarcates the distance from the outfall into the ocean (mile 0) to the headwaters (mile 51).
- Paint one every mile along the trail.

INTERPRETIVE

36x24” same as 2003 LARMP Sign Guidelines





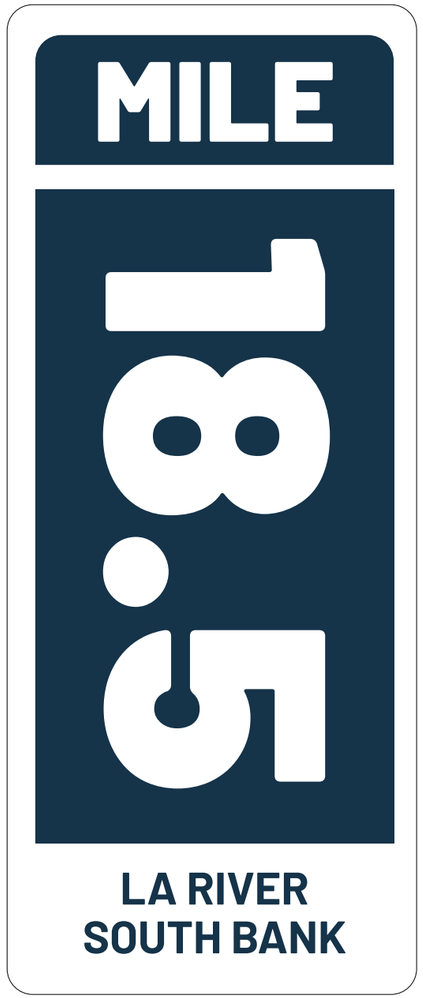


PURPOSE AND PLACEMENT

- Educates trail and park users. Presiding agency will determine the content and use of interpretive signs.
- Placement should be out of the main route of circulation - and trail rest areas, access points, river pavilions, overlooks.

MILE MARKERS

6x14.5”
Hung between 40” and 70” off the ground



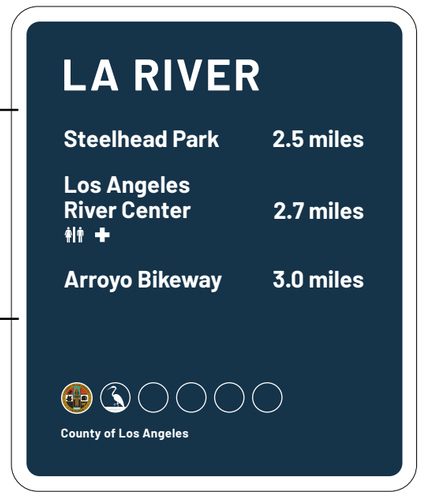
PURPOSE AND PLACEMENT

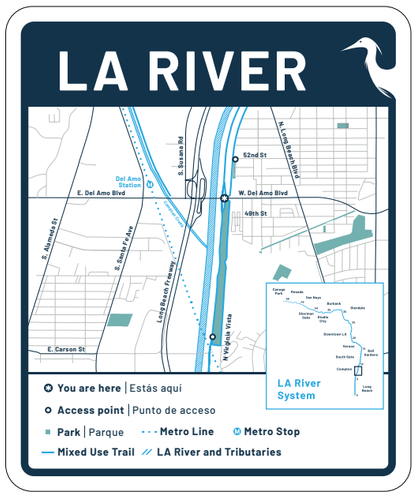
- Demarcates the distance from the outfall into the ocean (River Mile 0) to the headwaters (River Mile 51).
- Place one every half mile along the trail, on the riverside of the trail.

CONFIRMATION

26.75x32" same as 2003 LARMP Sign Guidelines
Limited to 3 destinations per sign
to meet MUTCD requirements

ADA Standard met for imperative information
If hung between 40" and 70" off the ground, minimum 5/8" high type
Type here is .91"





PURPOSE AND PLACEMENT

- Informs trail users that they are on the correct route. Can include distances or time, but does not direct (no arrows).
- Place one set of rules near the entrance. Other signage about the channel should be placed at regular intervals along the trail itself .
- Signs showing destinations should show locations that are ahead on the trail and on the same side of the river bank. They should be double-sided, and can include symbols that indicate locations that have amenities such as restrooms and first aid.
- Trail map signs should be placed at access points so that users can identify access points and exits before they embark on their route.

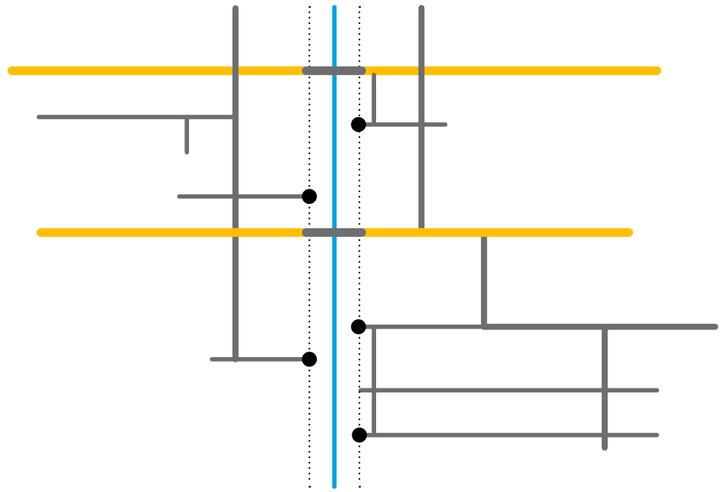
LARGE SCALE ICON GRAPHICS

TRAIL UNDERPASSES

PURPOSE AND PLACEMENT

- Adds to the characters of the river and informs users about location.
- Place along blank walls, underpasses, or other key moments to highlight river mile or local context.

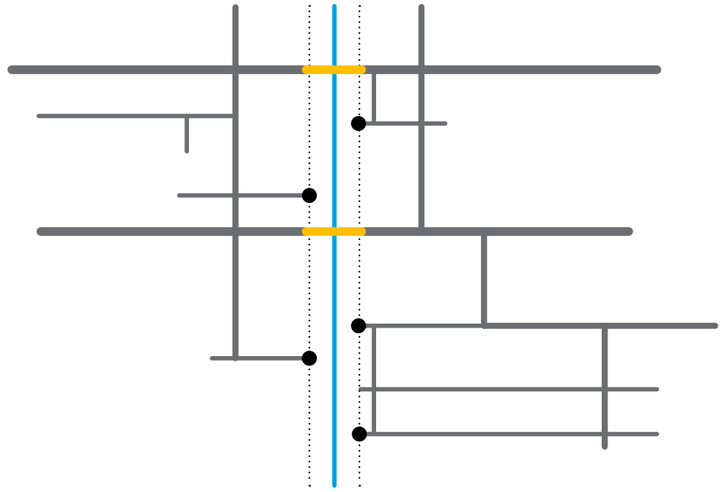
ARTERIAL ROAD ENVIRONMENTAL GRAPHICS



BEST PRACTICE GUIDELINES

- Per MUTCD, do not place Community Wayfinding along Freeways and Expressways.
- Per MUTCD, do not place Community Wayfinding in a location that competes visually with standard traffic signs.
- Use existing posts and traffic light posts where possible.
- At large pedestrian intersections, combine wayfinding with large totems at corners to avoid sign clutter.
- Apply Directional signage with existing bike lanes / pavement markings where applicable.
- Direct users to nearest access point .

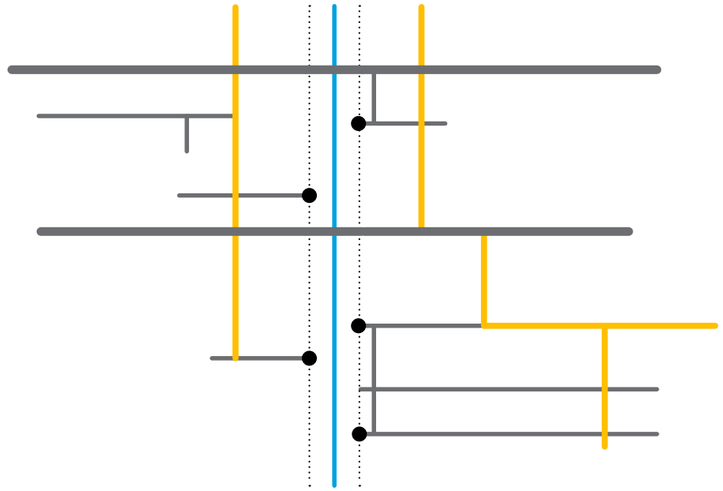
BRIDGE ENVIRONMENTAL GRAPHICS

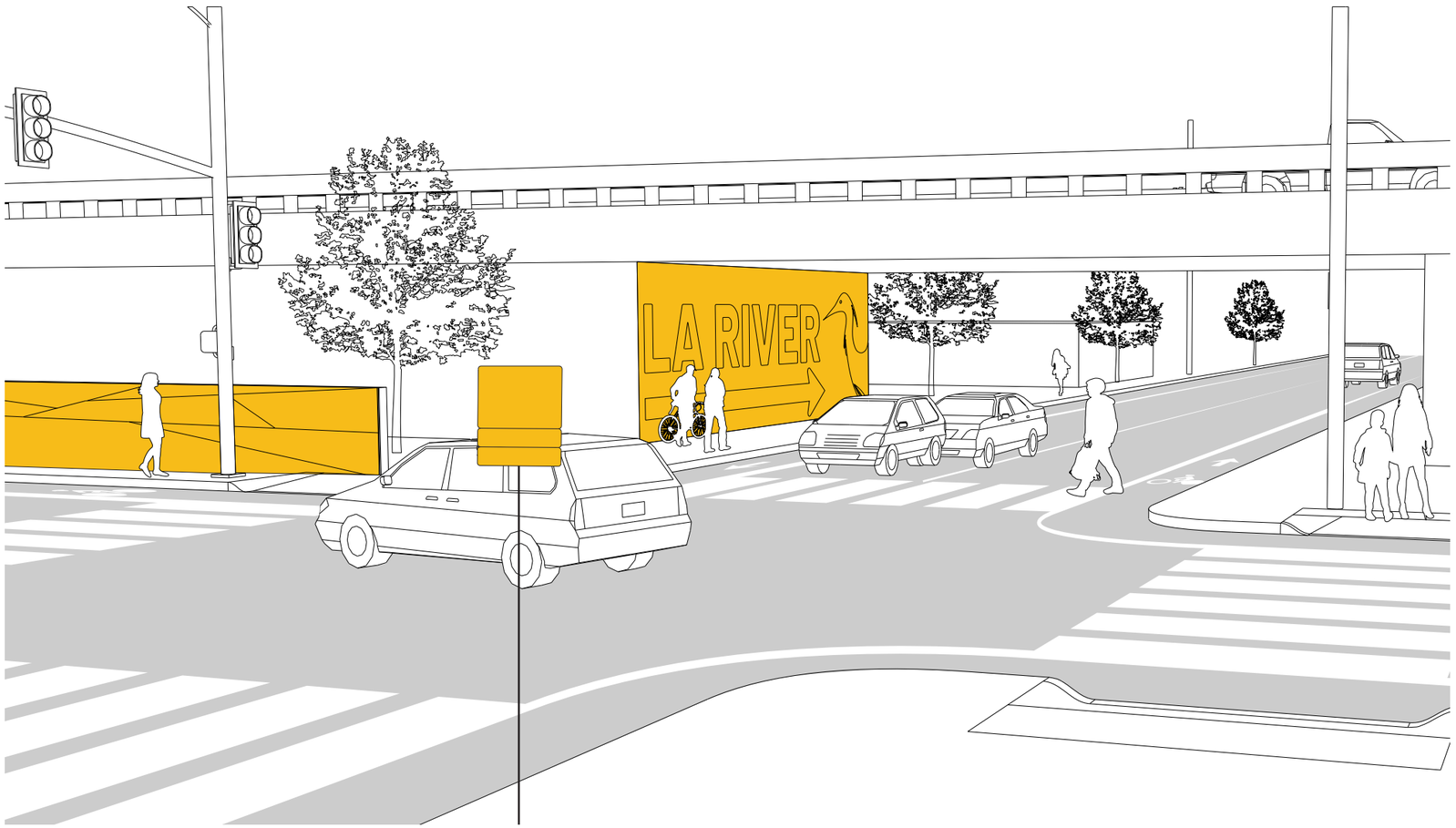


BEST PRACTICE GUIDELINES

- Per MUTCD, do not place Community Wayfinding along Freeways and Expressways.
- Per MUTCD, do not place Community Wayfinding in a location that competes visually with standard traffic signs.
- Use existing posts where possible.
- Apply Confirmation Signage that the bridge is crossing the LA River, isolated from other traffic signs.

COLLECTOR ROAD ENVIRONMENTAL GRAPHICS

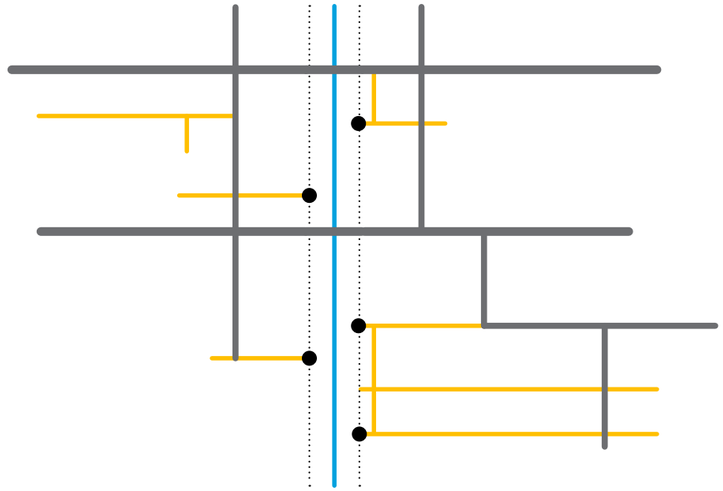




BEST PRACTICE GUIDELINES

- Per MUTCD, do not place Community Wayfinding in a location that competes visually with standard traffic signs.
- Use existing posts and traffic light posts where possible.
- At large pedestrian intersections, combine wayfinding with large totems at corners to avoid sign clutter.
- Apply Directional signage with existing bike lanes / pavement markings where applicable.
- Direct users to nearest access point.

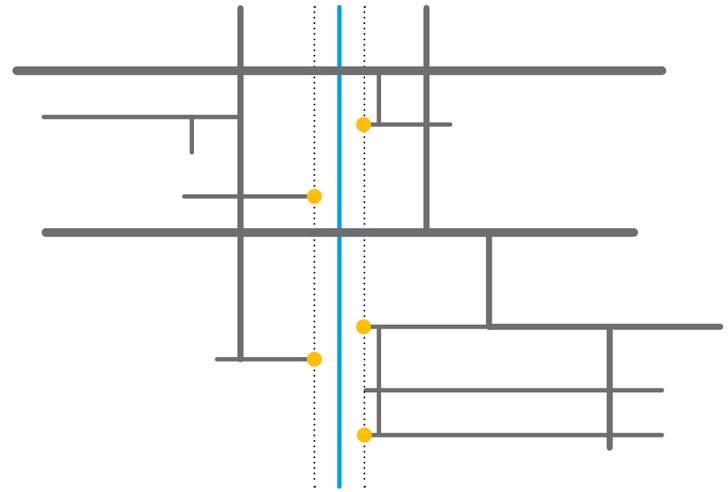
LOCAL ROAD ENVIRONMENTAL GRAPHICS



BEST PRACTICE GUIDELINES

- Per MUTCD, do not place Community Wayfinding in a location that competes visually with standard traffic signs.
- Use existing posts where possible.
- Apply Directional signage with existing bike lanes / pavement markings where applicable.
- Direct users to nearest access point.
- Be sensitive to context - In Residential areas, restrict signage to public ROW and minimize signage as needed.

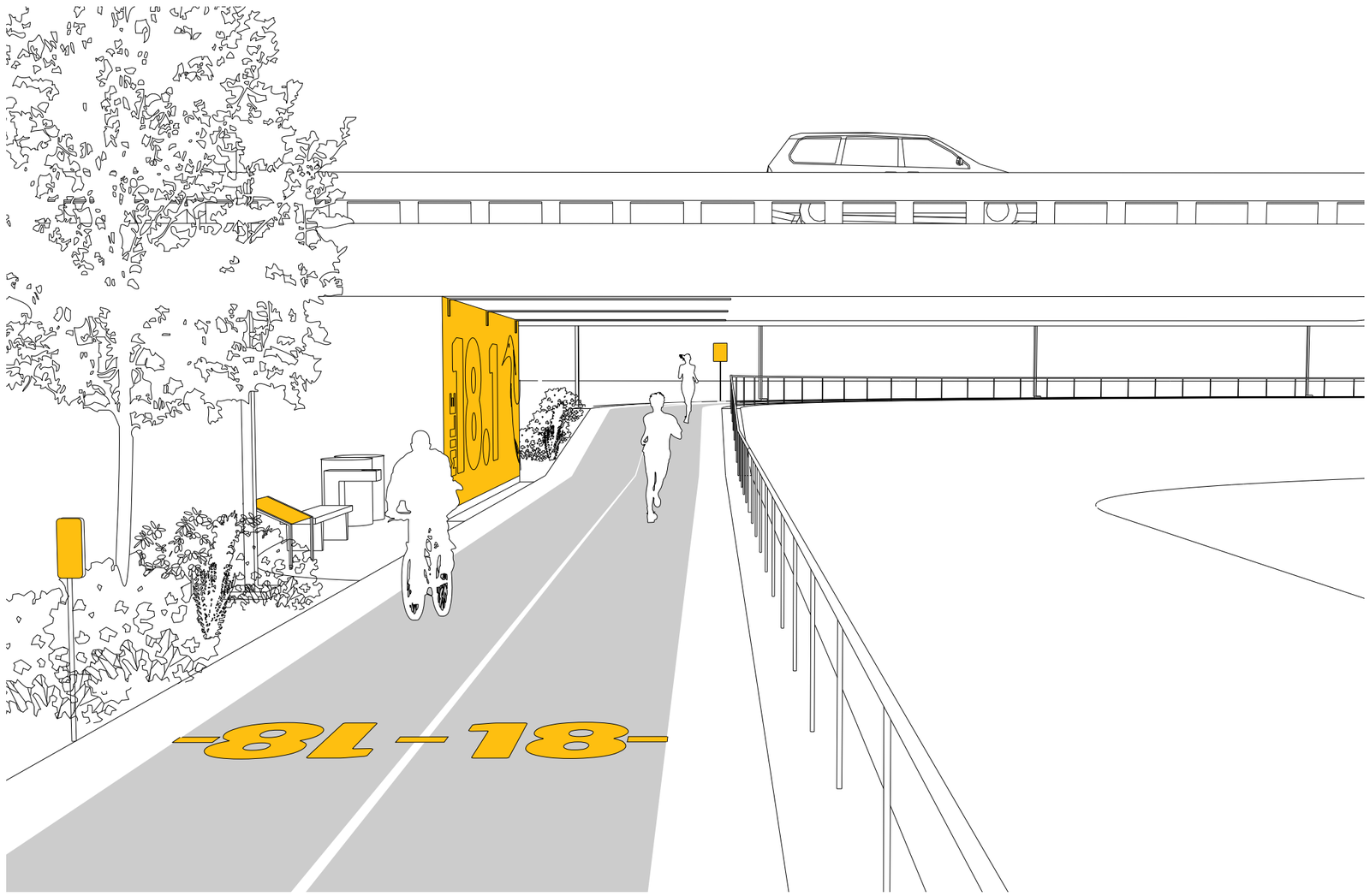
ACCESS POINT ENVIRONMENTAL GRAPHICS

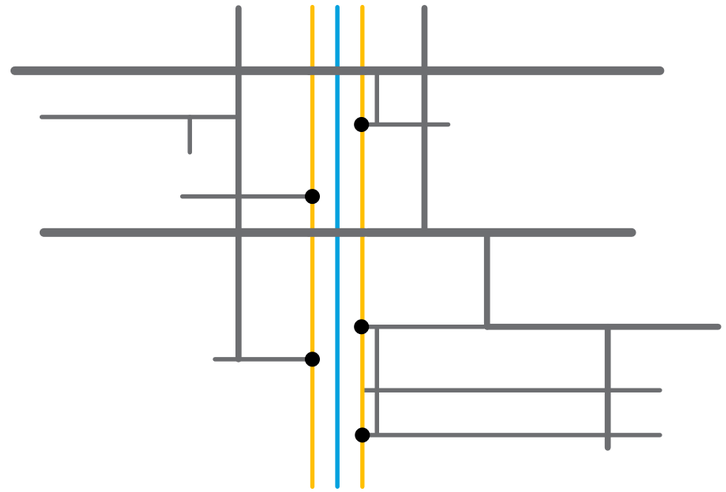


BEST PRACTICE GUIDELINES

- Place one Informational sign at the entry point of each access point.
- Place Regulatory “Park Rules” sign further back, alongside River Pavilion, trail, or other amenity.
- Apply Regulatory “Warning and Safety” signage along channel at regular intervals. (Every mile?)
- Use environmental graphics for neighborhood expression.
- Use existing posts where possible.

RIVERSIDE / TRAIL ENVIRONMENTAL GRAPHICS





BEST PRACTICE GUIDELINES

- Place Mile Markers and pavement markings every .5 miles.
- Place Confirmation and Destination signs as needed along the trail (at least every mile).
- Use environmental graphics for trail underpasses and bare walls along the trail.
- Use existing posts where possible.

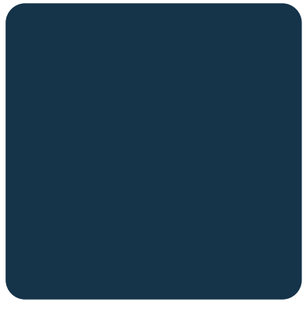
ENVIRONMENTAL GRAPHICS - COMMUNITY EXPRESSION

ELEMENTS THAT MUST BE CONSISTENT:

- **Barlow font**
- **Heron symbol or icon**
- **Color - Besides the color variation in natural materials, any additional non-neutral colors should match the guidelines RAL**

*Exception is with large scale icon graphics, where artist has discretion on final outcome.

LA RIVER



ENVIRONMENTAL GRAPHICS - COMMUNITY EXPRESSION

VARIATION ALLOWED IN THESE ELEMENTS:

- **Materials (should not impact water quality, such as galvanized metals)**
- **Form**
- **Content**

*Exception is with large scale icon graphics, where artist has discretion on final outcome.

ADDITIONAL ITEMS FOR ENVIRONMENTAL GRAPHICS GUIDELINES UPDATE

SIGN MATERIALITY

ATTACHMENTS - MOUNTING BRACKETS

BIKE TRAIL PAINT - WATER BASED / THERMOPLASTIC

COLOR MATCHING