

# West Santa Ana Branch Transit Corridor

Draft EIS/EIR Appendix N  
Final Biological Resources Impact Analysis Report



Metro®



# WEST SANTA ANA BRANCH TRANSIT CORRIDOR PROJECT

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## Draft EIS/EIR Appendix N Final Biological Resources Impact Analysis Report

*Prepared for:*



**Metro**<sup>®</sup>

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Metropolitan Transportation Authority

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## Appendix

### APPENDIX A: FINAL AQUATIC RESOURCES DELINEATION

## ACRONYMS AND ABBREVIATIONS

AA	Alternatives Analysis
BIOS	Biogeographic Information and Observation System
BRT	Bus Rapid Transit
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CHSRA	California High-Speed Rail Authority
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
DBH	Diameter at Breast Height
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
GCCOG	Gateway Cities Council of Governments
I	Interstate Freeway
IPaC	Information for Planning and Consultation
LAMC	Los Angeles Municipal Code
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
MRDC	Metro Rail Design Criteria
MWD	Metropolitan Water District
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NWI	National Wetlands Inventory

## Acronyms and Abbreviations

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OCTA	Orange County Transportation Authority
PEROW/WSAB	Pacific Electric Right-of-Way/West Santa Ana Branch
ROD	Record of Decision
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SR	State Route
SSC	Species of Special Concern
SWQCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TPSS	Traction Power Substation Sites
TRS	Technical Refinement Study
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WDR	Waste Discharge Requirements
WSAB	West Santa Ana Branch

# 1 INTRODUCTION

## 1.1 Study Background

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit (LRT) line that would extend up to approximately 19 miles from the southern termini in the City of Artesia to different termini through southeast Los Angeles (LA) County, traversing densely populated, low-income, and heavily transit-dependent communities. The Project would provide reliable, fixed-guideway transit service that would increase mobility and connectivity for historically underserved, transit-dependent, and environmental justice communities; reduce travel times on local and regional transportation networks; and accommodate substantial future employment and population growth.

## 1.2 Alternatives Evaluation, Screening, and Selection Process

A wide range of potential alternatives have been considered and screened through the alternatives analysis processes. In March 2010, the Southern California Association of Governments (SCAG) initiated the Pacific Electric Right-of-Way (PEROW)/WSAB Alternatives Analysis (AA) Study in coordination with the relevant cities, the Orangeline Development Authority (now known as Eco-Rapid Transit), the Gateway Cities Council of Governments, the Los Angeles County Metropolitan Transportation Authority (Metro), the Orange County Transportation Authority, and the owners of the right-of-way (ROW)—Union Pacific Railroad (UPRR), BNSF Railway, and the Ports of Los Angeles and Long Beach. The AA Study evaluated a wide variety of transit connections and modes for a broader 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana in Orange County. In February 2013, SCAG completed the PEROW/WSAB Corridor Alternatives Analysis Report<sup>1</sup> and recommended two LRT alternatives for further study: West Bank 3 and the East Bank.

Following completion of the AA, Metro completed the WSAB Technical Refinement Study in 2015 focusing on the design and feasibility of five key issue areas along the 19-mile portion of the WSAB Transit Corridor within LA County:

- Access to Union Station in downtown Los Angeles
- Northern Section Options
- Huntington Park Alignment and Stations
- New Green Line Station
- Southern Terminus at Pioneer Station in Artesia

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study (Environmental Study) with the goal of environmentally clearing the project under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

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<sup>1</sup> Initial concepts evaluated in the SCAG report included transit connections and modes for the 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana. Modes included low-speed magnetic levitation (maglev) heavy rail, light rail, and bus rapid transit (BRT).

Metro issued a Notice of Preparation (NOP) on May 25, 2017, with a revised NOP issued on June 14, 2017, extending the comment period. In June 2017, Metro held public scoping meetings in the Cities of Bellflower, Los Angeles, South Gate, and Huntington Park. Metro provided project updates and information to stakeholders with the intent to receive comments and questions through a comment period that ended in August 2017. A total of 1,122 comments were received during the public scoping period from May through August 2017. The comments focused on concerns regarding the Northern Alignment options, with specific concerns related to potential impacts to Alameda Street with an aerial alignment. Given potential visual and construction issues raised through public scoping, additional Northern Alignment concepts were evaluated.

In February 2018, the Metro Board of Directors approved further study of the alignment in the Northern Section due to community input during the 2017 scoping meetings. A second alternatives screening process was initiated to evaluate the original four Northern Alignment options and four new Northern Alignment concepts. The *Final Northern Alignment Alternatives and Concepts Updated Screening Report* was completed in May 2018 (Metro 2018). The alternatives were further refined and, based on the findings of the second screening analysis and the input gathered from the public outreach meetings, the Metro Board of Directors approved Build Alternatives E and G for further evaluation.

On July 11, 2018, Metro issued a revised and recirculated CEQA Notice of Preparation, thereby initiating a scoping comment period. The purpose of the revised Notice of Preparation was to inform the public of the Metro Board's decision to carry forward Alternatives E and G into the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). During the scoping period, one agency and three public scoping meetings were held in the Cities of Los Angeles, Cudahy, and Bellflower. The meetings provided project updates and information to stakeholders with the intent to receive comments and questions to support the environmental process. The comment period for scoping ended in August 24, 2018; over 250 comments were received.

Following the July 2018 scoping period, a number of project refinements were made to address comments received, including additional grade separations, removing certain stations with low ridership, and removing the Bloomfield extension option. The Metro Board adopted these project refinements at their November 2018 meeting.

### 1.3 Report Purpose and Structure

This section examines the affected environment, impacts, and mitigation related to biological resources. Information regarding biological resources pertaining to the 12 local jurisdictions (the unincorporated Florence-Firestone community of LA County, as well as the cities of Los Angeles, Vernon, Huntington Park, Bell, Cudahy, South Gate, Downey, Paramount, Bellflower, Artesia, and Cerritos) within the Study Area is provided. The report is organized into six additional categories:

- Section 2 – Project Description
- Section 3 – Regulatory Framework
- Section 4 – Affected Environment/Existing Conditions
- Section 5 – Environmental Impact/Environmental Consequences
- Section 6 – Mitigation Measures
- Section 7 – CEQA Determination

## 1.4 General Topic Background

Biological resources refer to the plant and wildlife species that are present within an area, as well as vegetation communities that may support such species. Biological resources also encompass waters and/or wetlands subject to agency jurisdiction. Existing biological resources within the Affected Area are determined by reviewing available literature and documentation within the vicinity, in conjunction with a reconnaissance survey to observe conditions on the ground. The Affected Area for the purposes of evaluating the potential effects/impacts to biological resources is defined as 100 feet surrounding the proposed alignment and around proposed station areas, MSF sites, TPSS sites, and parking facilities. The Affected Area for biological resources is sufficient to characterize the existing setting and to evaluate potential effects/impacts to biological resources.

## 1.5 Methodology

### 1.5.1 Literature Review

Literature reviews for biological studies are conducted to assess the accumulated body of knowledge regarding biological resources within and adjacent to the Affected Area. Prior to the field survey, Rincon Consultants, Inc. (Rincon) conducted a literature review to characterize the nature and extent of biological resources within and adjacent to the corridor. The literature review included an evaluation of current and historical aerial photographs of the site (Google Earth 2017).

The California Natural Diversity Data Base (CNDDDB; CDFW 2017a), Biogeographic Information and Observation System (BIOS; CDFW 2017b) and the United States Fish and Wildlife Service's (USFWS) Critical Habitat Portal (USFWS 2017a) and Information Planning and Conservation online system (IPaC 2017b) were reviewed to determine if any special-status wildlife, plant, or vegetation communities were previously recorded on or near the Project alignment. Additionally, a five-mile radius CNDDDB search was utilized to determine a preliminary list of special-status species with the potential to occur within the Affected Area. The potential for these species to occur within the Affected Area was then evaluated, based on the habitat requirements of the species, existing conditions within the Affected Area, and occurrence details of the species records. The National Wetlands Inventory (NWI; USFWS 2017c) was reviewed to determine if any wetland and/or non-wetland waters of the United States had been previously documented and mapped on or in the vicinity of the Project. Other resources included the California Native Plant Society (CNPS) Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2017), California Department of Fish and Wildlife (CDFW) Special Animals List (CDFW 2017c), and CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2017d).

Aerial photographs of all potential jurisdictional waters within the Affected Area as well as regional and site-specific topographic maps, the Soil Survey, Los Angeles County, California, Southeastern Part (USDA, NRCS 1973), and other available background information were reviewed to better characterize the nature and extent of potentially jurisdictional waters and wetlands were also reviewed. The *National Wetlands Inventory* (NWI) (USFWS 2020) and the *National Hydrography Dataset* (USGS 2020) were reviewed to determine if any wetlands or other waters had been previously documented and mapped within the Affected Area. The *National Hydric Soils List by State: California* (USDA NRCS 2020) was also reviewed to determine if any soil map units mapped in the site were classified as hydric.

### 1.5.2 Field Reconnaissance Survey

Rincon biologists Robin Murray and Charis van der Heide conducted a field reconnaissance survey on May 11, 2017 between the hours of 10:00 am and 4:00 pm. The Affected Area is defined as 100 feet on both sides along the alignment and around the proposed station areas, as well as Maintenance and Storage Facilities, TPSS sites, and parking facilities. The purpose of the survey was to document existing biological conditions within the Affected Area, including plant and wildlife species, vegetation communities, jurisdictional waters and wetlands, and the potential for presence of special-status species and/or habitats. The biologists conducted the survey along the route primarily by car; however, where the route crossed drainages a detailed examination was conducted via pedestrian survey. Where portions of the Affected Area were inaccessible (i.e., private property), the biologists visually inspected those areas with binoculars (power rating of 10 x 40). Weather conditions during the survey included an average temperature of 70 degrees Fahrenheit, winds between 3 and 5 miles per hour, and 0 percent cloud cover.

An additional field reconnaissance survey was conducted on July 24, 2020, during which all potential jurisdictional waters within the Affected Area were delineated. This survey is further described in the Jurisdictional Waters section below.

### 1.5.3 Vegetation Classification

All vegetation communities observed within the accessible portions of the Affected Area were surveyed by vehicle and on foot, using binoculars and aerial photography interpretation as necessary. Vegetation communities were classified using *A Manual of California Vegetation* (Sawyer et al. 2009), where appropriate.

### 1.5.4 Flora

All plant species observed in the Affected Area were noted, and plants that could not be identified in the field were identified later using taxonomic keys and reference materials (Jepson Flora Project 2017, Hatch 2007). The reconnaissance survey included a directed search for special-status plants that would have been apparent at the time of the survey. Floral nomenclature for native and non-native plants follows Baldwin et al. (2012) as updated by The Jepson Online Interchange (University of California, Berkeley 2014). The approximate number of street trees within the Project footprint in the Southern Section was estimated based on engineering plans overlaid on aerial imagery of the Affected Area.

### 1.5.5 Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other signs were documented. The detection of wildlife species was limited by seasonal and temporal factors. The survey was conducted during the spring; therefore, potentially occurring winter migrants may not have been observed. Because the survey was performed during the day, identification of nocturnal animals was limited to remnant signs (e.g., scat, tracks, etc.), if present on-site. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (2017); for mammals, Wilson and Reeder (2005); and for amphibians and reptiles, Crother (2012).



### 1.5.6 Jurisdictional Resources

A reconnaissance-level survey was performed on July 24, 2020, during which all potentially jurisdictional features identified within the Affected Area were inspected to record existing conditions and determine jurisdictional limits. Initial coordination with the USACE was not conducted prior to the delineation described in this study. However, based on the delineation conducted for this study, the preliminary jurisdictional delineation request was submitted to the USACE on November 5, 2020, for their review and approval.

Drainage features, width measurements, and wetland sample points were mapped using a Trimble® GeoXT GPS unit and recent aerial photography. Width measurements for USACE jurisdiction were determined based on the lateral extent of the Ordinary High-Water Mark (OHWM). RWQCB jurisdiction was determined in accordance with the previously listed methodologies to identify waters of the U.S. The procedures of State Water Resources Control Board (SWRCB)'s *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* were applied, and the Affected Area was reviewed for features that may have fallen outside federal jurisdiction due to lack of connectivity or insufficient flow. CDFW jurisdiction was delineated in accordance with Section 1602(a) of the California Fish and Game Code and were measured laterally from bank to bank at the top of the channel, or to the outer drip-line of associated riparian vegetation, if present.

One OHWM data sheet and one wetland sample point were completed at a representative location within the Affected Area of each crossing to determine the presence/absence of wetland indicators, such as hydrophytic vegetation, hydric soils, and wetland hydrology. Soil test pits were not conducted since the Affected Area consisted of concrete-lined channels devoid of soils.

### 1.5.7 Impact Analysis

Potential biological effects of the Project were evaluated by examining existing biological conditions along and surrounding the proposed alignments and proposed stations, Maintenance and Storage Facilities, TPSS sites, and parking facilities. Potential adverse effects would occur if implementation of the Project would impact special-status plant and wildlife species or aquatic resources subject to USACE, RWQCB, or CDFW jurisdiction, or result in conflicts with applicable biological plans, policies, or regulations. General indicators of significance, based on guidelines or criteria in the National Environmental Policy Act (NEPA), include the following:

- Potential modification or destruction of habitat, movement corridors, or breeding, feeding, and sheltering areas for endangered, threatened, rare, or other special-status species
- Potential measurable degradation of protected habitats, sensitive vegetation communities, wetlands, or other habitat areas identified in plans, policies, or regulations
- Potential loss of a substantial number of any species that could affect the abundance or diversity of that species beyond the level of normal variability
- Potential indirect impacts, both temporary and permanent, from excessive noise that elicits a negative response and avoidance behavior

The California Environmental Quality Act (CEQA) thresholds of significance are presented in Section 7.1.



## 2 PROJECT DESCRIPTION

This section describes the No Build Alternative and the four Build Alternatives studied in the WSAB Transit Corridor Draft EIS/EIR, including design options, station locations, and maintenance and storage facility (MSF) site options. The Build Alternatives were developed through a comprehensive alternatives analysis process and meet the purpose and need of the Project.

The No Build Alternative and four Build Alternatives are generally defined as follows:

- **No Build Alternative** - Reflects the transportation network in the 2042 horizon year without the proposed Build Alternatives. The No Build Alternative includes the existing transportation network along with planned transportation improvements that have been committed to and identified in the constrained *Metro 2009 Long-Range Transportation Plan (2009 LRTP)* (Metro 2009) and SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* (SCAG 2016), as well as additional projects funded by Measure M that would be completed by 2042.
- **Build Alternatives** - The Build Alternatives consist of a new LRT line that would extend from different termini in the north to the same terminus in the City of Artesia in the south. The Build Alternatives are referred to as:
  - Alternative 1: Los Angeles Union Station to Pioneer; the northern terminus would be located underground at Los Angeles Union Station (LAUS) Forecourt
  - Alternative 2: 7th St/Metro Center to Pioneer; the northern terminus would be located underground at 8th Street between Figueroa Street and Flower Street near 7th Street/Metro Center Station
  - Alternative 3: Slauson/A Line to Pioneer; the northern terminus would be located just north of the intersection of Long Beach Avenue and Slauson Avenue in the City of Los Angeles, connecting to the current A Line Slauson Station
  - Alternative 4: I-105/C Line to Pioneer; the northern terminus would be located at I-105 in the city of South Gate, connecting to the C Line along the I-105

Two design options are under consideration for Alternative 1. Design Option 1 would locate the northern terminus station box at the LAUS Metropolitan Water District (MWD) east of LAUS and the MWD building, below the baggage area parking facility. Design Option 2 would add a Little Tokyo Station along the WSAB alignment. The design options are further discussed in Section 2.1.4.5.

Figure 2-1 illustrates the four Build Alternatives and the design options. In the north, Alternative 1 would terminate at LAUS and primarily follow Alameda Street south underground to the proposed Arts/Industrial District Station. Alternative 2 would terminate near the existing 7th Street/Metro Center Station in the Downtown Transit Core and would primarily follow 8th Street east underground to the proposed Arts/Industrial District Station.

Figure 2-1. Project Alternatives



Source: Metro, 2020

From the Arts/Industrial District Station to the southern terminus at Pioneer Station, Build Alternatives 1 and 2 share a common alignment. South of Olympic Boulevard, the Build Alternatives would transition from an underground configuration to an aerial configuration, cross over the Interstate (I-) 10 freeway and then parallel the existing Metro A Line along the Wilmington Branch ROW as it proceeds south. At Slauson Avenue, Alternatives 1, 2, and 3 would turn east and transition to an at-grade configuration to follow the La Habra Branch ROW along Randolph Street. At the San Pedro Subdivision ROW, the Build Alternatives would turn southeast to follow the San Pedro Subdivision ROW and then transition to the Pacific Electric Right-of-Way (PEROW), south of I-105 freeway. Build Alternatives 1, 2, 3, and

4 would then follow the PEROW to the southern terminus at the proposed Pioneer Station in Artesia. The Build Alternatives would be grade-separated where warranted, as indicated on Figure 2-2.

Figure 2-2. Project Alignment by Grade



Source: Metro, 2020

## 2.1 Geographic Sections

The approximately 19-mile corridor is divided into two geographic sections—the Northern and Southern Sections. The boundary between the Northern and Southern Sections occurs at Florence Avenue in the City of Huntington Park.

### 2.1.1 Northern Section

The Northern Section of the Project Corridor includes approximately 8 miles of Build Alternatives 1 and 2 and 3.8 miles for Alternative 3. Alternative 4 is not within the Northern Section. The Northern Section covers the geographic area from downtown Los Angeles to Florence Avenue in the City of Huntington Park and would generally traverse the Cities of Los Angeles, Vernon, Huntington Park, and Bell, and the unincorporated Florence-Firestone community of LA County (Figure 2-3). Build Alternatives 1 and 2 would traverse portions of the Wilmington Branch (between approximately Martin Luther King Jr Boulevard along Long Beach Avenue to Slauson Avenue). Build Alternatives 1, 2, and 3 would traverse portions of the La Habra Branch ROW (between Slauson Avenue along Randolph Street to Salt Lake Avenue), and San Pedro Subdivision ROW (between Randolph Street to approximately Paramount Boulevard) along the Northern Section.

Figure 2-3. Northern Section



Source: Metro, 2020

### 2.1.2 Southern Section

The Southern Section includes approximately 11 miles of Build Alternatives 1, 2, and 3 and includes all 6.6 miles of Alternative 4. The Southern Section covers the geographic area from south of Florence Avenue in the City of Huntington Park to the City of Artesia and traverses the Cities of Huntington Park, Cudahy, South Gate, Downey, Paramount, Bellflower, Cerritos, and Artesia (Figure 2-4). In the Southern Section, all four Build Alternatives would utilize portions of the San Pedro Subdivision and the Metro-owned PEROW (between approximately Paramount Boulevard to South Street).

Figure 2-4. Southern Section



Source: Metro, 2020

### 2.1.3 No Build Alternative

For the NEPA evaluation, the No Build Alternative is evaluated in the context of the existing transportation facilities in the Project Corridor (the corridor extends approximately 2 miles from either side of the proposed alignment) and other capital transportation improvements and/or transit and highway operational enhancements that are reasonably foreseeable.

Because the No Build Alternative provides the background transportation network, against which the Build Alternatives' impacts are identified and evaluated, the No Build Alternative does not include the Project.

The No Build Alternative reflects the transportation network in 2042 and includes the existing transportation network along with planned transportation improvements that have been committed to and identified in the constrained Metro 2009 LRTP and the SCAG 2016 RTP/SCS, as well as additional projects funded by Measure M, a sales tax initiative approved by voters in November 2016. The No Build Alternative includes Measure M projects that are scheduled to be completed by 2042.

Table 2.1 lists the existing transportation network and planned improvements included as part of the No Build Alternative.

**Table 2.1. No Build Alternative – Existing Transportation Network and Planned Improvements**

Project	To / From	Location Relative to Study Area
<b>Rail (Existing)</b>		
Metro Rail System (LRT and Heavy Rail Transit)	Various locations	Within Study Area
Metrolink (Southern California Regional Rail Authority) System	Various locations	Within Study Area
<b>Rail (Under Construction/Planned)<sup>1</sup></b>		
Metro Westside D Line Extension	Wilshire/Western to Westwood/VA Hospital	Outside Study Area
Metro C Line Extension <sup>2</sup> to Torrance	96th Street Station to Torrance	Outside Study Area
Metro C Line Extension	Norwalk to Expo/Crenshaw <sup>3</sup>	Outside Study Area
Metro East-West Line/Regional Connector/Eastside Phase 2	Santa Monica to Lambert Santa Monica to Peck Road	Within Study Area
Metro North-South Line/Regional Connector/Foothill Extension to Claremont Phase 2B	Long Beach to Claremont	Within Study Area
Metro Sepulveda Transit Corridor	Metro G Line to Metro E Line	Outside Study Area
Metro East San Fernando Valley Transit Corridor	Sylmar to Metro G Line	Outside Study Area
Los Angeles World Airport Automated People Mover	96th Street Station to LAX Terminals	Outside Study Area
Metrolink Capital Improvement Projects	Various projects	Within Study Area



Project	To / From	Location Relative to Study Area
California High-Speed Rail	Burbank to LA LA to Anaheim	Within Study Area
Link US <sup>4</sup>	LAUS	Within Study Area
<b>Bus (Existing)</b>		
Metro Bus System (including BRT, Express, and local)	Various locations	Within Study Area
Municipality Bus System <sup>5</sup>	Various locations	Within Study Area
<b>Bus (Under Construction/Planned)</b>		
Metro G Line (BRT)	Del Mar (Pasadena) to Chatsworth Del Mar (Pasadena) to Canoga Canoga to Chatsworth	Outside Study Area
Vermont Transit Corridor (BRT)	120th Street to Sunset Boulevard	Outside Study Area
North San Fernando Valley BRT	Chatsworth to North Hollywood	Outside Study Area
North Hollywood to Pasadena	North Hollywood to Pasadena	Outside Study Area
<b>Highway (Existing)</b>		
Highway System	Various locations	Within Study Area
<b>Highway (Under Construction/Planned)</b>		
High Desert Multi-Purpose Corridor	SR-14 to SR-18	Outside Study Area
I-5 North Capacity Enhancements	SR-14 to Lake Hughes Rd	Outside Study Area
SR-71 Gap Closure	I-10 to Rio Rancho Rd	Outside Study Area
Sepulveda Pass Express Lane	I-10 to US-101	Outside Study Area
SR-57/SR-60 Interchange Improvements	SR-70/SR-60	Outside Study Area
I-710 South Corridor Project (Phases 1 and 2)	Ports of Long Beach and LA to SR-60	Within Study Area
I-105 Express Lane	I-405 to I-605	Within Study Area
I-5 Corridor Improvements	I-605 to I-710	Outside Study Area

Source: Metro 2018, WSP 2019

Notes: <sup>1</sup> Where extensions are proposed for existing Metro rail lines, the origin/destination is defined for the operating scheme of the entire rail line following completion of the proposed extensions and not just the extension itself.

<sup>2</sup> Metro C Line extension to Torrance includes new construction from Redondo Beach to Torrance; however, the line will operate from Torrance to 96th Street.

<sup>3</sup> The currently under construction Metro Crenshaw/LAX Line will operate as the Metro C Line.

<sup>4</sup> Link US rail walk times included only.

<sup>5</sup> The municipality bus network system is based on service patterns for Bellflower Bus, Cerritos on Wheels, Cudahy Area Rapid Transit, Get Around Town Express, Huntington Park Express, La Campana, Long Beach Transit, Los Angeles Department of Transportation, Norwalk Transit System, and the Orange County Transportation Authority.

BRT = Bus Rapid Transit; LAUS = Los Angeles Union Station; LAX = Los Angeles International Airport; SR = State Route; VA = Veterans Affairs

### 2.1.4 Proposed Alignment Configuration for the Build Alternatives

This section summarizes the alignment for each of the Build Alternatives. The general characteristics of four Build Alternatives are summarized in Table 2.2. Figure 2-5 illustrates the freeway crossings along the alignment. Additionally, the Build Alternatives would require relocation of existing freight rail tracks within the ROW to maintain existing operations where there would be overlap with the proposed light rail tracks. Figure 2-6 depicts the alignment sections that would require freight track relocation.

**Table 2.2. Summary of Build Alternative Components**

Component	Quantity			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Alignment Length	19.3 miles	19.3 miles	14.8 miles	6.6 miles
Stations Configurations	11 3 aerial; 6 at-grade; 2 underground (Note: Design Option 2 - Add Little Tokyo - would add one underground station to the above total)	12 3 aerial; 6 at-grade; 3 underground	9 3 aerial; 6 at-grade	4 1 aerial; 3 at-grade
Parking Facilities	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	4 (approximately 2,180 spaces)
Length of underground, at-grade, and aerial	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial <sup>1</sup>	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial <sup>1</sup>	12.2 miles at-grade; 2.6 miles aerial <sup>1</sup>	5.6 miles at-grade; 1.0 miles aerial <sup>1</sup>
At-grade crossings	32	32	32	12
Freight crossings	8	8	6	1
Freeway Crossings	6 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	6 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	4 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	3 (2 freeway undercrossings <sup>2</sup> at I-605, SR-91)
Elevated Street Crossings	24	24	15	7
River Crossings	3	3	3	1
TPSS Facilities	23	23	16	7
Maintenance and Storage Facility site options	2	2	2	2

Source: WSP, 2020

Notes: <sup>1</sup> Alignment configuration measurements count retained fill embankments as at-grade.

<sup>2</sup> The light rail tracks crossing beneath freeway structures.

TPSS = traction power substation

Component	Quantity			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Alignment Length	19.3 miles	19.3 miles	14.8 miles	6.6 miles
Stations Configurations	11 3 aerial; 6 at-grade; 2 underground <sup>3</sup>	12 3 aerial; 6 at-grade; 3 underground	9 3 aerial; 6 at-grade	4 1 aerial; 3 at-grade
Parking Facilities	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	4 (approximately 2,180 spaces)
Length of underground, at-grade, and aerial	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial <sup>1</sup>	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial <sup>1</sup>	12.2 miles at-grade; 2.6 miles aerial <sup>1</sup>	5.6 miles at-grade; 1.0 miles aerial <sup>1</sup>
At-grade crossings	32	32	32	12
Freight crossings	10	10	9	2
Freeway Crossings	6 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	6 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	4 (3 freeway undercrossings <sup>2</sup> at I-710; I-605, SR-91)	3 (2 freeway undercrossings <sup>2</sup> at I-605, SR-91)
Elevated Street Crossings	25	25	15	7
River Crossings	3	3	3	1
TPSS Facilities	22 <sup>3</sup>	23	17	7
Maintenance and Storage Facility site options	2	2	2	2

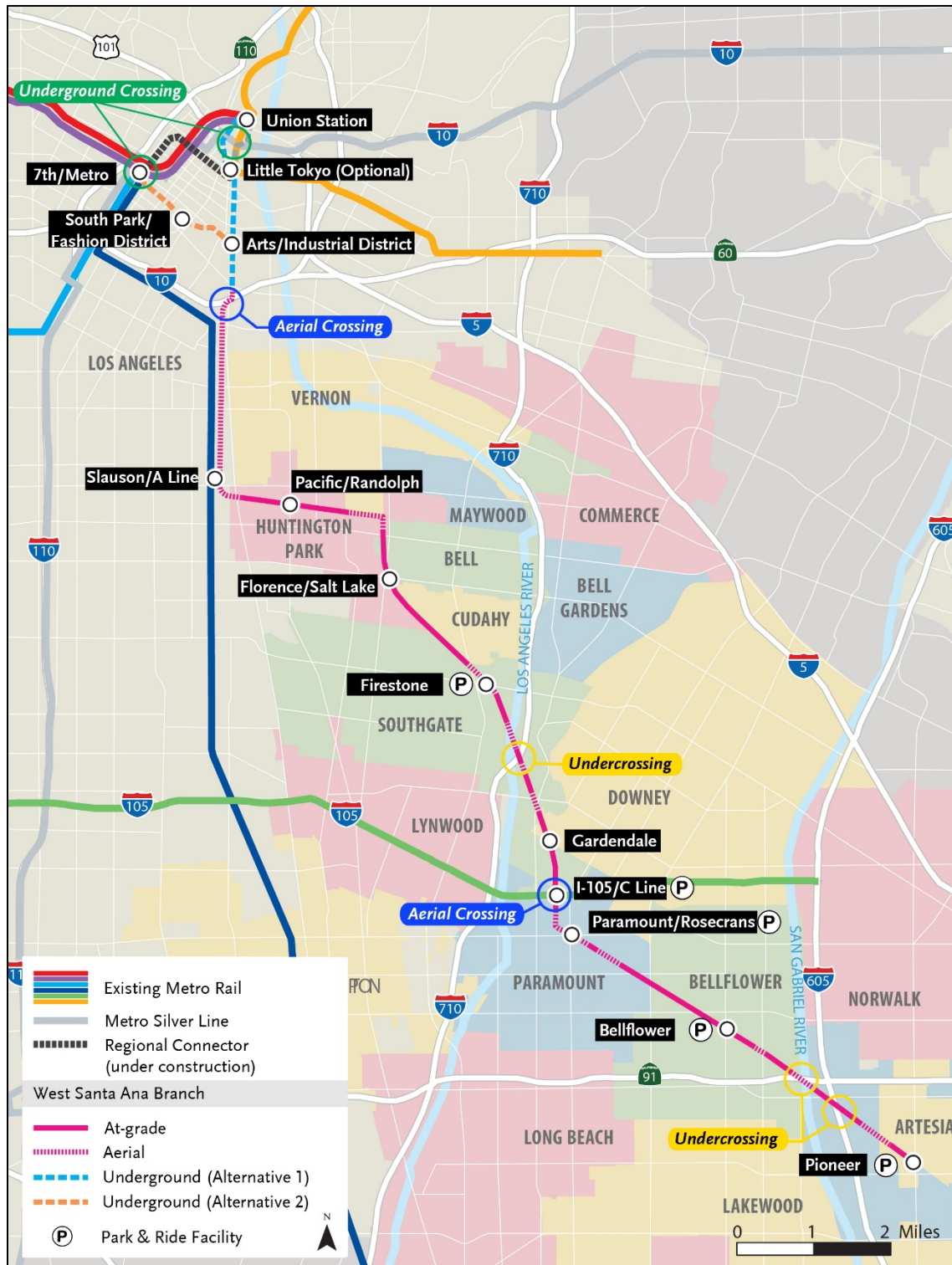
Source: WSP 2020

Notes: <sup>1</sup> Alignment configuration measurements count retained fill embankments as at-grade.

<sup>2</sup> The light rail tracks crossing beneath freeway structures.

<sup>3</sup> Under Design Option 2 – Add Little Tokyo Station, an additional underground station and TPSS site would be added under Alternative 1

Figure 2-5. Freeway Crossings



Source: WSP, 2020

Figure 2-6. Existing Rail Right-of-Way Ownership



Source: WSP, 2020

### 2.1.4.1 Alternative 1

The total alignment length of Alternative 1 would be approximately 19.3 miles, consisting of approximately 2.3 miles of underground, 12.3 miles of at-grade, and 4.7 miles of aerial alignment. Alternative 1 would include 11 new LRT stations (note: under Design Option 2 Little Tokyo Station would be an additional underground station), 2 of which would be underground, 6 would be at-grade, and 3 would be aerial. Five of the stations would include parking facilities, providing a total of approximately 2,780 new parking spaces. The alignment would include 32 at-grade crossings, 3 freeway undercrossings, 2 aerial freeway crossings, 1 underground freeway crossing, 3 river crossings, 25 aerial road crossings, and 10 freight crossings.

In the north, Alternative 1 would begin at a proposed underground station at/near LAUS either beneath the LAUS Forecourt or behind the MWD building (Design Option 1) beneath the baggage area parking facility. Crossovers would be located on the north and south ends of the station box with tail tracks extending approximately 1,200 feet north of the station box. A tunnel extraction portal would be located within the tail tracks for both Alternative 1 terminus station options.

From LAUS, the alignment would continue underground crossing under the US-101 freeway and the existing Metro L Line aerial structure and continue south beneath Alameda Street to the optional Little Tokyo Station between 1st Street and 2nd Street (note: under Design Option 2, Little Tokyo Station would be constructed). From the optional Little Tokyo Station, the alignment would continue underground beneath Alameda Street to the proposed Arts/Industrial District Station under Alameda Street between 6th Street and Industrial Street. (Note, Alternative 2 would have the same alignment as Alternative 1 from this point south. Refer to Section 2.1.4.2 for additional information on Alternative 2.)

The underground alignment would continue south under Alameda Street to 8th Street, where the alignment would curve to the west and transition to an aerial alignment south of Olympic Boulevard. The alignment would cross over the I-10 freeway in an aerial viaduct structure and continue south, parallel to the existing Metro A Line at Washington Boulevard. The alignment would continue in an aerial configuration along the eastern half of Long Beach Avenue within the UPRR owned Wilmington Branch ROW, east of the existing Metro A Line and continue south to the proposed Slauson/A Line Station. The aerial alignment would pass over the existing pedestrian bridge at E. 53rd Street. The Slauson/A Line Station would serve as a transfer point to the Metro A Line via a pedestrian bridge. The vertical circulation would be connected at street level on the north side of the station via stairs, escalators, and elevators. (The Slauson/A Line Station would serve as the northern terminus for Alternative 3; refer to Section 2.1.4.3 for additional information on Alternative 3.)

South of the Slauson/A Line Station, the alignment would turn east along the existing La Habra Branch ROW (also owned by UPRR) in the median of Randolph Street. The alignment would be on the north side of the La Habra Branch ROW and would require the relocation of existing freight tracks to the southern portion of the ROW. The alignment would transition to an at-grade configuration at Alameda Street and would proceed east along the Randolph Street median. Wilmington Avenue, Regent Street, Albany Street, and Rugby Avenue would be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration. The proposed Pacific/Randolph Station would be located just east of Pacific Boulevard.

From the Pacific/Randolph Station, the alignment would continue east at-grade. Rita Avenue would be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration. At the San Pedro Subdivision ROW, the alignment would transition to an aerial configuration and turn south to cross over Randolph Street and the freight tracks, returning to an at-grade configuration north of Gage Avenue. The alignment would be located on the east side of the existing San Pedro Subdivision ROW freight tracks and the existing track(s) would be relocated to the west side of the ROW. The alignment would continue at-grade within the San Pedro Subdivision ROW to the proposed at-grade Florence/Salt Lake Station south of the Salt Lake Avenue/Florence Avenue intersection.

South of Florence Avenue, the alignment would extend from the proposed Florence/Salt Lake Station in the City of Huntington Park to the proposed Pioneer Station in the City of Artesia, as shown in Figure 2-4. The alignment would continue southeast from the proposed at-grade Florence/Salt Lake Station within the San Pedro Subdivision ROW, crossing Otis Avenue, Santa Ana Street, and Ardine Street at-grade. The alignment would be located on the east side of the existing San Pedro Subdivision freight tracks, and the existing tracks would be relocated to the west side of the ROW. South of Ardine Street, the alignment would transition to an aerial structure to cross over the existing UPRR tracks and Atlantic Avenue. The proposed Firestone Station would be located on an aerial structure between Atlantic Avenue and Florence Boulevard.

The alignment would then cross over Firestone Boulevard and transition back to an at-grade configuration prior to crossing Rayo Avenue at-grade. The alignment would continue south along the San Pedro Subdivision ROW, crossing Southern Avenue at-grade and continuing at-grade until it transitions to an aerial configuration to cross over the LA River. The proposed LRT bridge would be constructed next to the existing freight bridge. South of the LA River, the alignment would transition to an at-grade configuration crossing Frontage Road at-grade, then passing under the I-710 freeway through the existing box tunnel structure and then crossing Miller Way. The alignment would then return to an aerial structure to cross over the Rio Hondo Channel. South of the Rio Hondo Channel, the alignment would briefly transition back to an at-grade configuration and then return to an aerial structure to cross over Imperial Highway and Garfield Avenue. South of Garfield Avenue, the alignment would transition to an at-grade configuration and serve the proposed Gardendale Station north of Gardendale Street.

From the Gardendale Station, the alignment would continue south in an at-grade configuration, crossing Gardendale Street and Main Street to connect to the proposed I-105/C Line Station, which would be located at-grade north of Century Boulevard. This station would be connected to the new infill C Line Station in the middle of the freeway via a pedestrian walkway on the new LRT bridge. The alignment would continue at-grade, crossing Century Boulevard and then over the I-105 freeway in an aerial configuration within the existing San Pedro Subdivision ROW bridge footprint. A new Metro C Line Station would be constructed in the median of the I-105 freeway. Vertical pedestrian access would be provided from the LRT bridge to the proposed I-105/C Line Station platform via stairs and elevators. To accommodate the construction of the new station platform, the existing Metro C Line tracks would be widened and, as part of the I-105 Express Lanes Project, and the I-105 lanes would be reconfigured. (The I-105/C Line Station would serve as the northern terminus for Alternative 4; refer to Section 2.1.4.4 for additional information on this alternative.)

South of the I-105 freeway, the alignment would continue at-grade within the San Pedro Subdivision ROW. In order to maintain freight operations and allow for freight train crossings, the alignment would transition to an aerial configuration as it turns southeast and enter the PEROW. The existing freight track would cross beneath the aerial alignment and align on the north side of the PEROW east of the San Pedro Subdivision ROW. The proposed Paramount/Rosecrans Station would be located in an aerial configuration west of Paramount Boulevard and north of Rosecrans Avenue. The existing freight track would be relocated to the east side of the alignment beneath the station viaduct.

The alignment would continue southeast in an aerial configuration over the Paramount Boulevard/Rosecrans Avenue intersection and descend to an at-grade configuration. The alignment would return to an aerial configuration to cross over Downey Avenue descending back to an at-grade configuration north of Somerset Boulevard. One of the adjacent freight storage tracks at the World Energy facility would be relocated to accommodate the new LRT tracks and maintain storage capacity. There are no active freight tracks south of the World Energy facility.

The alignment would cross Somerset Boulevard at-grade. South of Somerset Boulevard, the at-grade alignment would parallel the existing Bellflower Bike Trail that is currently aligned on the south side of the PEROW. The alignment would continue at-grade crossing Lakewood Boulevard, Clark Avenue, and Alondra Boulevard. The proposed at-grade Bellflower Station would be located west of Bellflower Boulevard.

East of Bellflower Boulevard, the Bellflower Bike Trail would be realigned to the north side of the PEROW to accommodate an existing historic building located near the southeast corner of Bellflower Boulevard and the PEROW. It would then cross back over the LRT tracks at-grade to the south side of the ROW. The LRT alignment would continue southeast within the PEROW and transition to an aerial configuration at Cornuta Avenue, crossing over Flower Street and Woodruff Avenue. The alignment would return to an at-grade configuration at Walnut Street. South of Woodruff Avenue, the Bellflower Bike Trail would be relocated to the north side of the PEROW. Continuing southeast, the LRT alignment would cross under the SR-91 freeway in an existing underpass. The alignment would cross over the San Gabriel River on a new bridge, replacing the existing abandoned freight bridge. South of the San Gabriel River, the alignment would transition back to an at-grade configuration before crossing Artesia Boulevard at-grade.

East of Artesia Boulevard the alignment would cross beneath the I-605 freeway in an existing underpass. Southeast of the underpass, the alignment would continue at-grade, crossing Studebaker Road. North of Gridley Road, the alignment would transition to an aerial configuration to cross over 183rd Street and Gridley Road. The alignment would return to an at-grade configuration at 185th Street, crossing 186th Street and 187th Street at-grade. The alignment would then pass through the proposed Pioneer Station on the north side of Pioneer Boulevard at-grade. Tail tracks accommodating layover storage for a three-car train would extend approximately 1,000 feet south from the station, crossing Pioneer Boulevard and terminating west of South Street.



#### 2.1.4.2 Alternative 2

The total alignment length of Alternative 2 would be approximately 19.3 miles, consisting of approximately 2.3 miles of underground, 12.3 miles of at-grade, and 4.7 miles of aerial alignment. Alternative 2 would include 12 new LRT stations, 3 of which would be underground, 6 would be at-grade, and 3 would be aerial. Five of the stations would include parking facilities, providing a total of approximately 2,780 new parking spaces. The alignment would include 32 at-grade crossings, 3 freeway undercrossings, 2 aerial freeway crossings, 1 underground freeway crossing, 3 river crossings, 25 aerial road crossings, and 10 freight crossings.

In the north, Alternative 2 would begin at the proposed WSAB 7th Street/Metro Center Station, which would be located underground beneath 8th Street between Figueroa Street and Flower Street. A pedestrian tunnel would provide connection to the existing 7th Street/Metro Center Station. Tail tracks, including a double crossover, would extend approximately 900 feet beyond the station, ending east of the I-110 freeway. From the 7th Street/Metro Center Station, the underground alignment would proceed southeast beneath 8th Street to the South Park/Fashion District Station, which would be located west of Main Street beneath 8th Street.

From the South Park/Fashion District Station, the underground alignment would continue under 8th Street to San Pedro Street, where the alignment would turn east toward 7th Street, crossing under privately owned properties. The tunnel alignment would cross under 7th Street and then turn south at Alameda Street. The alignment would continue south beneath Alameda Street to the Arts/Industrial District Station located under Alameda Street between 7th Street and Center Street. A double crossover would be located south of the station box, south of Center Street. From this point, the alignment of Alternative 2 would follow the same alignment as Alternative 1, which is described further in Section 2.1.4.

#### 2.1.4.3 Alternative 3

The total alignment length of Alternative 3 would be approximately 14.8 miles, consisting of approximately 12.2 miles of at-grade, and 2.6 miles of aerial alignment. Alternative 3 would include 9 new LRT stations, 6 would be at-grade and 3 would be aerial. Five of the stations would include parking facilities, providing a total of approximately 2,780 new parking spaces. The alignment would include 32 at-grade crossings, 3 freeway undercrossings, 1 aerial freeway crossing, 3 river crossings, 15 aerial road crossings, and 9 freight crossings. In the north, Alternative 3 would begin at the Slauson/A Line Station and follow the same alignment as Alternatives 1 and 2, described in Section 2.1.4.

#### 2.1.4.4 Alternative 4

The total alignment length of Alternative 4 would be approximately 6.6 miles, consisting of approximately 5.6 miles of at-grade and 1.0 mile of aerial alignment. Alternative 3 would include 4 new LRT stations, 3 would be at-grade, and 1 would be aerial. Four of the stations would include parking facilities, providing a total of approximately 2,180 new parking spaces. The alignment would include 12 at-grade crossings, 2 freeway undercrossings, 1 aerial freeway crossing, 1 river crossing, 7 aerial road crossings, and 2 freight crossings. In the north, Alternative 4 would begin at the I-105/C Line Station and follow the same alignment as Alternatives 1, 2, and 3, described in Section 2.1.4.

### 2.1.4.5 Design Options

Alternative 1 includes two design options:

- **Design Option 1:** LAUS at the Metropolitan Water District (MWD) – The LAUS station box would be located east of LAUS and the MWD building, below the baggage area parking facility. Crossovers would be located on the north and south ends of the station box with tail tracks extending approximately 1,200 feet north of the station box. From LAUS, the underground alignment would cross under the US-101 freeway and the existing Metro L Line aerial structure and continue south beneath Alameda Street to the optional Little Tokyo Station between Traction Avenue and 1st Street. The underground alignment between LAUS and the Little Tokyo Station would be located to the east of the base alignment.
- **Design Option 2:** Add the Little Tokyo Station – Under this design option, the Little Tokyo Station would be constructed as an underground station and there would be a direct connection to the Regional Connector Station in the Little Tokyo community. The alignment would proceed underground directly from LAUS to the Arts/Industrial District Station primarily beneath Alameda Street.

## 2.2 Maintenance and Storage Facility

MSFs accommodate daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles (LRVs). Activities may take place in the MSF throughout the day and night depending upon train schedules, workload, and the maintenance requirements.

Two MSF options are evaluated; however, only one MSF would be constructed as part of the Project. The MSF would have storage tracks, each with sufficient length to store three-car train sets and a maintenance-of-way vehicle storage. The facility would include a main shop building with administrative offices, a cleaning platform, a traction power substation (TPSS), employee parking, a vehicle wash facility, a paint and body shop, and other facilities as needed. The east and west yard leads (i.e., the tracks leading from the mainline to the facility) would have sufficient length for a three-car train set. In total, the MSF would need to accommodate approximately 80 LRVs to serve the Project's operations plan.

Two potential locations for the MSF have been identified—one in the City of Bellflower and one in the City of Paramount. These options are described further in the following sections.

### 2.2.1 Bellflower MSF Site Option

The Bellflower MSF site option is bounded by industrial facilities to the west, Somerset Boulevard and apartment complexes to the north, residential homes to the east, and the PEROW and Bellflower Bike Trail to the south. The site is approximately 21 acres in area and can accommodate up to 80 vehicles (Figure 2-7).

### 2.2.2 Paramount MSF Site Option

The Paramount MSF site option is bounded by the San Pedro Subdivision ROW on the west, Somerset Boulevard to the south, industrial and commercial uses on the east, and All American City Way to the north. The site is 22 acres and could accommodate up to 80 vehicles (Figure 2-7).

Figure 2-7. Maintenance and Storage Facility Options



Source: WSP, 2020



## 3 REGULATORY FRAMEWORK

The following is a brief summary of the regulatory context under which biological resources are managed at the federal and state levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources and are discussed in further detail below. Agencies with the responsibility and regulatory guiding documents for protection of biological resources within the Affected Area include:

- United States Army Corps of Engineers (USACE): wetlands and other waters of the United States;
- United States Fish and Wildlife Service (USFWS): federally listed species and migratory birds;
- California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game): riparian areas and other waters of the State, state-listed species;
- Regional Water Quality Control Board (RWQCB): waters of the State.

### 3.1 Federal

#### 3.1.1 Federal Endangered Species Act

The federal Endangered Species Act of 1973 (ESA) provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead federal agencies for implementing ESA are the USFWS and the National Marine Fisheries Service (NMFS), a division of the United States National Oceanic and Atmospheric Administration Fisheries Service (NOAA). The USFWS maintains a worldwide list of federally listed and candidate species, including birds, insects, fish, reptiles, mammals, crustaceans, and plants.

The law requires federal agencies, in consultation with the USFWS and/or NMFS, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a "taking" (defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct") of any listed species. Likewise, the import, export, interstate, and foreign commerce of listed species are all generally prohibited.

#### 3.1.2 Clean Water Act and United States Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), the USACE has authority to regulate activities that result in the discharge of dredged or fill material to waters of the United States. Perennial and intermittent streams, wetlands, open waters, and ephemeral channels are considered jurisdictional waters of the United States if they are hydrologically connected and/or have a significant nexus to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any dredge, fill, or adverse modification of jurisdictional wetlands would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving the creation or enhancement of similar habitats.

Section 408 of the Rivers and Harbors Appropriation Act of 1899 provides that the Secretary of the Army may, on recommendation of the Chief of Engineers, grant permission for the alteration of a public work (including USACE-constructed levees and flood-control channels) so long as that alteration is not injurious to the public interest and will not impair the usefulness of the work. Alterations refer to any action by any entity other than USACE that builds upon, alters, improves, moves, occupies, or otherwise affects the usefulness, or the structural or ecological integrity, of a USACE project. Alterations also include actions approved as encroachments. Any such alteration would require technical review by USACE for consistency with Section 408, and subsequent permission prior to the start of work.

#### 3.1.3 State Water Resources Control Board

The SWRCB and nine RWQCBs (Water Boards) are responsible for implementing CWA Sections 401, 402, and 303(d) within California, including by issuing Section 401 Water Quality Certifications and Section 402 National Pollutant Discharge Elimination System (NPDES) Permits. Issuance of a Section 401 Certification requires documenting compliance with state water quality standards, including watershed plans, designated beneficial uses, and the total maximum daily load (TMDL) program. Pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.), the Water Boards may also assert authority over waters of the State, which may include features that are not waters of the United States. The *Porter-Cologne Act* requires the regulation of all pollutant discharges including wastes in project runoff that could affect the quality of the state's water. Any entity proposing to discharge a waste must file a Report of Waste Discharge with the appropriate Water Board.

#### 3.1.4 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 United States Code [USC] Section 703-712) implements various treaties and conventions between the United States, Canada, Japan, Mexico, and Russia for the protection of migratory birds. Under the MBTA, taking, killing or possessing migratory birds is unlawful. Unless permitted by regulations, the MBTA provides that it is unlawful to “pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not.” According to the MBTA, a person, association, partnership, or corporation which violates the MBTA or its regulations is guilty of a misdemeanor and subject to a fine of up to \$500, jail up to six months, or both. Anyone who knowingly takes a migratory bird and intends to, offers to, or actually sells or barter the bird is guilty of a felony, which carries fines of up to \$2,000, jail time of up to two years, or both. Permissible fines are increased significantly by the Sentencing Reform Act of 1984, as amended in 1987. The MBTA should not be construed to prevent states and territories from making or enforcing laws or regulations not inconsistent with the MBTA or which give further protection to migratory birds, nests, and eggs, if such laws and regulations do not extend open seasons.

#### 3.1.5 United States Fish and Wildlife Service and National Marine Fisheries Service

The USFWS implements the MBTA and the *Bald and Golden Eagle Protection Act of 1940* (16 USC Section 668). The USFWS and NMFS share responsibility for implementing the federal ESA (16 USC § 153 et seq.). The USFWS generally implements the federal ESA for terrestrial and freshwater species, while the NMFS implements the federal ESA for marine and anadromous species. Projects that would result in a “take” of any federally listed species are

required to obtain permits from the USFWS and/or NMFS through consultation under either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of federal ESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species.

“Take” under federal definition means to “harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Proposed or candidate species do not have the full protection of federal ESA; however, the USFWS and NMFS advise project applicants that species could be elevated to listed status at any time.

## 3.2 State

### 3.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, plants, and their respective habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The CESA prohibits the “take” of state listed threatened, endangered, or fully protected species (Fish and Game Code Section 2050 et. seq.). Under CESA, the “take” of a species is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CESA allows for take incidental to otherwise lawful activity. The CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species. The CDFW will work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

### 3.2.2 California Department of Fish and Wildlife

The CDFW derives its authority from the California Fish and Game Code (Code) of California. Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds of prey and their eggs and nests against take, possession, or destruction of nests or eggs. The CDFW also prohibits take for species designated as fully protected under the Fish and Game Code.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Under this category, SSC do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.

The CDFW also has authority to administer the *Native Plant Protection Act* (NPPA; Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant occurs is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Rivers, streams, and lakes, and associated wetlands and riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year floodplain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake.

## 3.3 Regional

### 3.3.1 Regional Water Quality Control Board

The SWRCB and the Los Angeles RWQCB have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The Los Angeles RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction.

## 3.4 Local

The Project corridor traverses 12 local jurisdictions, including the cities of Los Angeles, Vernon, Huntington Park, Bell, Cudahy, South Gate, Downey, Paramount, Bellflower, Artesia, and Cerritos, and the unincorporated Florence- Firestone community of LA County.

### 3.4.1 City of Los Angeles General Plan

Natural resources within the City of Los Angeles limits are regulated according to the City of Los Angeles General Plan Natural Resources Element. The Conservation and Natural Resources Element of the City of Los Angeles General Plan contains policy for the protection of open space; biological resources, including LA County designation of Significant Ecological Areas (SEAs), and local water resources (City of Los Angeles 2015). The policies anticipate potential impacts to biological resources from the land uses and activities that will occur under the General Plan and serve to avoid, reduce, and/or mitigate those impacts.

### 3.4.2 City of Los Angeles Preservation of Oak Trees

Within the City of Los Angeles Municipal Code (LAMC) Chapter IV Public Welfare (2005) and Ordinance No. 153,478, there are provisions for the protection of native oak (*Quercus* spp.) trees greater than 8-inches diameter-at-breast-height (DBH). In addition, protections include other native trees (e.g. bay [*Umbellularia* spp.], sycamore [*Platanus* spp.], walnut [*Juglans* spp.], etc.) having greater than a 4-inch cumulative (i.e., total diameter of multi-trunk) diameter at breast height (DBH).

### 3.4.3 City of Los Angeles Municipal Code

Per Section 46 (Protected Tree Regulations) of the LAMC, removal of trees is defined as any act that will cause a protected tree to die, including but not limited to, acts that inflict damage upon the root system or other part of the tree by fire, application of toxic substances, operation of equipment or machinery, or by changing the natural grade of land by excavation



or filling the drip line area around the trunk. Removal or relocation of street trees and protected native trees regulated by the City of Los Angeles requires a permit to be obtained from the Board of Public Works.

#### **3.4.4 City of Vernon General Plan**

The City of Vernon General Plan Resources Element establishes goals and policies to preserve open space including the Los Angeles River and for the planting and maintenance of street trees.

#### **3.4.5 City of Vernon Street Trees Ordinance**

Chapter 12.28 of the City of Vernon Municipal Code regulates the planting, maintenance, and removal of trees in the public ROWs and on city-owned property. It regulates the species of tree which can be planted and requires a Planting Plan. Additionally, the ordinance regulates the removal and pruning of street trees.

#### **3.4.6 City of Huntington Park General Plan**

The City of Huntington Park General Plan Conservation Element contains goals and policies for the protection of water resources. Existing and potential natural resources in the City of Huntington Park are limited as the City does not contain any forests, bodies of water, or substantial plant or animal habitats.

#### **3.4.7 Huntington Park Municipal Code**

Section 7-5.204 of the Huntington Park Municipal Code is specific to street trees. As discussed therein, “No person shall plant or remove any City tree, shrub, or plant without first obtaining a permit to do so from the Director. The Director shall further have the authority to impose any conditions on the approval of such permits as are deemed necessary by the Director to fulfill the purpose and intent of this chapter.” Additionally, Section 7-5.212 states, “If the owner or agent of private property, in front of which a parkway tree is planted, wishes to have the parkway tree removed, he or she must file a written request with the Director, on a form to be provided by the Director. The Director may approve or deny such requests. The Director shall not consider requests for the removal of a parkway tree from anyone other than the owner or agent of the private property in front of which the subject parkway tree is planted.”

#### **3.4.8 Los Angeles County General Plan 2035**

The LA County General Plan Conservation and Natural Resources Element contain a number of policies and goals related to protection of biological resources. These policies are related to habitat linkages, riparian habitat, streambeds and wetlands, woodlands, chaparral, coastal sage scrub, and SEAs and Coastal Resources Areas (CRAs).

The Florence-Firestone community of LA County is located in an urbanized area adjacent to the City of Huntington Park and generally lacks these resources.

#### 3.4.9 Los Angeles County Oak Tree Ordinance

The LA County Oak Tree Ordinance prohibits damage or removal of native oak trees, without a permit, which are:

- Eight inches or more in diameter (25 inches or more in circumference) as measured four and one-half (4.5) feet above mean natural grade (i.e., DBH), or
- Oaks with multiple trunks a combined DBH of twelve inches (28 inches or more in circumference) or more of the two (2) largest trunks

#### 3.4.10 City of Bell General Plan

The City of Bell General Plan Open Space/Conservation/Recreation Element identifies policies and goals for the protection of natural and manmade resources including soil, water, air, and historic resources. Open space and parks are also discussed.

#### 3.4.11 City of Bell Municipal Code

According to Section 12.24.060 of the Bell Municipal Code, “Whenever the owner or person in possession of a lot desires to have a tree removed from an abutting parkway, he or she shall file a written request therefor for approval by the city council. If the tree is found to be in good condition and the request is granted solely for the convenience of the applicant, then the full cost of such removal and replanting as necessary, shall be borne by the person making such request and the estimated amount, as determined by the director, shall be paid to the recreation and parks department before removal shall take place.”

#### 3.4.12 City of Cudahy General Plan

The City of Cudahy is currently updating its General Plan. The Draft General Plan includes a Conservation Element which notes that the urbanized areas of LA County, including the City of Cudahy, are not noted for forests with natural vegetation consisting mainly of wild grasses and scattered trees and brush. While there are many endangered, rare, and threatened animals and plants in the Southern California region, studies and surveys in Cudahy have not identified the presence of any endangered, rare, or threatened plants or animals. However, the General Plan update contains a goal to preserve the environment through the conservation of resources.

#### 3.4.13 City of South Gate General Plan

The City of South Gate General Plan Green City Element contains goals and policies for the conservation of waters, forests, soils, rivers, wildlife, and fisheries. Policies include the protection of rare or endangered species, protection of street trees, and efforts to improve the riverfronts and naturalize the Los Angeles River and Rio Hondo Channel.

#### 3.4.14 City of South Gate Municipal Code

According to Section 5.33 of South Gate Municipal Code, “No person, but for a person undertaking official business for the city of South Gate, shall plant, remove, relocate, damage, excessively prune or cut or encroach into the protected zone or any public tree within the city of South Gate without first obtaining a permit from the director of public works and paying the required fee. No such permit shall be valid for a period greater than ninety days after the date of its issuance and shall thereafter be null and void unless extended in writing by the director of public works.” Additionally, “The director of public works may impose any condition he/she deems necessary, to carry, out the purpose and intent of this

chapter. The applicant must bear all costs of performing or executing any condition ordered by the director of public works. No permit shall be issued unless the applicant, in writing, accepts the conditions and agrees to observe same. Conditions may include, but are not limited to, any of the following:

- (a) Replacing the public tree with a tree or trees, including a boxed tree or trees, of a species and size designated by the director of public works;
- (b) Relocating the public tree to a location approved in writing by the director of public works. Prior to permit issuance a written report from an arborist shall be submitted to the director of public works describing the relocation method to be used and providing the city with a three-year guarantee of survival;
- (c) Payment of restitution for the public tree in the amount determined by the director of public works;
- (d) Any other condition the director of public works deems reasonable and appropriate.”

#### **3.4.15 City of Downey Vision 2025**

Chapter 4 of the City of Downey Vision 2025 General Plan, Conservation Chapter, contains goals and policies for the protection of water supply, water quality, and trees. The tree policies discourage the removal of trees on public or private property.

#### **3.4.16 City of Downey Municipal Code**

According to Section 7605 of the Downey Municipal Code, “Any street tree removed shall be replaced if a replacement is deemed appropriate and if it is mutually agreed to by both the City and the property owner. The replacement tree shall be selected in accordance with the official Tree Species List and Master Street Tree Plan. No public street tree will be removed/planted without having obtained a permit from the Public Works Department.”

#### **3.4.17 City of Paramount General Plan**

The City of Paramount General Plan Resource Element provides policies for the development and preservation of open space, natural resources, and landscaping and city beautification. The natural resource policies focus on air and water quality.

#### **3.4.18 City of Bellflower General Plan**

The City of Bellflower General Plan Conservation Element contains policies for the preservation and enhancement of public and private vegetation. The policies focus on the landscaped environment.

#### **3.4.19 City of Artesia General Plan 2030**

The City of Artesia General Plan 2030 Open Space and Conservation Sub-Element focuses on parks and recreational facilities. The Sub-Element discusses the City’s urbanized condition and no rare or endangered plant or animal species have been identified. Additionally, there are no significant natural habitats in the City. Wildlife species present in the City are typical of any disturbed, highly urbanized setting and are not considered rare, endangered, or threatened. The City is also devoid of wetland and riparian habitat. The City’s most significant plant resources are imported trees and ornamental plants.

### 3.4.20 City of Cerritos General Plan

The City of Cerritos General Plan Conservation Element contains policies and goals for the conservation of water resources and biological resources. The biological resources section focuses on a community forest as the City lacks other biological resources as it is highly urbanized.

### 3.4.21 City of Cerritos Tree Ordinance

Chapter 9.75 of the City of Cerritos municipal code establishes goals, policies, and regulations which will ensure compliance with the city's objective to create and maintain a community forest as an essential element of the city's character. It provides regulations for residential, commercial, and industrial properties as well as regulation of trees in parkways and roadways.

### 3.4.22 City of Cerritos Municipal Code

According to Section 9.75.205 of Cerritos Municipal Code, "No person shall plant, remove, cut, prune, root prune, apply pesticides or otherwise disturb any city tree." There are no provisions for replacements of impacted trees.

## 4 AFFECTED ENVIRONMENT/EXISTING CONDITIONS

### 4.1 General Corridor-wide Conditions

#### 4.1.1 Topography and Soils

The Affected Area is located in the Los Angeles Basin, which is an oval-shaped, alluvial plain spanning approximately 40 miles northwest to southeast. The Los Angeles Basin is bordered by the Santa Monica Mountains on the north, Puente Hills to the east, Pacific Ocean to the west, and the Santa Ana Mountains to the south. The topography of the Affected Area is generally flat and includes commercial urban lands and roads and channelized drainages. Elevation ranges from 78 feet to 294 feet above mean sea level. Based on the most recent soil survey (USDA 2017), the Affected Area contains four map units:

- Urban land, commercial, 0 to 5 percent slopes
- Urban land-Hueneme, drained-San Meridio complex, 0 to 2 percent slopes
- Urban land-Metz-Pico complex, 0 to 2 percent slopes/ flood plains
- Urban land, frequently flooded, 0 to 5 percent slopes

Typic Xerorthents soil series is the main component of the Commercial Urban Lands map unit and consists of soils that formed in alluvium derived from granite. This soil type is typically found in alluvial fans and alluvial plains. Hueneme, San Meridio, Pico, Metz soil series are poorly to well drained soils derived from granite and/or sedimentary rock covered with discontinuous human-transported material. These soils are typically found on alluvial fans and coastal plains. The Urban land with frequent flooding map unit constitutes the channelized rivers in the Project vicinity and consists of discontinuous human-transported material.

#### 4.1.2 Land Cover and Vegetation

All proposed alignment sections are within previously developed areas such as public ROW (streets) and industrial, commercial, and residential areas.

##### 4.1.2.1 Urban/Developed Lands

Urban/developed lands include areas that have been developed with structures, streets, sidewalks, or other hardscape elements or otherwise physically altered to an extent that native vegetation is no longer supported. Urban/developed lands are characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas that have been physically disturbed (by previous human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate, may also be considered urban/developed lands.

Specifically, areas identified as urban/developed lands within the Affected Area include paved roads and associated landscaping. Landscaping incorporates both native and non-native species. Native species include, but not limited to: coast live oak (*Quercus agrifolia*), various other oaks (*Quercus* spp.), California black walnut (*Juglans californica*), juniper (*Juniperus* sp.), and elderberry (*Sambucus nigra*). Non-native species include but are not limited to: gum trees (*Eucalyptus globulus*, *E. camaldulensis*, *E. spp.*), Peruvian pepper (*Schinus molle*), tree of Heaven (*Ailanthus altissima*), various pines (*Pinus* spp.), persimmon (*Diospyros* sp.), Canary Island date palm (*Phoenix canariensis*), Mexican fan palm (*Washingtonia robusta*), queen palm (*Syagrus romanzoffiana*), and various other palms (*Phoenix* sp., *Washingtonia* sp.), coast

myoporum (*Myoporum laetum*), Callery pear (*Pyrus calleryana*), black locust (*Robinia pseudoacacia*), lemon (*Citrus limon*), various ornamental figs (*Ficus* spp.), bird of paradise (*Strelitzia reginae*), bottlebrush (*Callistemon* sp.), and oleander (*Nerium oleander*).

### 4.1.2.2 Drainages

All proposed alignment sections cross drainages within the headwaters of the Los Angeles River at three locations (Figure 4-1). These crossings occur within the Southern Section. The proposed alignment crosses the Los Angeles River and the Rio Hondo (a tributary to the Los Angeles River) near Interstate-710 (I-710), and the San Gabriel River at State Route-91 (SR-91) in the City of Bellflower. The streambeds at the proposed crossings are entirely channelized and consist of concrete with scattered ruderal and emergent wetland plant species, such as spikerush (*Eleocharis* sp.), within seams in the concrete. However, the vegetation does not constitute an intact wetland vegetation community, due to the extremely sparse distribution. In addition, the proposed alignment crosses numerous storm drain systems. However, these storm drains consist primarily of belowground concrete pipes. The proposed alignment does not cross any soft-bottomed drainage channels with a natural substrate.

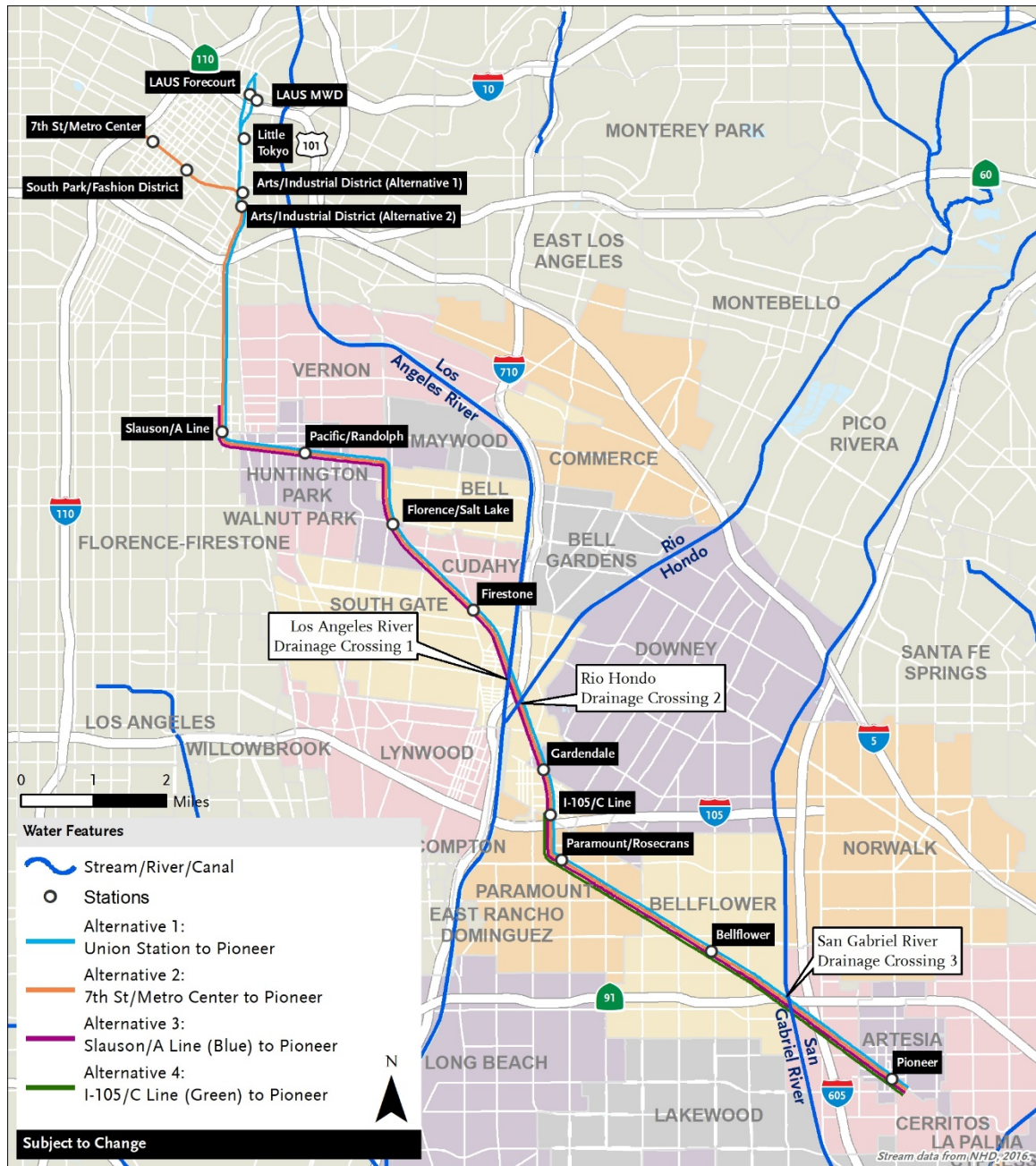
### 4.1.2.3 General Wildlife

The Affected Area and surrounding areas provide habitat suitable for wildlife species that commonly occur in southern California urban areas. Wildlife species observed/detected on or adjacent to the Affected Area include the native acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Pipilo crissalis*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), mourning dove (*Zenaidura macroura*), northern mockingbird (*Mimus polyglottos*), western kingbird (*Tyrannus verticalis*), house finch (*Haemorhous mexicanus*), band-tailed pigeon (*Patagioenas fasciata*), Anna's hummingbird (*Calypte anna*), and California ground squirrel (*Otospermophilus beecheyi*), as well as the non-native rock dove (*Columba livia*), house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), and fox squirrel (*Sciurus niger*). The identified wildlife species are common in the highly urban developed areas, and none of these species are special-status.

The Los Angeles River, Rio Hondo, and San Gabriel River are all highly channelized and provide limited vegetated riparian habitat for wildlife. However, several species of birds associated with aquatic environments find suitable foraging habitat along the banks with slow-moving water. Several of these species were observed during the reconnaissance survey, primarily at the Los Angeles River and Rio Hondo crossings, including great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), mallard (*Anas platyrhynchos*), black-necked stilt (*Himantopus mexicanus*), western gull (*Larus occidentalis*), and killdeer (*Charadrius vociferous*).

The elevated structures spanning the drainages (i.e., railroad trellises over the Los Angeles River and Rio Hondo and SR-91 overpass over the San Gabriel River) create adequate nesting habitat for several avian species. At the structure crossing over the San Gabriel River, an American kestrel (*Falco sparverius*), northern rough-winged swallows (*Stelgidopteryx serripennis*), and white-throated swifts (*Aeronautes saxatalis*) were observed exhibiting nesting behavior under the SR-91 overpass during the reconnaissance survey. Barn swallows (*Hirundo rustica*) were observed over the Los Angeles River at the SR-91 bridge crossing.

Figure 4-1. Drainage Locations



Project data from WSP and Metro, 2020; stream data from NHD, 2016. Subject to Change.

### 4.1.3 Special-Status Biological Resources

This section discusses special-status biological resources observed within the Affected Area during the field survey and evaluates the potential for the Affected Area to support other special-status resources based on existing conditions. Local, State, and Federal agencies regulate special-status resources and require an assessment of their presence or potential presence to be conducted within the Affected Area prior to the approval of any proposed development. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the

CNDDDB, species occurrence records from other sites in the vicinity of the development boundary, and previous reports from the Project area. The potential for each special-status species to occur in the Affected Area was evaluated according to the following criteria:

- *Not Expected.* Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- *Low Potential.* Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- *Moderate Potential.* Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- *High Potential.* All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- *Present.* Species was observed on the site or has been recorded (e.g., CNDDDB, other reports) on the site within the last 5 years.

For the purpose of this analysis, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and NMFS under the federal ESA; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the CESA, and/or those recognized as SSC by the CDFW. In addition, plant species are ranked by the CNPS California Rare Plant Rank (CRPR) system, as follows, with species ranked 1 and 2 considered special-status:

- Rank 1A = Plants presumed extinct in California
- Rank 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- Rank 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened)
- Rank 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known)
- Rank 2 = Rare, threatened or endangered in California, but more common elsewhere.
- Rank 3 = Need more information (a Review List)
- Rank 4 = Plants of Limited Distribution (a Watch List)

Furthermore, biological resources, including vegetation communities, on a scale, global (G) and state/province (S) 1 through 5, based on NatureServe's (2010) methodologies, as follows, with those alliances ranked G or S as 1 through 3 considered special-status:

- G1 or S1 - Critically Imperiled Globally or State-wide
- G2 or S2 - Imperiled Globally or State-wide
- G3 or S3 - Vulnerable to extirpation or extinction Globally or State-wide
- G4 or S4 - Apparently Secure Globally or State-wide
- G5 or S5 - Secure Globally or State-wide.



Plant communities are also considered special-status biological resources if they have limited distributions, have high value for sensitive wildlife, contain special-status species, or are particularly susceptible to disturbance. The CDFW ranks special-status communities as “threatened” or “very threatened” and keeps records of occurrences in CNDDDB.

#### 4.1.3.1 Special-Status Species

As previously discussed, a CNDDDB search was conducted for the Project. The CNDDDB identified 23 special-status plant species and 18 special-status wildlife species within a five-mile radius of the Affected Area. Table 4.1 provides the species name, status, and habitat requirements for all special-status species identified within a five-mile radius of the Affected Area. The species’ potential to occur within the Affected Area is also discussed.

##### Special-Status Plant Species

During the site survey, no rare or sensitive plant species were observed within the Affected Area, with the exception of Southern California black walnut (CRPR 4.2), which are planted street trees. While a focused examination during the flowering period for most species was not conducted, based on the existing development and disturbances and lack of suitable habitat, no other special-status plant species are expected to occur.

##### Special-Status Wildlife Species

During the field assessment, no special-status wildlife species were observed or otherwise detected, though some species (i.e., great blue heron) are considered sensitive when nesting. While individuals were observed, habitat capable of supporting heron rookeries is not present within the Affected Area. Special-status wildlife species typically have very specific habitat requirements which may include, but are not limited to, vegetation communities, elevation levels and topography, and availability of primary constituent elements (i.e., space for individual and population growth, breeding, foraging, and shelter). As the Affected Area consists of mostly developed streets and associated landscaping and street/community trees, most of the special-status wildlife species listed in Table 4.1 are not expected to occur due to lack of suitable habitat. Limited low-quality roosting habitat is available for western mastiff bat (*Eumops perotis californicus*), pallid bat (*Antrozous pallidus*), and silver haired bat (*Lasionycteris noctivagans*), primarily in high buildings in downtown Los Angeles, as well as existing bridges crossing the Los Angeles River, Rio Hondo, and San Gabriel River. Marginal foraging habitat for big free tailed bat (*Nyctinomops macrotis*) is also present throughout the Affected Area.

The portions of the Affected Area that cross the aforementioned drainages may provide temporary migratory and foraging territory for reptile species that inhabit slow moving intermittent streams and seasonal wetlands. The western pond turtle (*Emys marmorata*) has a low potential to occur based on prior development, existing disturbances, and poor habitat quality within the drainages.

Habitat is present within the Affected Area with the potential to support protected nesting birds, including raptor species. The typical nesting season for raptors in coastal southern California occurs from January 1 to May 31. The reconnaissance survey was conducted in May 2017 and no existing raptor nests were observed.

Table 4.1. Special-Status Plant and Wildlife Species within a Five-Mile Radius of the Affected Area

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<b>Plants</b>				
<i>Arenaria paludicola</i> marsh sandwort	FE/SE G1 / S1 1B.1	Marshes and swamps. Growing up through dense mats of <i>Typha</i> spp., <i>Juncus</i> spp., <i>Scirpus</i> spp., etc. in freshwater marsh. Sandy soil. 3-170 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Astragalus tener</i> var. <i>titi</i> coastal dunes milk-vetch	FE/SE G2T1 / S1 1B.1	Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 1-45 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Atriplex coulteri</i> Coulter's saltbush	None/None G3 / S1S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Atriplex parishii</i> Parish's brittle scale	None/None G1G2 / S1 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 5-1420 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Atriplex serenana</i> var. <i> davidsonii</i> Davidson's salt scale	None/None G5T1 / S1 1B.2	Coastal bluff scrub, coastal scrub. Alkaline soil. 10-200 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>California macrophylla</i> round-leaved filaree	None/None G3? / S3? 1B.2	Cismontane woodland, valley and foothill grassland. Clay soils. 15-1200 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Calystegia felix</i> lucky morning-glory	None/None G1Q / S1	Meadows and seeps, riparian scrub. Sometimes alkaline, alluvial. 30-215 m.	Not Expected	Habitat requirements for species not present within Affected Area.

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<i>Centromadia parryi</i> ssp. <i>australis</i> southern tarplant	None/None G3T2 / S2 1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils, sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m.	Not Expected	Habitat requirements for species not present within Affected Area. No scattered fields or disturbed areas within the Affected Area provide suitable habitat for the species.
<i>Chloropyron</i> <i>maritimum</i> ssp. <i>maritimum</i> salt marsh bird's- beak	FE/SE G4?T1 / S1 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Dudleya multicaulis</i> many-stemmed dudleya	None/None G2 / S2 1B.2	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 15-790 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	None/None G5TH / SH 1A	Marshes and swamps (coastal salt and freshwater). 10-1675 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Horkelia cuneata</i> var. <i>puberula</i> mesa horkelia	None/None G4T1 / S1 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Juglans californica</i> Southern California black walnut	None/None G3 / S3 4.2	Chaparral, coastal scrub, cismontane woodland. Slopes, canyons, alluvial habitats. 50-900 m.	Present	Individual trees that appear to be ornamental street trees observed along the Project alignment. Recommend arborist survey.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	None/None G4T2 / S2 1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.	Not Expected	Habitat requirements for species not present within Affected Area.

#### 4 Affected Environment/Existing Conditions

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper- grass	None/None G5T3 / S3 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Nasturtium gambelii</i> Gambel's water cress	FE/ST G1 / S1 1B.1	Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-330 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Navarretia prostrata</i> prostrate vernal pool navarretia	None/None G2 / S2 1B.1	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Orcuttia californica</i> California Orcutt grass	FE/SE G1 / S1 1B.1	Vernal pools. 10-660 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Phacelia stellaris</i> Brand's star phacelia	None/None G1 / S1 1B.1	Coastal scrub, coastal dunes. Open areas. 1-400 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Pseudognaphalium leucocephalum</i> white rabbit- tobacco	None/None G4 / S2 2B.2	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 35-515 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	None/None G4TH / SH 1A	Riparian woodland. Salix swales in riparian habitats. 65-300 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Sidalcea neomexicana</i> salt spring checkerbloom	None/None G4 / S2 2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 0-1530 m.	Not Expected	Habitat requirements for species not present within Affected Area.

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<i>Symphotrichum defoliatum</i> San Bernardino aster	None/None G2 / S2 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernal mesic grassland or near ditches, streams and springs; disturbed areas. 2-2040 m.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Symphotrichum greatae</i> Greata's aster	None/None G2 / S2 1B.3	Chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Mesic canyons. 335-2015 m.	Not Expected	Outside of elevation range of the Affected Area.
<b>Insects</b>				
<i>Bombus crotchii</i> Crotch bumble bee	None/None G3G4 / S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Low	Elements of suitable habitat and foraging species exist within Affected Area. However, the species has not been observed within the vicinity of the Affected Area since 1945.
<i>Danaus plexippus</i> monarch - California overwintering population	None/None G4T2T3 / S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	The two recorded winter roost sites are over 3 miles south of the Affected Area and would not be impacted by the Project. Individuals were observed during the site visit on May 11, 2017.

4 Affected Environment/Existing Conditions

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<b>Reptiles</b>				
<i>Emys marmorata</i> western pond turtle	None/None G3G4 / S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000-foot elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Low	Elements of suitable habitat present within Affected Area. However, existing development, disturbances, and invasive species reduce the potential for occurrence. Upland habitat constricted by urban development. Species has not been documented in the vicinity of the Affected Area since the 1980s.
<i>Phrynosoma blainvillii</i> coast horned lizard	None/None G3G4 / S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, & abundant supply of ants & other insects.	Not Expected	Habitat requirements for species not present within Affected Area.
<b>Birds</b>				
<i>Agelaius tricolor</i> tricolored blackbird	None/SCE G2G3 / S1S2 SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Athene cunicularia</i> burrowing owl	None/None G4 / S3 SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Expected	Habitat requirements for species not present within Affected Area.

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<i>Buteo regalis</i> ferruginous hawk	None/None G4 / S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Low	Scattered fields to support foraging area adjacent to Affected Area. Low potential as a transient in the Affected Area.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FR/SE G5T2T3 / S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE/SE G5T2 / S1	Riparian woodlands in Southern California.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SD G4T4 / S3S4 FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Low	Low potential as a transient in the Affected Area.
<i>Riparia riparia</i> bank swallow	None/ST G5 / S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Expected	Habitat requirements for species not present within Affected Area.
<i>Vireo bellii pusillus</i> least Bell's vireo	FE/SE G5T2 / S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, <i>Baccharis</i> , mesquite.	Not Expected	Habitat requirements for species not present within Affected Area.

4 Affected Environment/Existing Conditions

Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<b>Mammals</b>				
<i>Antrozous pallidus</i> pallid bat	None/None G5 / S3 SSC	Deserts, grasslands, shrublands, woodlands & forests, occasionally roosting in buildings, culverts and bridges. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low	Limited roosting habitat available within Affected Area.
<i>Eumops perotis californicus</i> western mastiff bat	None/None G5T4 / S3S4 SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc. Roosts in crevices in cliff faces, high buildings, trees & tunnels.	Low	Limited roosting habitat available within Affected Area.
<i>Lasionycteris noctivagans</i> silver-haired bat	None/None G5 / S3S4	Primarily a coastal & montane forest dweller feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.	Low	Marginally suitable roosting and foraging habitat is present in the Affected Area.
<i>Nyctinomops macrotis</i> big free-tailed bat	None/None G5 / S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Low	Roosting habitat requirements for species not present within Affected Area, though suitable foraging habitat is present.
<i>Taxidea taxus</i> American badger	None/None G5 / S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils & open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	Extremely limited prey base in urbanized Affected Area. Habitat constricted by urban development.



Scientific Name Common Name	Status Federal/State Global/State CRPR*	Habitat Requirements	Potential to Occur in Affected Area	Habitat Suitability/ Observations
<b>Sensitive Natural Communities</b>				
Walnut Forest	None/None G1 / S1.1	Walnut forest	None	Scattered California black walnut trees were observed in the Affected Area; however, these do not constitute a walnut forest.

Source: CDFW 2017

\*Key:

BCC = USFWS Bird of Conservation Concern  
 FC = Federal Candidate Species  
 FD = Federally Delisted  
 FE = Federally Endangered  
 FP = CDFW Fully Protected  
 FT = Federally Threatened  
 SCE = State Candidate Endangered  
 SD = State Delisted  
 SE = State Endangered  
 ST = State Threatened  
 SR = State Rare  
 SSC = CDFW Species of Special Concern

**CRPR (CNPS California Rare Plant Rank):**

1A=Presumed Extinct in California  
 1B=Rare, Threatened, or Endangered in California and elsewhere  
 2=Rare, Threatened, or Endangered in California, but more common elsewhere  
 3=Need more information (a Review List)  
 4=Plants of Limited Distribution (a Watch List)

**CRPR Threat Code Extension:**

.1=Seriously endangered in California (> 80% of occurrences threatened / high degree and immediacy of threat)  
 .2=Fairly endangered in California (20-80% occurrences threatened)  
 .3=Not very endangered in California (<20% of occurrences threatened)

**G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind 5.**

1 = Critically Imperiled  
 2 = Imperiled  
 3 = Vulnerable  
 4 = Apparently Secure  
 5 = Secure  
 ? = Inexact Numeric Rank  
 Q = Questionable Taxonomy

The portions of the Affected Area that cross the aforementioned drainages may provide temporary movement corridors for mammals. However, due to the highly developed nature of the surrounding upland, it is unlikely that mammals utilize the channelized drainages. The remainder of the Affected Area consists of highly developed urban areas that are undesirable to wildlife as movement corridors.

### 4.1.3.2 Special-Status Vegetation Communities

One special-status vegetation community, the walnut forest (G1/S1.1), has been mapped three miles north of the Affected Area. Multiple California black walnut trees were observed within the Affected Area; however, these individuals are planted street trees, and do not constitute a walnut forest community.

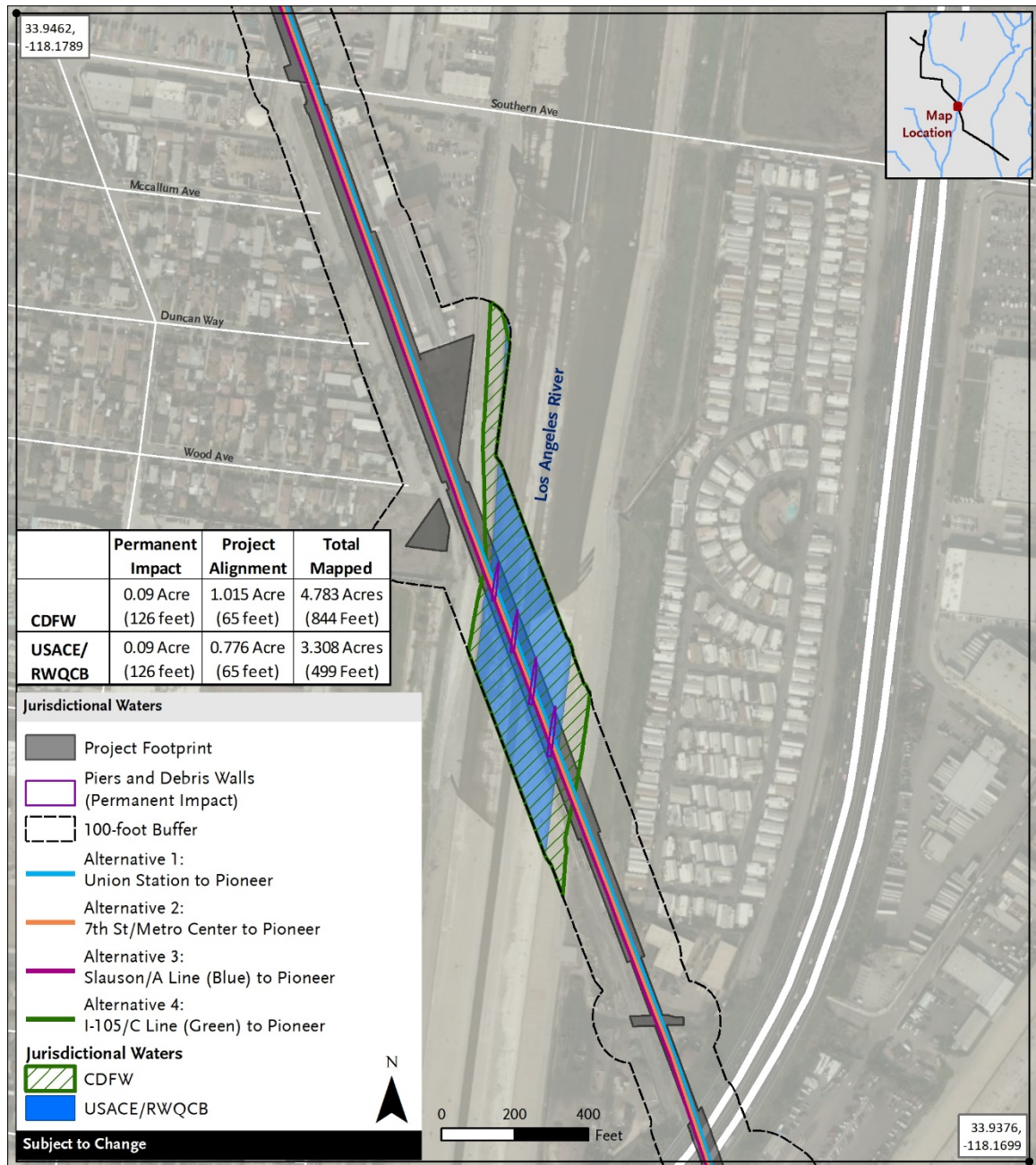
### 4.1.3.3 Jurisdictional Resources

The Affected Area is located within the western edge of the Los Angeles River watershed. The watershed encompasses and is shaped by the path of the Los Angeles River, which flows from its headwaters in the Simi Hills and Santa Susana Mountains eastward to the northern corner of Griffith Park. From Griffith Park, the channel continues southward through the Glendale Narrows before it flows across the coastal plain and into the Pacific Ocean via San Pedro Bay near Long Beach. Based on the findings of the jurisdictional delineation conducted for this study, The Los Angeles, Rio Hondo, and San Gabriel Rivers are subject to USACE, RWQCB, and CDFW jurisdiction. All three drainages contain an OHWM and bed, bank and channel features, though riparian vegetation is absent. No wetlands are present due to the absence of soils and the extremely limited distribution of vegetation. These drainages are classified as USACE non-wetland waters. No isolated waters of the State are present.

As previously discussed in Section 4.1.2.2, the Southern Section crosses aboveground drainages in three locations (Figure 4-1):

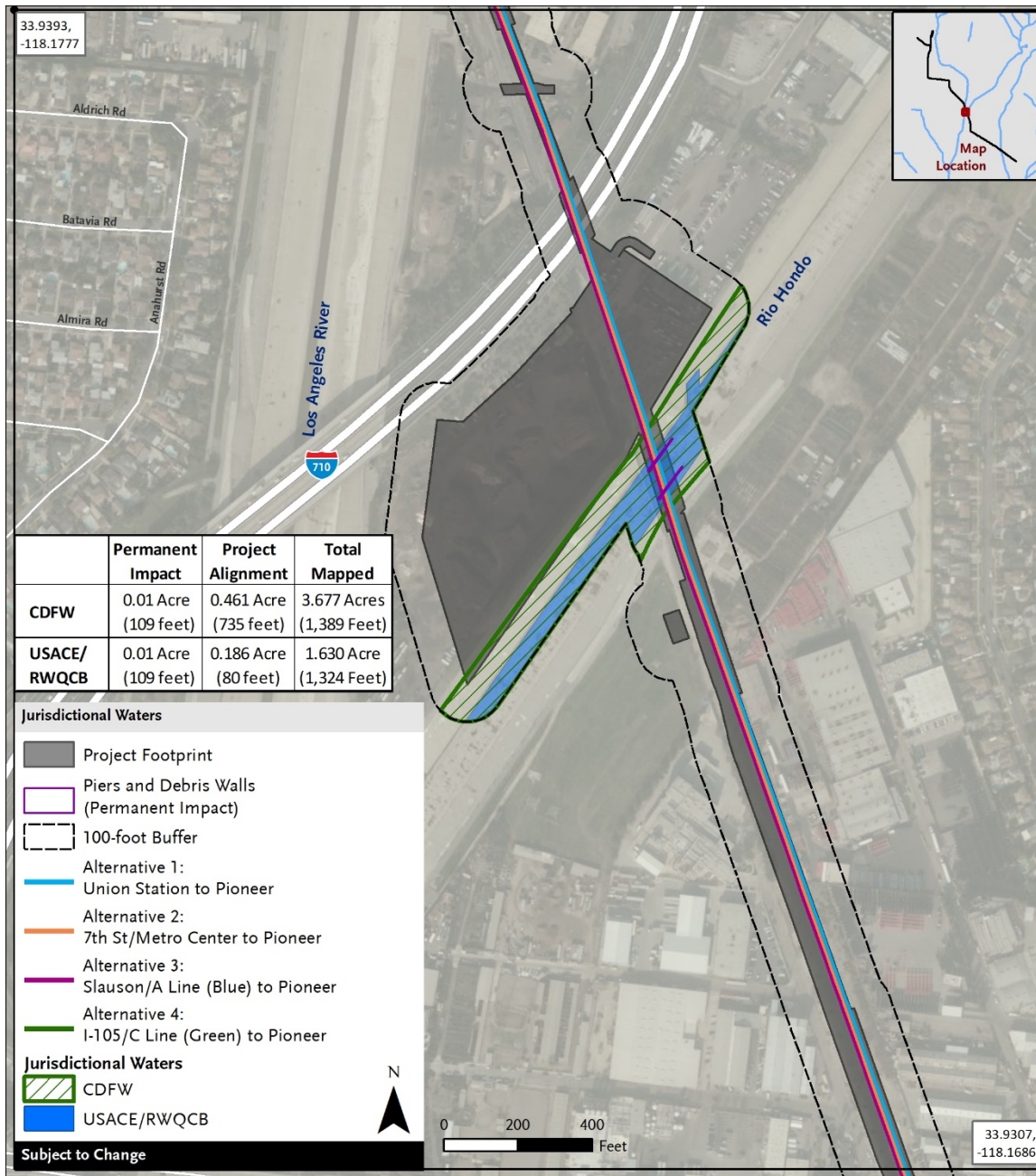
- Drainage Crossing 1: Located in Alternatives 1, 2, and 3, at the Los Angeles River between the southern end of Wood Avenue and I-710 in the City of Lynwood. Within the Study Area, the Los Angeles River contains 3.308 acres of waters subject to the jurisdiction of the USACE and RWQCB (Figure 4-2). Since the Los Angeles River is a Traditional Navigable Water (TNW) and a tributary to the Pacific Ocean, it is subject to the jurisdiction of USACE under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Within the Study Area, the Los Angeles River contains 4.783 acres of non-riparian streambed subject to the jurisdiction of CDFW. This represents the furthest extent of jurisdictional area within the river. The river's measured bank to bank width ranged from 320 feet to 345 feet.
- Drainage Crossing 2: Alternatives 1, 2, and 3 would cross the Rio Hondo, a tributary to the Los Angeles River, between I-710 and Ruchti Road in the City of Lynwood. Within the Study Area, the Rio Hondo contains 1.63 acres of waters subject to the jurisdiction of the USACE and RWQCB (Figure 4-3). Since the Rio Hondo regularly contributes surface flow to the Los Angeles River, a TNW and a tributary to the Pacific Ocean, it is subject to the jurisdiction of USACE under Section 404 of the CWA.
- Drainage Crossing 3: All four Build Alternatives (Alternatives 1, 2, 3 and 4) would cross the San Gabriel River at SR-91 in the City of Bellflower. Within the Study Area, the San Gabriel River contains 0.856 acre of waters subject to the jurisdiction of the USACE and RWQCB (Figure 4-4). Since the San Gabriel River regularly contributes surface flow to the Pacific Ocean in a typical year, it is subject to the jurisdiction of USACE under Section 404 of the CWA.

Figure 4-2. Drainage Crossing 1 Jurisdictional Delineation



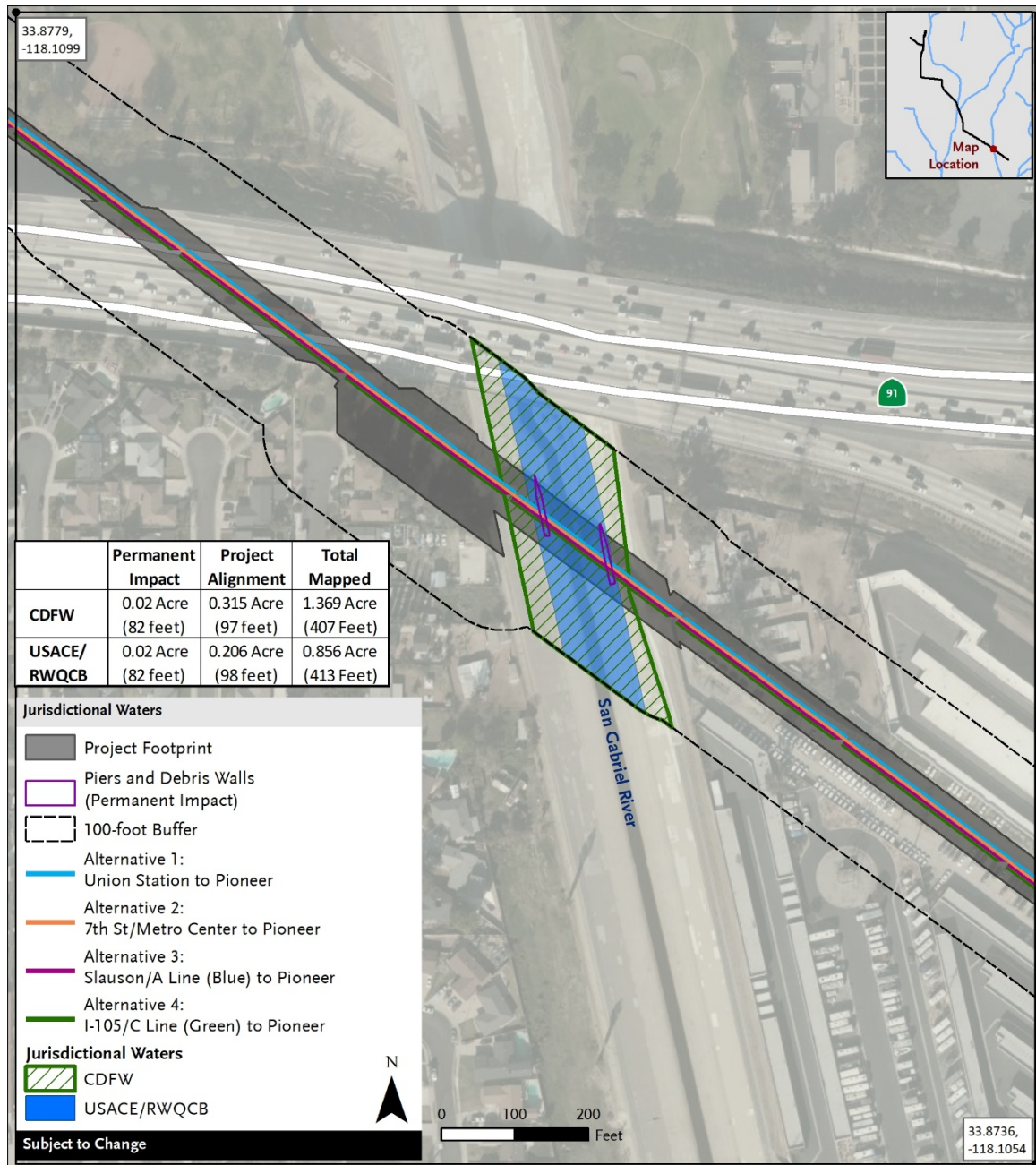
Source: Prepared for Metro in 2020

Figure 4-3. Drainage Crossing 2 Jurisdictional Delineation



Source: Prepared for Metro in 2020

Figure 4-4. Drainage Crossing 3 Jurisdictional Delineation



Source: Prepared for Metro in 2020

In a letter dated February 9, 2021, the USACE responded to the preliminary jurisdictional delineation request submitted for this study on November 5, 2020. Consistent with that request and the findings presented herein, the USACE preliminary determined that waters of the U.S. may be present in the three locations in the Affected Area (at the Los Angeles, Rio Hondo, and San Gabriel River crossings).

### 4.1.3.4 Wildlife Movements

The Project is located within developed urban areas and CDFW does not include any mapped California Essential Habitat Connectivity areas within the Affected Area nor does it contain any Missing Linkages as identified by South Coast Wildlands Network. However, the drainage channels described above may facilitate some wildlife movement for urban-tolerant mammals, such as coyotes and raccoons, and mature ornamental shrubs and trees may serve as habitat linkages for urban-tolerant bird species.

### 4.1.3.5 Resources Protected by Local Policies and Ordinances

As previously discussed above in Section 3.4, numerous street trees protected by the Cities of Los Angeles, Huntington Park, Bell, South Gate, Downey, Bellflower, and Cerritos are present within the Affected Area. Approximately 110 street trees may be impacted (one at the Gardendale Station, one at a TPSS location, and approximately 108 within the remainder of the corridor).

### 4.1.3.6 Conservation Plans

The Affected Area is not identified as a Biological Resource Area or Significant Ecological Area by the City or County of Los Angeles, or any other jurisdictions traversed by the Affected Area. In addition, the Affected Area is highly urbanized and not within or proximate to any native wildlife corridors, native wildlife nursery sites, critical habitat, land trust, habitat conservation plan, or any other regional planning areas, as identified by the City of Los Angeles or any other local, regional, state or federal agency. Therefore, conservation plans are not addressed further within this analysis.

## 5 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

### 5.1 Operation Impacts

#### 5.1.1 No Build Alternative

The No Build Alternative includes projects identified in the SCAG 2016 RTP/SCS (SCAG 2016), Metro's 2009 LRTP, and Measure M. Under the No Build Alternative, the Build Alternative would not be developed. However, several infrastructure and transportation-related projects located within the Study Area as described in Table 2.1 would be implemented and built. SCAG 2016 RTP/SCS, Metro's 2009 LRTP, and Measure M projects identified in the vicinity of the Project alignment include the Metro East-West Line/Regional Connector/Eastside Phase 2, CA HSR, Metro North-South Line/Regional Connector, improvements to the Metro bus system and local municipality bus systems, I-710 South Corridor Project, and I-105 Express Lane. Project-related TODs are not included in the No Build Alternative because the future planning of TODs surrounding the Project station areas cannot occur without implementation of the Project.

The projects included in the No Build Alternative would change the regional transportation system and likely reduce regional vehicle miles traveled. This would result in fewer automobiles on the regional roadway network and less mobile noise. Projects in the No Build Alternative would undergo environmental analyses to determine if the projects would result in physical impacts to jurisdictional resources or protected trees. It is anticipated that mitigation would be identified and implemented as needed. Therefore, no adverse impacts related to biological resources would occur under the No Build Alternative.

#### 5.1.2 Build Alternatives

Environmental impacts and consequences were analyzed for the Project as a whole and not broken down by geographic section because the urban nature of the Affected Area is generally consistent across geographic sections for this resource.

Project operation activities would have the potential to result in direct and/or indirect adverse impacts to nesting birds, roosting and/or foraging bats, jurisdictional resources, and protected trees. Those potential impacts are outlined in the following sections.

##### 5.1.2.1 Special-Status Species

The Project is located in a heavily developed/disturbed area and does not support any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS<sup>2</sup>. Therefore, the operation of the Project would not result in adverse direct or indirect impacts on any candidate, sensitive, or special status plant species identified in such plans, policies, or regulations.

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<sup>2</sup> In a meeting (held on September 12, 2018 with representatives from the USFWS, Metro and FTA) and in follow-up email correspondence, a representative from the USFWS expressed no concerns with the project alignment in regard to the special status species list.

Certain special status wildlife species may, however, be present. The western mastiff bat and pallid bat, CDFW Species of Special Concern, and silver haired bat, a special-status G5/S3S4 species, may utilize high buildings or bridges within the Affected Area as roosting habitat, specifically buildings in downtown Los Angeles and existing bridges crossing the Los Angeles River, Rio Hondo, and San Gabriel River. Big free tailed bat, a CDFW Species of Special Concern, may utilize the Affected Area as foraging habitat. A Bat Habitat Suitability Assessment (Mitigation Measure BIO-1) should be conducted by a qualified bat biologist within the Affected Area to determine the potential for impacts resulting from project operations during the bat maternity season (June 1-October 31).

Additionally, nesting bird habitat is present throughout the Affected Area, including within proposed station areas, Maintenance and Storage Facilities, TPSS sites, and parking facilities. Nesting bird species are protected by the MBTA and the CFGC. Increased noise or increased human presence in the Affected Area may result in adverse effects to special-status wildlife. However, the Project is located in a heavily developed/disturbed area, and as such, operation of the Project is not expected to present a new or unusual use within the area, and therefore, would be unlikely to affect wildlife species should they be present.

### 5.1.2.2 Jurisdictional Resources

Based on the jurisdictional delineation conducted for this study, three potential crossings of jurisdictional water resources, the Los Angeles, Rio Hondo and San Gabriel Rivers, occur within the Affected Area. None of these crossings contain intact riverine or wetland vegetation. The Project would span these resources and operation of the Project would not impact these jurisdictional water resources because there would be no disturbance to the bed, banks, and any associated vegetation, or discharge of fill material into the features.

### 5.1.2.3 Protected Trees

Any protected trees within the Affected Area would not be impacted by the operation of the Project.

### 5.1.3 Design Options

- Design Option 1 MWD
- Design Option 2 Little Tokyo Station

These components are substantially similar to the rest of the Affected Area in regard to existing biological conditions (i.e., urban, disturbed). Additionally, these components are underground, and construction of these design options would not result in impacts to biological resources. Therefore, the impact conclusions presented above for the Build Alternatives are applicable to Design Options 1 and 2.

### 5.1.4 Maintenance and Storage Facility

The Bellflower and Paramount Maintenance and Storage Facilities are substantially similar to the rest of the Affected Area in regard to existing biological conditions (i.e., urban, disturbed). Therefore, the impact conclusions presented above for the Build Alternatives are applicable to the Bellflower and Paramount Maintenance and Storage Facilities.



## 5.2 Construction Impacts

This section discusses the possible adverse impacts to biological resources that may occur from construction of the proposed Project. Environmental impacts and consequences were analyzed for the Project as a whole and not broken down by geographic section as the urban nature of the Affected Area is generally consistent across geographic sections for biological resources.

### 5.2.1 No Build Alternative

The No Build Alternative includes projects identified in the SCAG 2016 RTP/SCS (SCAG 2016), Metro's 2009 LRTP, and Measure M. Under the No Build Alternative, the Build Alternative would not be developed. However, several infrastructure and transportation-related projects located within the Study Area as described in Table 2.1 would be implemented and built. SCAG 2016 RTP/SCS, Metro's 2009 LRTP, and Measure M projects identified in the vicinity of the Project alignment include the Metro East-West Line/Regional Connector/Eastside Phase 2, CA HSR, Metro North-South Line/Regional Connector, improvements to the Metro bus system and local municipality bus systems, I-710 South Corridor Project, and I-105 Express Lane. Project-related TODs are not included in the No Build Alternative because the future planning of TODs surrounding the Project station areas cannot occur without implementation of the Project.

The projects included in the No Build Alternative would change the regional transportation system and likely reduce regional vehicle miles traveled. This would result in fewer automobiles on the regional roadway network and less mobile noise. Construction of projects included in the No Build Alternative could affect biological resources, including street trees. Under the No Build Alternative, no changes related to the Build Alternatives, and no project-related impacts to biological resources would occur. It is anticipated mitigation would be identified and implemented as feasible. Therefore, the No Build Alternative would not cause new adverse effects related to biological resources during construction.

### 5.2.2 Build Alternatives

Project construction activities would have the potential to result in direct and/or indirect adverse impacts to nesting birds, roosting and/or foraging bats, jurisdictional resources, and protected trees. Those potential impacts are outlined in the following sections. Environmental impacts and consequences were analyzed for the Project as a whole and not broken down by geographic section as the urban nature of the Affected Area is generally consistent across geographic sections for this resource.

#### 5.2.2.1 Special-Status Species

If initial ground disturbance and vegetation/tree trimming or removal is required during the nesting bird season, the Project may adversely impact nesting birds through increased injury or mortality or disruption of normal adult behaviors resulting in the abandonment or harm to eggs and nestlings. Construction related noise and dust could also result in an adverse indirect impact to nesting birds. Likewise, if initial ground disturbance takes place during bat maternity season (June 1-October 31), the Project may adversely impact maternal roosting bats and their young by increasing the potential for injury or mortality through disruption of normal foraging, flying, or roosting behaviors. Mitigation Measures BIO-1 and BIO-2, described below, would be implemented to avoid or minimize adverse impacts to bats and

nesting birds. After implementation of these mitigation measures, no adverse effects to special-status species are expected to occur.

### 5.2.2.2 Jurisdictional Resources

Current engineering plans indicate that permanent piers and debris walls will be constructed within the jurisdictional limits of the Los Angeles River, Rio Hondo, and San Gabriel River. The Project does not propose to alter any embankments or the existing contours of the jurisdictional resources. The jurisdictional delineation conducted for this study mapped the location and extent of jurisdictional water resources potentially impacted by the proposed project. Specifically, the Los Angeles River, Rio Hondo, and San Gabriel River crossings would result in approximately 0.009 acres, 0.01 acres, and 0.02 acres of fill, respectively. Construction of these structures must adhere to the requirements of the USACE under Section 404 of the CWA and potentially Section 408 of the Rivers and Harbors Act, the RWQCB under Section 401 of the CWA, and CDFW pursuant to Section 1600 et. seq. of the CFGC. These jurisdictional water resources would be confirmed by the state and federal authorities at the time that permits are requested. Mitigation Measure BIO-3 (described below) would be implemented to avoid and minimize adverse impacts to jurisdictional resources to the extent practicable. With implementation of mitigation impacts to jurisdictional water resources would not be adverse.

### 5.2.2.3 Protected Trees

Impacts to trees that meet the requirements of local policies may require a permit to be obtained prior to encroachment or removal/relocation of protected trees. Relevant tree protection regulations or ordinances of jurisdictions within the Affected Area are provided in detail in Section 3.4 of this Impact Analysis Report for the cities of Los Angeles, Huntington Park, Bell, South Gate, Downey and Cerritos. The unincorporated LA County, Vernon, Cudahy, Paramount, Bellflower and Artesia do not have specific applicable regulations or ordinances related to protected trees.

#### City of Los Angeles

As previously discussed, Per Section 46 (Protected Tree Regulations) of the LAMC, removal or relocation of street trees and protected native trees regulated by the City of Los Angeles requires a permit to be obtained from the Board of Public Works.

The exact number and species of protected trees potentially impacted within the City of Los Angeles is not known at this time. However, it is assumed that some protected trees would be adversely impacted by construction of the Project. The Project would comply with applicable regulations and ordinances as required by the City of Los Angeles to minimize potential impacts. Nonetheless, Mitigation Measure BIO-4 (described below) would be implemented to aid in the protection of protected trees to the greatest extent and avoid adverse impacts.

#### City of Huntington Park

As previously discussed, Section 7-5.204 of the Huntington Park Municipal Code states that prior to plant removal, including street trees, a permit must be obtained. Furthermore, for parkway trees, direct request must be filed with the City's Director.

The exact number and species of protected trees potentially impacted within the City of Huntington Park is not known at this time. However, it is assumed that some protected trees

would be adversely impacted by construction of the Project. The Project would comply with applicable regulations and ordinances as required by the City of Huntington Park to minimize potential impacts. Nonetheless, Mitigation Measure BIO-4 would be implemented to aid in the protection of protected trees to the greatest extent and avoid adverse impacts.

### City of Bell

As previously discussed, Section 12.24.060 of the Bell Municipal Code states that prior to tree removal approval from the city council is required.

The exact number and species of protected trees potentially impacted within the City of Bell is not known at this time. However, it is assumed that some protected trees would be adversely impacted by construction of the Project. The Project would comply with applicable regulations and ordinances as required by the City of Bell to minimize potential impacts. Nonetheless, Mitigation Measure BIO-4 would be implemented to aid in the protection of protected trees to the greatest extent and avoid adverse impacts.

### City of South Gate

As previously discussed, Section 5.33 of South Gate Municipal Code states that a permit must be obtained prior to the planting, removal, relocation, or damage to public trees.

The exact number and species of protected trees potentially impacted within the City of South Gate is not known at this time. However, it is assumed that some protected trees would be adversely impacted by construction of the Project. The Project would comply with applicable regulations and ordinances as required by the City of South Gate to minimize potential impacts. Nonetheless, Mitigation Measure BIO-4 would be implemented to aid in the protection of protected trees to the greatest extent and avoid adverse impacts.

### City of Downey

As previously discussed, Section 7605 of the Downey Municipal Code, states that street tree removal would require a replacement if deemed appropriate and in accordance with the official Tree Species List and Master Street Tree Plan. Further, no public street tree will be removed/planted without obtaining a permit.

The exact number and species of protected trees potentially impacted within the City of Downey is not known at this time. However, it is assumed that some protected trees would be adversely impacted by construction of the Project. The Project would comply with applicable regulations and ordinances as required by the City of Downey to minimize potential impacts. Nonetheless, Mitigation Measure BIO-4 would be implemented to aid in the protection of protected trees to the greatest extent and avoid adverse impacts.

### City of Cerritos

As previously discussed, Section 9.75.205 of Cerritos Municipal Code states that “No person shall plant, remove, cut, prune, root prune, apply pesticides or otherwise disturb any city tree.” There are no provisions for replacements of impacted trees.

The exact number and species of protected trees potentially impacted within the City of Cerritos is not known at this time. However, it is assumed that some protected trees would be adversely impacted by construction of the Project. The Project would comply with applicable regulations and ordinances as required by the City of Cerritos to minimize

potential impacts. Nonetheless, Mitigation Measure BIO-4 would be implemented to aid in the protection of protected trees to the greatest extent and avoid adverse impacts.

### 5.2.3 Design Options

- Design Option 1 MWD
- Design Option 2 Little Tokyo Station

These components are substantially similar to the rest of the Affected Area in regard to existing biological conditions (i.e., urban, disturbed). Additionally, these components are underground, and construction of these design options would not result in impacts to biological resources. Therefore, the impact conclusions presented above for the Build Alternatives are applicable to Design Options 1 and 2.

### 5.2.4 Maintenance and Storage Facility

The Bellflower and Paramount Maintenance and Storage Facilities are substantially similar to the rest of the Affected Area in regard to existing biological conditions (i.e., urban, disturbed). Therefore, the impact conclusions presented above for the Build Alternatives are applicable to the Bellflower and Paramount Maintenance and Storage Facilities.

## 6 MITIGATION MEASURES

With implementation of the following mitigation measures, impacts would not be adverse under NEPA and would be less than significant under CEQA.

**BIO-1: Special-Status Bats.** A Bat Habitat Suitability Assessment would be conducted by a qualified bat biologist prior to initiation of construction near areas with the potential to provide bat habitat to determine the potential presence and document suitable locations for special-status bat species.

If project construction occurs within the bat maternity season (June 1 through October 31) in the vicinity of suitable habitat for western mastiff bat, pallid bat, silver haired bat, and big free tailed bat, a qualified biologist would complete a pre-construction survey to determine the presence or absence of any maternity roosting of special-status bats. If special-status bats are present, project activities disruptive to the roost within 100 feet of an active maternity roost would be delayed, if feasible, until after the maternity season, or until a qualified biologist determines that the roosting site is no longer in use, or as otherwise determined in coordination with the applicable resource agency. This buffer may be reduced at the discretion of a qualified monitoring biologist. A criterion to be used to evaluate the appropriate maternity roosting site buffer includes existing levels of ambient disturbance.

**BIO-2: Nesting Birds.** If project construction occurs within the peak bird breeding season (January 1 through May 31 for raptors, and March 1 through August 31 for passerines) within suitable nesting habitat (e.g., vegetation, bridges, or other structures), a nesting bird and/or raptor pre-construction survey would be conducted by a qualified biologist within the disturbance footprint plus a 300-foot buffer. The survey would occur no more than three days prior to initiation of ground disturbance and/or vegetation removal. If project construction occurs in an area over multiple nesting seasons, a subsequent pre-construction nesting bird and raptor survey may be required prior to the initiation of construction each season.

Pre-construction nesting bird and raptor surveys would be conducted during the time of day when birds are active and would be of sufficient duration to reliably conclude the presence or absence of nesting birds and/or raptors onsite and within the designated vicinity. The nesting bird and raptor survey results would be submitted to Metro prior to ground and/or vegetation disturbance activities.

If active nests are found, their locations would be flagged. An appropriate avoidance buffer, depending upon the species and the proposed work activity, would be determined by a qualified biologist in consultation with the appropriate regulatory agency. The buffer would be delineated with bright orange construction fencing or other suitable flagging. Active nests would be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. If project activities must occur within the buffer, they would be conducted at the discretion of the qualified biologist. Inactive nests that have been confirmed by a qualified biologist could be removed based on their recommendations.

**BIO-3: Jurisdictional Resources.** Impacts associated with permanently disturbed areas within regulated waters would be mitigated in-kind at a minimum ratio of 1:1.

Mitigation can be completed by providing adequate funding to a third-party organization, conservation bank, or in-lieu fee program for the in-kind creation or restoration. If mitigation is implemented offsite, mitigation lands should be located in the vicinity of the Affected Area or within the Los Angeles River Watershed. The Affected Area falls within the service area for the Land Veritas Soquel Canyon mitigation bank, which is approved to provide mitigation for permitted impacts under US Army Corps of Engineers 404 permits, Regional Water Quality Control Board 401 Certifications, and California Department of Fish and Wildlife 1600 agreements.

Note: the final mitigation ratios required by regulatory agencies during the permitting process may differ from those identified above.

**BIO-4: Protected Trees.** Prior to removal of any protected trees (as specified in applicable local ordinances), an Arborist Study would be completed to plot the location of each protected tree that may be encroached upon (i.e., construction activities within the tree protection zone, as measured 5 feet from the canopy dripline), and identify each protected tree proposed to be removed or retained and impacted. The Arborist Study would be prepared by a Certified Consulting Arborist in compliance with local ordinance guidelines and would be prepared in accordance with the reporting requirements of the applicable local jurisdiction. In addition, as required by applicable local jurisdiction ordinances, a tree protection plan would be prepared that would, at a minimum, include: site plans, protective tree barriers, the designated tree protection zone (identifying an area sufficiently large enough to protect the tree and its roots from disturbance), activities prohibited or permitted within the tree protection zone, and encroachment boundaries. The Arborist Study and tree protection plan would be submitted to the appropriate departments of local jurisdictions with applicable tree ordinances for approval prior to the start of any tree-disturbing construction activities.

## 7 CEQA DETERMINATION

Environmental impacts were analyzed for the Project (Alternatives 1, 2, 3, and 4, Design Options 1 and 2 and the Bellflower and Paramount MSF Sites) as a whole and not broken down by geographic section as the urban nature of the Affected Area is generally consistent across geographic sections for biological resources.

### 7.1 Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

#### 7.1.1 Operation

##### 7.1.1.1 No Project Alternative

Under the No Project Alternative, the Project would not be constructed; no new infrastructure would be built within the Affected Area as a result of the Project. The existing freight tracks within the rail ROWs and the environmental setting would remain in current conditions. Therefore, under the No Project Alternative, there would be no direct or indirect impacts to special-status species as a result of Project operation.

##### 7.1.1.2 Build Alternatives

The Project is located in a heavily developed/disturbed area, and as such, operation of the Project is not expected to present a new or unusual use within the area. As a result, the Project would be unlikely to affect wildlife species should they be present. Therefore, direct and indirect impacts to special-status species as a result of project operation would be less than significant, and mitigation would not be required.

#### Mitigation Measures

Operation of the Project would not result in impacts. Therefore, mitigation would not be required.

#### Impacts remaining After Mitigation

No impacts would occur.

#### 7.1.2 Construction

##### 7.1.2.1 No Project Alternative

Under the No Project Alternative, the Project would not be constructed; no new infrastructure would be built within the Affected Area as a result of the Project. The existing freight tracks within the rail ROWs and the environmental setting would remain in current conditions. Therefore, under the No Project Alternative, there would be no direct or indirect impacts to special-status species as a result of Project construction.

### 7.1.2.2 Build Alternatives

As discussed in Section 5.2.2.1, limited low-quality roosting habitat is available for western mastiff bat and pallid bat (CDFW species of special concern), as well as silver haired bat, a special-status G5/S3S4 species, primarily in high-rise buildings in downtown Los Angeles, as well as existing bridges crossing the Los Angeles River, Rio Hondo, and San Gabriel River. Suitable foraging habitat is present for big free tailed bat, a CDFW species of special concern. Impacts to roosting bats may occur during Project construction if the species is roosting within buildings or bridges. Impacts to the bats would be reduced with implementation of Mitigation Measure BIO-1 requiring the preparation of a Bat Habitat Suitability Assessment and preconstruction bat survey, and delay of construction activities if active maternity roosts are present. In addition, habitat for protected nesting birds is present within and adjacent to the Affected Area. With Implementation of Mitigation Measure BIO-2 requiring the avoidance of the bird nesting season or the implementation of a preconstruction nesting bird survey, impacts related to nesting birds would be less than significant.

### Mitigation Measures

Implementation of Mitigation Measures BIO-1 and BIO-2 would be required to reduce impacts to a less than significant level.

### Impacts Remaining after Mitigation

With implementation of Mitigation Measures BIO-1 and BIO-2, impacts to sensitive special-status species resulting from project construction would be avoided, and impacts would be less than significant.

## 7.2 Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

### 7.2.1 Operation

#### 7.2.1.1 No Project Alternatives

As noted above, under the No Project Alternative, the environmental setting would remain in current conditions. Therefore, under the No Project Alternative, there would be no impact on riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS and no impacts would occur as a result of Project operation.

#### 7.2.1.2 Build Alternatives

The Project is located in a highly developed/urban area, and no quality habitat that would support native riparian plant or wildlife species is present. Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in CNDDDB. Similar to special-status plant and wildlife species, vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those



alliances ranked with a scale of global (G) or state/providence (S) as 1 through 3 considered sensitive. The vegetation that is present throughout the Affected Area is ruderal or ornamental in nature. Therefore, impacts to sensitive natural communities would not occur as a result of Project operation. There would be no impact, and mitigation would not be required.

### **Mitigation Measures**

Operation of the Project would not result in impacts. Therefore, mitigation is not required.

### **Impacts remaining After Mitigation**

No impacts would occur.

## **7.2.2 Construction**

### **7.2.2.1 No Project Alternative**

Under the No Project Alternative, the Project would not be constructed; no new infrastructure would be built within the Affected Area as a result of the Project. The existing freight tracks within the rail ROWs and the environmental setting would remain in current conditions. Therefore, under the No Project Alternative, there would be no direct or indirect impacts to special-status species as a result of Project construction.

### **7.2.2.2 Build Alternatives**

The Project is located in a highly developed/urban area and no habitat of quality to support native riparian plant/wildlife species is present. Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in CNDDDB. Similar to special-status plant and wildlife species, vegetation alliances are ranked 1 through 5 based on NatureServe’s (2010) methodology, with those alliances ranked with a scale of global (G) or state/providence (S) as 1 through 3 considered sensitive. The vegetation that is present throughout the Affected Area is ruderal or ornamental in nature. Therefore, impacts to sensitive natural communities would not occur.

### **Mitigation Measures**

Construction of the Project would not result in impacts. Therefore, mitigation is not required.

### **Impacts remaining After Mitigation**

No impacts would occur.

### **7.3 Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?**

#### **7.3.1 Operation**

##### **7.3.1.1 No Project Alternative**

Under the No Project Alternative, the Project would not be constructed, and the environmental setting would remain in current conditions. Therefore, under the No Project Alternative, there would be no impact on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means and no impacts would occur as a result of project operation.

##### **7.3.1.2 Build Alternative**

Operation of the Project would not result in impacts to state or federally protected wetlands. Therefore, no impacts would occur, and mitigation would not be required.

#### **Mitigation Measure**

No mitigation measures are required.

#### **Impacts Remaining After Mitigation**

No impacts would occur.

#### **7.3.2 Construction**

##### **7.3.2.1 No Project Alternative**

Under the No Project Alternative, the Project would not be constructed, and the environmental setting would remain in current conditions. Therefore, under the No Project Alternative, there would be no impact on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means and no impacts would occur as a result of project construction.

##### **7.3.2.2 Build Alternatives**

State and federally protected wetlands are not present within the Affected Area. Therefore, impacts to protected wetlands as a result of the Project would not occur. Urban channels, including the Los Angeles River, Rio Hondo Channel, and the San Gabriel River, occur within the Affected Area. According to current project design and construction methods, impacts to these jurisdictional water resources would occur. Specifically, the Los Angeles River, Rio Hondo Channel, and San Gabriel River crossings associated with Alternatives 1, 2, and 3 would result in 0.09 acre, 0.01 acre, and 0.02 acre of permanent fill, respectively. Alternative 4 would cross the San Gabriel River only.

The Project does not propose to alter any embankments or the existing contours of the jurisdictional resources. Impacts within regulated waters may be subject to the jurisdiction of regulatory agencies. This includes the requirements of the USACE under Section 404 of the Clean Water Act (CWA), the RWQCB under Section 401 of the CWA, and CDFW pursuant to Section 1600 et. seq. of the California Fish and Game Code. The jurisdictional delineation

conducted for this study mapped the extent of regulated waters and potential impacts. However, the location and extent of jurisdictional features would be confirmed by the state and federal authorities at the time that permits are requested. Implementation of Mitigation Measure BIO-3 requiring avoidance, minimization, and compensatory measures would be implemented to minimize and compensate for potential significant impacts to jurisdictional waters. With mitigation, impacts would be less than significant.

### **Mitigation Measure**

Adherence to mitigation measure BIO-3 would require avoidance and minimization and compensatory measures to minimize potential impacts to jurisdictional waters.

### **Impacts Remaining After Mitigation**

Implementation of Mitigation Measure BIO-3 would reduce impacts to a less than significant level.

## **7.4 Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

### **7.4.1 Operation**

#### **7.4.1.1 No Project Alternative**

The Project would not be constructed under the No Project Alternative; the environmental setting would remain in current conditions. Under the No Project Alternative, there would be no interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites and no impacts would occur as a result of Project operation.

#### **7.4.1.2 Build Alternatives**

Operation of the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites, as the Project is located within developed, urban areas. As a result, it is unlikely that wildlife utilizes the immediate area for regional movement. Furthermore, CDFW does not identify any mapped California Essential Habitat Connectivity areas within the Affected Area, nor does it contain any Missing Linkages, as identified by the South Coast Wildlands Network. Therefore, no impacts would occur, and mitigation would not be required.

### **Mitigation Measure**

No mitigation measures are required.

### **Impacts Remaining After Mitigation**

No impacts would occur.

## 7.4.2 Construction

### 7.4.2.1 No Project Alternative

The Project would not be constructed under the No Project Alternative; the environmental setting would remain in current conditions. Under the No Project Alternative, there would be no interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites and no impacts would occur as a result of Project construction.

### 7.4.2.2 Build Alternatives

As discussed in Section 4.1.3.4, the Project is located within developed urban areas and CDFW does not include any mapped California Essential Habitat Connectivity areas within the Affected Area nor does it contain any Missing Linkages as identified by South Coast Wildlands Network. However, the drainage channels may facilitate some wildlife movement for urban-tolerant mammals, such as coyotes and raccoons, and mature ornamental shrubs and trees may serve as habitat linkages for urban-tolerant bird species. Therefore, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites and no impacts would occur.

#### Mitigation Measure

No mitigation measures are required.

#### Impacts Remaining After Mitigation

No impacts would occur.

## 7.5 Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

### 7.5.1 Operation

#### 7.5.1.1 No Project Alternative

The Project would not be constructed under the No Project Alternative and the environmental setting would remain in current conditions. Under the No Project Alternative, there would not be conflicts with any local policies or ordinances protecting biological resources and no impacts would occur.

#### 7.5.1.2 Build Alternatives

Operation of the Project would not conflict with any local policies or ordinances protecting biological resources. Therefore, no impacts would occur, and mitigation would not be required.

#### Mitigation Measure

Operation of the Project would not result in impacts. Therefore, mitigation is not required.

#### Impacts Remaining After Mitigation

No impacts would occur.

## 7.5.2 Construction

### 7.5.2.1 No Project Alternative

The Project would not be constructed under the No Project Alternative; the environmental setting would remain in current conditions. Under the No Project Alternative, the Project would not conflict with any local policies or ordinances protecting biological resources and no impacts would occur as a result of Project construction.

### 7.5.2.2 Build Alternatives

Numerous protected street trees in the cities of Los Angeles, Huntington Park, Bell, South Gate, Downey, Bellflower, and Cerritos are present within the Affected Area. The exact number and species of protected trees potentially impacted by the Project is not known at this time. Based on a desktop study, approximately 110 trees could be affected by Alternatives 1 and 2, 85 trees by Alternative 3, and 75 trees by Alternative 4. Impacts to protected trees would result in a potentially significant impact without mitigation. With the implementation of Mitigation Measure BIO-4, an Arborist Study, prepared by a Certified Arborist shall be completed to plot the location of each protected tree within the Affected Area that may be encroached upon, and identify each protected tree proposed to be removed or retained and impacted. Additionally, the Arborist Study will detail a mitigation program for the potential impacts, to be tailored to comply with the requirements of each relevant local jurisdiction. Thus, impacts related to protected trees would be reduced to a less than significant level with mitigation.

#### Mitigation Measure

Implementation of Mitigation Measure BIO-4 would be required.

#### Impacts Remaining After Mitigation

Implementation of mitigation measure BIO-4 would require the preparation of an Arborist Study to plot locations of protected trees and a detailed mitigation program for potential impacts. Required adherence to mitigation measure BIO-4 would reduce impacts to a less than significant level.

## 7.6 Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

### 7.6.1 Operation

#### 7.6.1.1 No Project Alternative

Under the No Project Alternative, the Project would not be constructed, and the environmental setting would remain in current conditions. Under the No Project Alternative, there would not be conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan and no impacts would occur.

### **7.6.1.2 Build Alternatives**

Operation of the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved habitat conservation plan. Therefore, no impacts would occur, and mitigation would not be required.

#### **Mitigation Measure**

No mitigation measures are required.

#### **Impacts Remaining After Mitigation**

No impacts would occur.

### **7.6.2 Construction**

#### **7.6.2.1 No Project Alternative**

Under the No Project Alternative, the Project would not be constructed, and the environmental setting would remain in current conditions. Under the No Project Alternative, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan and no impacts would occur as a result of Project construction.

#### **7.6.2.2 Build Alternative**

The Project is not located in an area with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved habitat conservation plan. Thus, the Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impacts would occur.

#### **Mitigation Measure**

No mitigation measures are required.

#### **Impacts Remaining After Mitigation**

No impacts would occur.

## 8 REFERENCES

- American Ornithologists' Union (AOU) and Cooper Ornithological Society. 2017. Check-list of North American Birds. Retrieved from <http://checklist.aou.org/> (May 17, 2017).
- Baldwin B. G., Goldman, D. H., Keil D. J., Patterson R., Rosatti T. J. (editors). 2012. The Jepson Manual: Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded. University of California Press. Berkeley, California.
- Bowers, N., R. Bowers, & K. Kaufman. 2004. Mammals of North America.
- Burt, W.H., and R.P. Grossenheider. 1980. A Field Guide to the Mammals of North American North of Mexico. The Peterson Field Guide Series.
- Calflora. 2009. Information on Wild California Plants for Conservation, Education, and Appreciation. Berkeley CA. Updated online and accessed via: <http://www.calflora.org/>.
- California Department of Fish and Wildlife. 2017a. California Natural Diversity Database, RareFind 5 (May 15, 2017).
- California Department of Fish and Wildlife. 2017b. Biogeographic Information and Observation System (BIOS). Retrieved from <http://bios.dfg.ca.gov> (May 15, 2017).
- California Department of Fish and Wildlife. 2017c. Special Animals List. Biogeographic Data Branch, California Natural Diversity Database.
- California Department of Fish and Wildlife. 2017d. Special Vascular Plants, Bryophytes, and Lichens List. Biogeographic Data Branch, California Natural Diversity Database.
- California Native Plant Society (CNPS), Rare Plant Program. 2017. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> (May 15, 2017).
- California, State of. 2017. California Fish and Game Code. Available at: <http://codes.findlaw.com/ca/fish-and-game-code/>.
- Crother, Brian I. *Scientific and Standard English Names of Amphibians and Reptiles of North America*. [https://www.southeastern.edu/acad\\_research/depts/biol/faculty/pdf/crother2012.pdf](https://www.southeastern.edu/acad_research/depts/biol/faculty/pdf/crother2012.pdf) (accessed August 2019)
- Google Earth. 2017. Available at: <http://earth.google.com/>.
- Hatch, Charles R. 2007. Trees of the California Landscape. University of California Press. Berkeley, California.
- Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Wildlife, Nongame Heritage Program. 156 pgs.
- Jepson Flora Project (eds.) 2017. *Jepson eFlora*, <http://ucjeps.berkeley.edu/eflora/>
- National Oceanic and Atmospheric Administration. 2019a. Essential Fish Habitat Mapper. <https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper> (accessed August 2019).

- National Oceanic and Atmospheric Administration. 2019b. California Species List Tools. [https://www.westcoast.fisheries.noaa.gov/maps\\_data/california\\_species\\_list\\_tools.html](https://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html) (accessed August 2019).
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento.
- Southern California Association of Governments (SCAG). 2016. *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 2016. <http://scagrtpscs.net/Pages/default.aspx>.
- State Water Resources Control Board (SWRCB). 2019. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. March 2019.
- United States Department of Agriculture, Natural Resources Conservation Service. 1973. Soil Survey, Los Angeles County, California, Southeastern Part.
- United States Department of Agricultural, Natural Resources Conservation Service. 2017. Web Soil Survey. Retrieved from <http://websoilsurvey.nrcs.usda.gov/app> (May 15, 2017).
- United States Fish and Wildlife Service. 1973. The Endangered Species Act of 1973, as amended (16 U.S.C 1531 et seq.).
- United States Fish and Wildlife Service. 2017a. National Wetlands Inventory. Retrieved from <http://wetlands.fws.gov> (May 15, 2017).
- United States Fish and Wildlife Service. 2017b. Information Planning and Conservation System (IPAC) Retrieved from: <http://ecos.fws.gov/ipac/gettingStarted/index>
- United States Fish and Wildlife Service. 2017c. Critical Habitat Portal. Retrieved from <http://criticalhabitat.fws.gov> (May 15, 2017).
- United States Geological Survey (USGS). 2020. The National Map Viewer. <https://viewer.nationalmap.gov/advanced-viewer/>(accessed July 2020).
- University of California, Berkeley. 2014. The Jepson Herbarium. <https://ucjeps.berkeley.edu/interchange/>(accessed August 2019).
- Wilson, D.E. and Reeder, D.M. 2005. Mammal Species of the World. A Taxonomic and Geographic Reference (3rd edition), Johns Hopkins University Press, 2,142 pp. Retrieved from <http://www.departments.bucknell.edu/biology/resources/msw3/browse.asp> (May 15, 2017).



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## APPENDIX A: FINAL AQUATIC RESOURCES REPORT



# West Santa Ana Branch Transit Corridor

Appendix A: Final Final Aquatic Resources Delineation

Task No. 12.3a



Metro®



# **Appendix A:**

## **Final Aquatic Resources Delineation**

**Task No. 12.3 (Deliverable No. 12.3a)**

*Prepared for:*



**Metro**<sup>®</sup>

Los Angeles County  
Metropolitan Transportation Authority

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**June 2021**



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## ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
GPS	global positioning satellite
I	Interstate
LA	Los Angeles
LADWP	Los Angeles Department of Water and Power
LRT	light rail transit
OBL	Obligate Wetland
OHWM	Ordinary High Water Mark
Project	West Santa Ana Branch Transit Corridor
Rincon	Rincon Consultants, Inc.
RWQCB	Regional Water Quality Control Board
SR	State Route
SWRCB	State Water Resources Control Board
TNW	Traditionally Navigable Water
UPL	Obligate Upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
WSAB	West Santa Ana Branch



## 1 EXECUTIVE SUMMARY

On behalf of WSP USA, Inc., Rincon Consultants, Inc. (Rincon) prepared this Aquatic Resources Delineation for the West Santa Ana Branch (WSAB) Transit Corridor Project (project), located in Los Angeles County, California.

The delineation was conducted to confirm the location and extent of resources potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). Proposed impacts to potential jurisdictional features may be subject to USACE/RWQCB/CDFW notification and permit requirements, pursuant to Section 404 of the Clean Water Act and Sections 1600 *et seq.* of the California Fish and Game Code. This report was prepared to support USACE, RWQCB, and CDFW permitting processes, as well as environmental review under the California Environmental Quality Act (CEQA).

Three potentially jurisdictional drainages were identified and delineated within the study area. Total potential USACE jurisdiction is 5.79 acres; total potential RWQCB jurisdiction is 5.79 acres; and total potential CDFW jurisdiction is 9.83 acres.



## 2 INTRODUCTION

Rincon Consultants, Inc. (Rincon) conducted an aquatic resources delineation for the proposed West Santa Ana Branch Transit Corridor Project (project). The delineation was conducted to determine the location and extent of potentially jurisdictional waters near the proposed project footprint. Potentially jurisdictional waters include waters of the U.S. subject to the jurisdictions of the USACE and the Los Angeles RWQCB, and streambed/banks and associated riparian vegetation potentially subject to the jurisdictions of the RWQCB and CDFW. Any proposed work activities in areas identified as jurisdictional waters and/or streambed/banks and associated riparian habitat may be subject to the permit requirements of the USACE under Section 404 of the Clean Water Act (CWA), the Los Angeles RWQCB under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and/or CDFW pursuant to Sections 1600 *et seq.* of the California Fish and Game Code. Final jurisdictional determinations of the boundaries of waters and streambed habitats are made by each agency.

### 2.1 Project Location

The project proposes a light rail transit (LRT) line that would extend from four possible northern termini in southeast Los Angeles (LA) County to a southern terminus in the City of Artesia. The project is located within Ranges 12 and 13 west, Townships 1, 2, and 3 south, and Sections 11 and 17 (San Bernardino Principal Meridian) depicted on *South Gate, Inglewood, Los Angeles, and Hollywood* California United States Geological Survey 7.5-minute quadrangle maps. The proposed project begins in downtown Los Angeles and terminates at Pioneer Boulevard with a potential terminus at the Los Angeles/Orange County line to the south (Figure 2-1 and Figure 2-2).

All proposed alignment sections are within previously developed areas, such as public right-of-way and industrial, commercial, and residential areas. For the purpose of environmental analysis, the project is divided into two sections, northern and southern, with four alternatives. All project alternatives are proposed to cross potentially jurisdictional drainages in the same location, except Alternative 4, which only crosses the San Gabriel River. All proposed crossings are located in the southern section of the project. This report addresses all project alternatives.

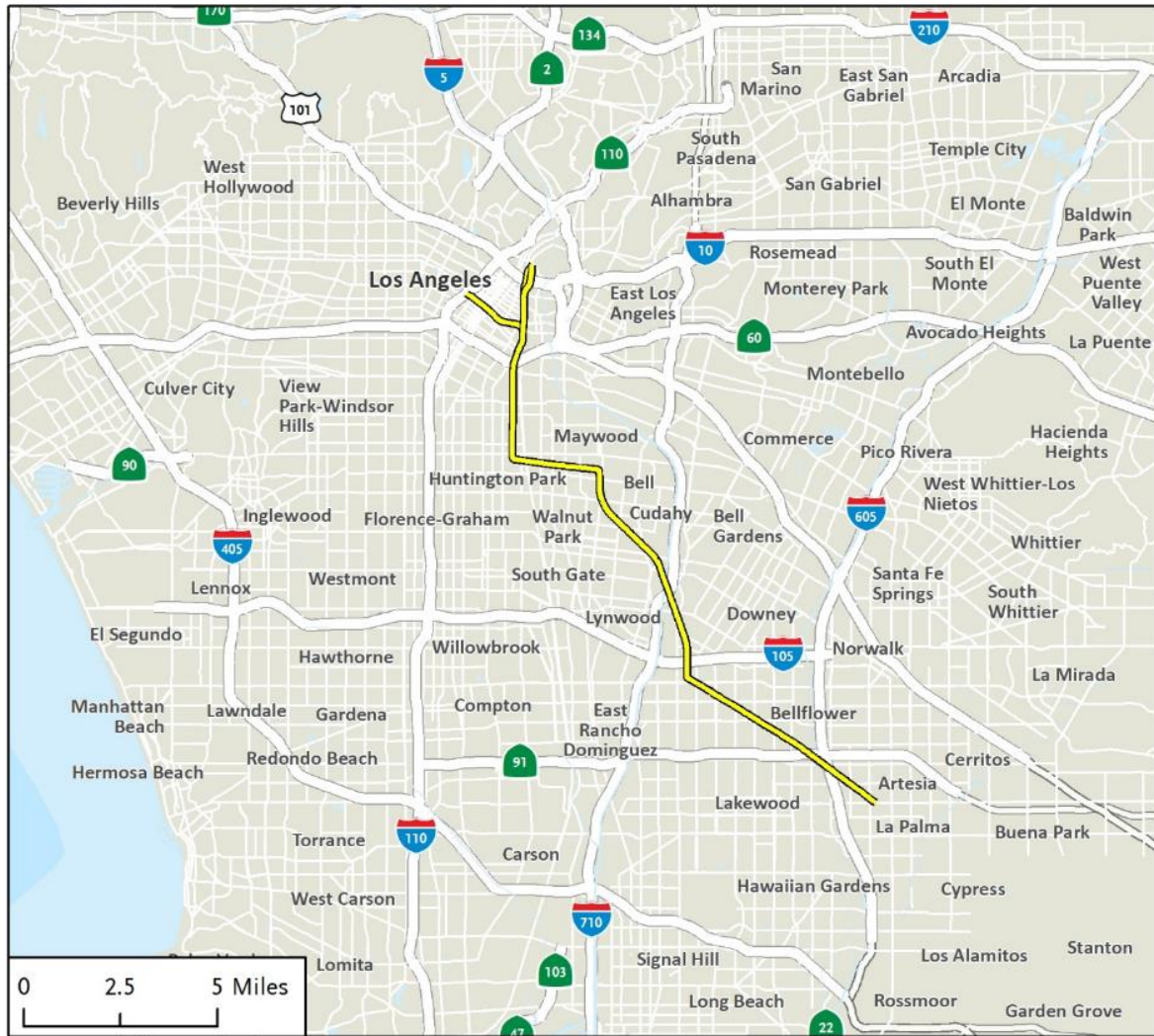
#### Northern Section

The Northern Section includes approximately 8 miles of Alternatives 1 and 2 and 3.8 miles of Alternative 3 and covers the geographic area from downtown Los Angeles to Florence Avenue, where the alignment transitions into the San Pedro Subdivision ROW (Figure 2-3). This section traverses the Cities of Los Angeles, Vernon, Huntington Park, Bell, and the unincorporated Florence-Firestone community of LA County.

#### Southern Section

The Southern Section is approximately 11 miles long and extends from south of Florence Avenue in the City of Huntington Park to the terminus at Pioneer Station in the City of Artesia, as shown in Figure 2-4. This section traverses through the Cities of Huntington Park, Cudahy, South Gate, Downey, Paramount, Bellflower, Cerritos, and Artesia.

Figure 2-1. Regional Vicinity



— Project Alignment 



Fig. 2. Regional Location



Figure 2-2. Project Overview



Source: Metro 2020

Figure 2-3. Northern Section



Source: Metro 2020

Figure 2-4. Southern Section



Source: Metro 2020

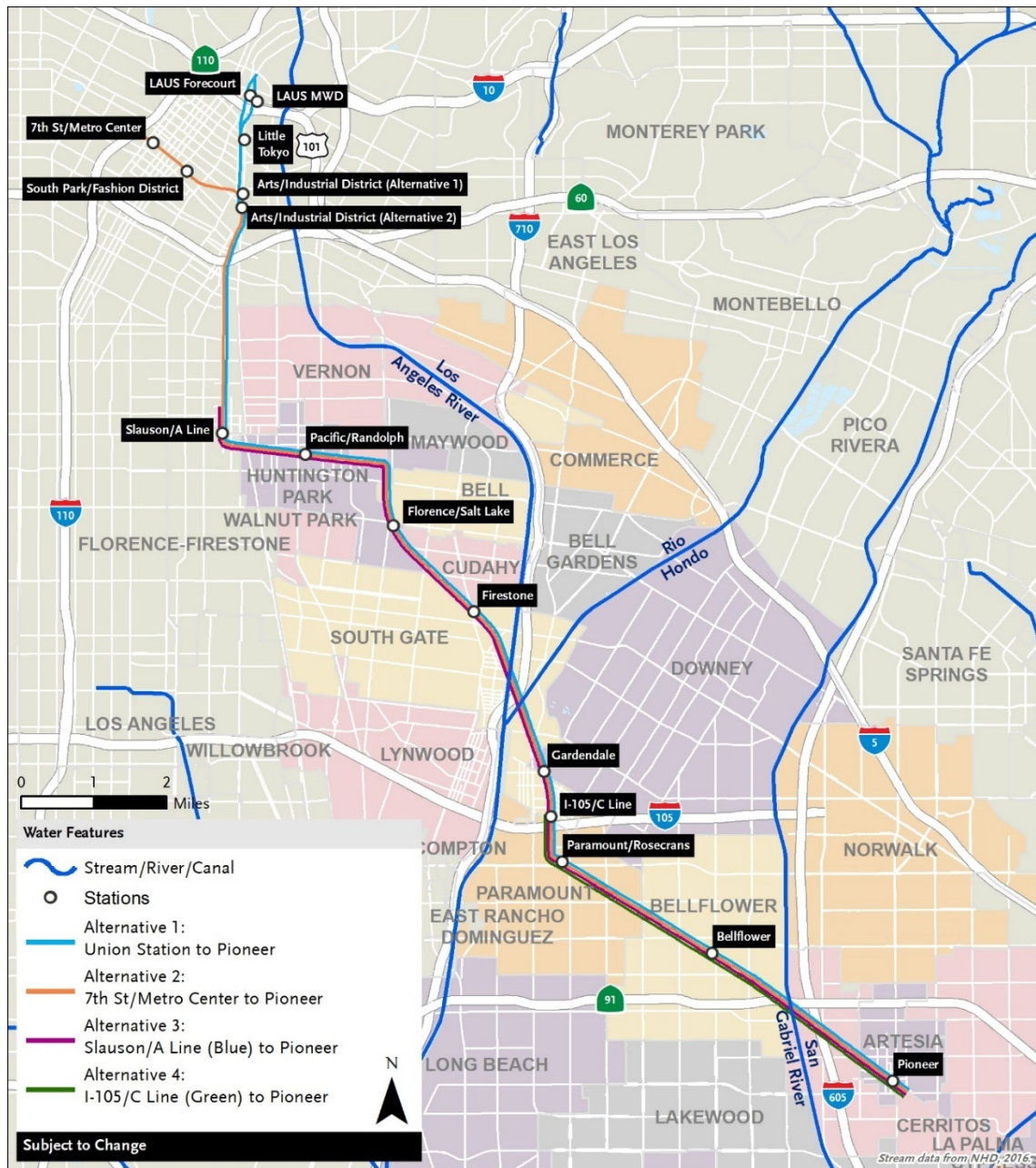
## 2.2 Project Description

The Project is one of 17 transit projects funded by Measure R, a one-half cent sales tax approved by LA County voters in November 2008, and Measure M, an extension of Measure R and an additional one-half cent sales tax approved by voters in November 2016. The Project is a new LRT line that would extend from four possible northern termini in southeast LA County to a southern terminus in the City of Artesia serving the communities of the Arts District, the Financial District, and surrounding communities in the City of Los Angeles, the unincorporated Florence-Graham community of LA County, and the Cities of Vernon, Huntington Park, Bell, Cudahy, South Gate, Downey, Paramount, Bellflower, Artesia, and Cerritos. The Project would provide reliable, fixed- guideway transit service that would increase mobility and connectivity for historically underserved, transit-dependent and environmental justice communities; reduce travel times on local and regional transportation networks; and accommodate substantial future employment and population growth.

Alternatives 1, 2, and 3 of the proposed alignment cross the Los Angeles River and the Rio Hondo Channel (a tributary to the Los Angeles River) near Interstate (I-) 710. Alternatives 1, 2, 3, and 4 of the proposed alignment cross the San Gabriel River at State Route (SR) 91 in the City of Bellflower (Figure 2-5). Alternatives 1, 2, and 3 traverse the Los Angeles River between the southern end of Wood Avenue and I-710 in the City of Lynwood (Figure 2-6). Alternatives 1, 2, and 3 traverse the Rio Hondo Channel between I-710 and Ruchti Road in the City of Lynnwood (Figure 2-6). Alternatives 1, 2, 3, and 4 traverse the San Gabriel River at SR-91 in the City of Bellflower (Figure 2-7). The Study Area is defined as where the project alignment crosses each river, plus a 100-foot buffer.

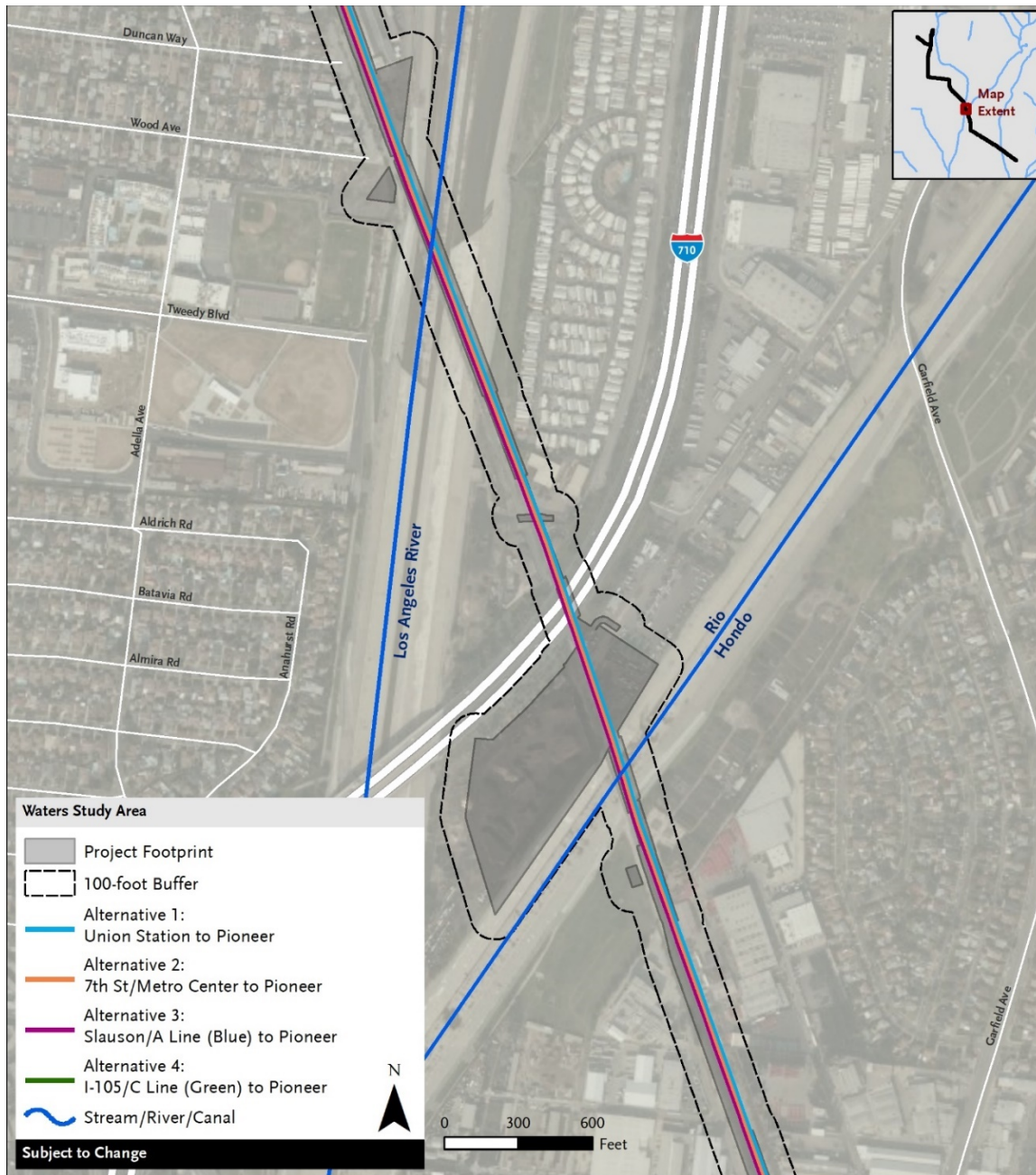
Current engineering plans indicate that the crossings would be designed as bridges; permanent piers and debris walls would be constructed within the LA River, Rio Hondo, and San Gabriel River. The Project does not propose to alter any embankments or the existing contours of the three rivers.

Figure 2-5. River Crossings



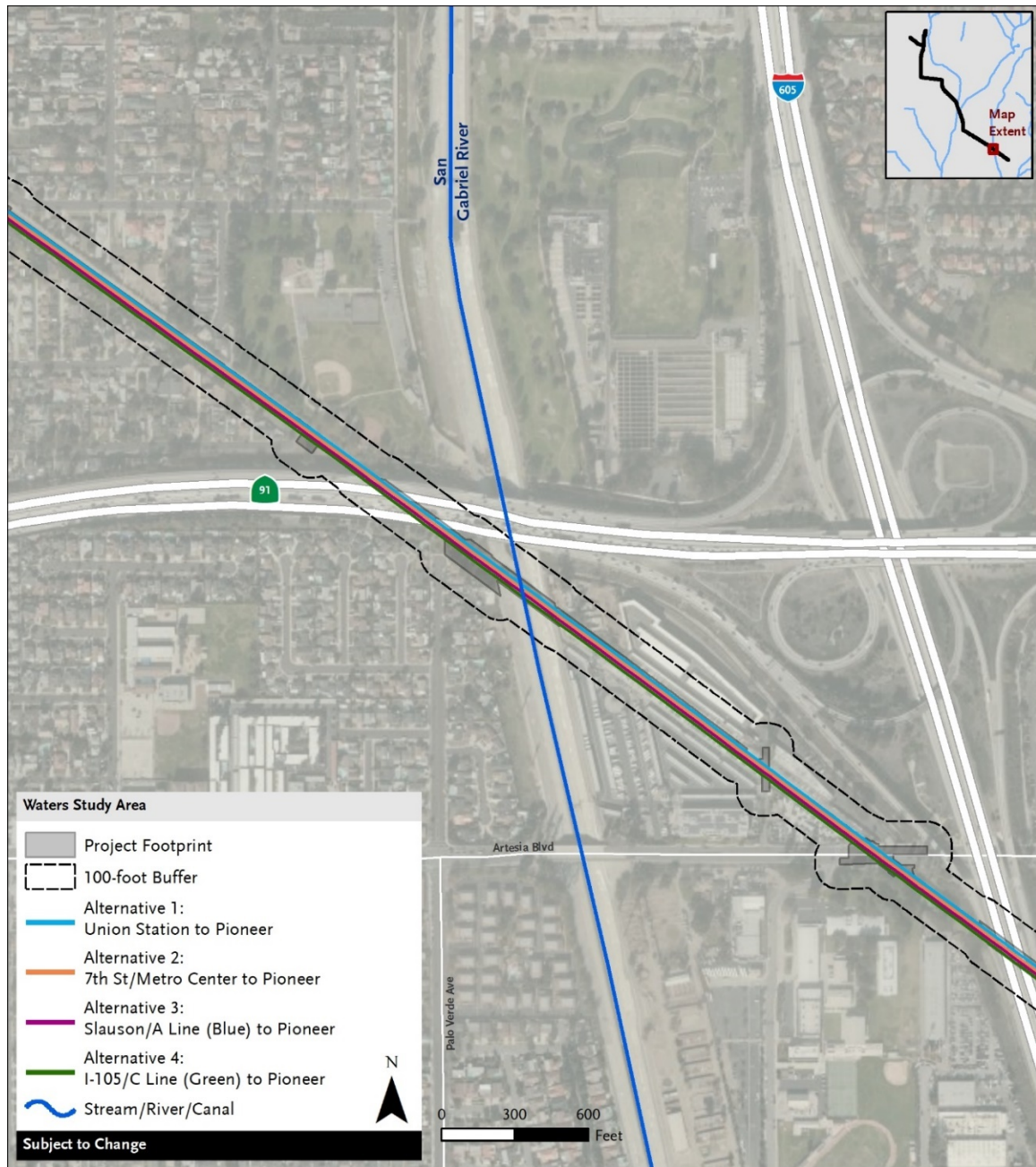
Source: Metro 2020

Figure 2-6. Los Angeles River and Rio Hondo



Source: Metro 2020

Figure 2-7. San Gabriel River



Source: Metro 2020

## 2.3 Environmental Setting

### Topography and Hydrology

The Study Area is located in the Los Angeles Basin, which is an oval-shaped, alluvial plain spanning approximately 40 miles northwest to southeast. The Los Angeles Basin is bordered by the Santa Monica Mountains on the north, the Puente Hills to the east, the Pacific Ocean to the west, and the Santa Ana Mountains to the south. The topography of the region is generally flat and includes commercial urban lands and roads and channelized drainages. Elevation ranges from 78 feet to 294 feet above mean sea level. All proposed alignment sections are within previously developed areas, such as public right-of-way and industrial, commercial, and residential areas.

The Study Area is within the Los Angeles River hydrologic unit (HUC 18070105) of the South Coast hydrologic region. The Los Angeles River is a perennial river originating in the Simi Hills and Santa Susana Mountains west of the City of Los Angeles and discharges to the Pacific Ocean. Most of the river flows through a concrete-lined channel and a series of flood-control basins before reaching the Pacific Ocean in the City of Long Beach. The Rio Hondo is a perennial river originating in the San Gabriel Mountains and is tributary to the Los Angeles River. The confluence of the two rivers is less than 1 mile south of the Project. The San Gabriel River is a perennial river originating in the San Gabriel mountains and discharges to the Pacific Ocean between the Cities of Long Beach and Seal Beach.

The Los Angeles River and Rio Hondo were channelized by the USACE between 1938 and 1960 as a response to destructive flood events in the 1930s (Los Angeles Department of Water and Power [LADWP] 2020a). An approximate 10-mile stretch of the San Gabriel River was also channelized and concrete lined during this period from below Whittier Narrows Dam to past Coyote Creek (LADWP 2020b).

### Climate

Weather in Los Angeles is typical of a Mediterranean-like semi-arid climate. Summers are warm and dry while winters are cool and relatively wet. Annual precipitation in LA County is typically about 12 to 15 inches, with the majority of rainfall occurring between November and April in typical years. Near the Study Area, most of the precipitation occurs between November and March, and mean annual temperatures range from 55 to 74 degrees Fahrenheit (°F) (Western Regional Climate Center 2020).

### Soils

Soils within the Study Area have been highly disturbed due to surrounding development and much of the area consists of fill. Based on a desktop review of the United States Department of Agriculture (USDA), National Resources Conservation Service Web Soil Survey (USDA 2020a), the Study Area contains one mapped soil type: Urban Land, frequently flooded. This soil type is mapped within channels with a manufactured layer and is not considered hydric.



## 3 METHODOLOGY

Rincon prepared this aquatic resources delineation of waters of the United States, waters of the State, and CDFW-jurisdictional streambeds based on a review of available literature and imagery supplemented with a field reconnaissance survey. The delineation assessed drainages within the project alignment with boundaries of all features mapped in the field using global positioning satellite (GPS) technology.

This aquatic resources delineation was conducted in accordance with currently accepted regulatory guidelines. The delineation analysis began with a literature review of existing studies, maps, and other publications. After completion of the literature review, a field delineation was completed to identify, describe, and map all potential jurisdictional waters within the Study Area.

### 3.1 Literature Review

Prior to the field survey, Rincon reviewed aerial photographs of the site; regional and site-specific topographic maps; *the Soil Survey, Los Angeles County, California, Southeastern Part* (USDA 1973); and other available background information to better characterize the nature and extent of potentially jurisdictional waters and wetlands. The *National Wetlands Inventory* (USFWS 2020) and the *National Hydrography Dataset* (USGS 2020a) were reviewed to determine if any wetlands or other waters had been previously documented and mapped within the Study Area. The *National Hydric Soils List by State: California* (USDA 2020b) was also reviewed to determine if any soil map units mapped in the site were classified as hydric.

### 3.2 Field Survey

Rincon Senior Biologist Robin Murray and Associate Biologist Gayle Bufo conducted an aquatic resources delineation field survey within the Study Area on July 24, 2020. All potentially jurisdictional features within the site were inspected to record existing conditions and determine jurisdictional limits.

Drainage features, width measurements, and wetland sample points were mapped using a Trimble® GeoXT GPS unit and recent aerial photography. Width measurements for USACE jurisdiction were determined based on the lateral extent of the Ordinary High Water Mark (OHWM). RWQCB jurisdiction was determined in accordance with the previously listed methodologies to identify waters of the U.S. The procedures of the State Water Resources Control Board's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (RWQCB 2019) were applied, and the Study Area was reviewed for features that may have fallen outside federal jurisdiction due to lack of connectivity or insufficient flow. CDFW jurisdiction was delineated in accordance with Section 1602(a) of the California Fish and Game Code and were measured laterally from bank to bank at the top of the channel or to the outer drip-line of associated riparian vegetation, if present. Appendix A provides pertinent regulations and definitions pertaining to this aquatic resources delineation.

One OHWM data sheet and one wetland sample point were completed at a representative location within the Study Area of each crossing to determine the presence/absence of wetland indicators, such as hydrophytic vegetation, hydric soils, and wetland hydrology. Soil test pits were not conducted since the Study Area consisted of concrete-lined channels devoid of soils.



## 4 DELINEATION RESULTS

Three potentially jurisdictional drainages, the Los Angeles River, Rio Hondo, and San Gabriel River were identified within the Study Area.

### 4.1 Los Angeles River

The Los Angeles River originates in the Simi Hills and Santa Susana Mountains west of the City of Los Angeles. The Los Angeles River flows eastward toward Burbank, then southward to Long Beach and discharges to the Pacific Ocean. A large portion of the river flows through a concrete-lined channel and a series of flood control basins before reaching the Pacific Ocean. The mainstem of the Los Angeles River is considered a “Traditionally Navigable Water” (TNW) from its origins at the confluence of Arroyo Calabasas and Bell Creek to San Pedro Bay at the Pacific Ocean (U.S. Environmental Protection Agency 2010). The entirety of the Los Angeles River within the Study Area is a concrete-lined channel and is generally devoid of vegetation. Vegetation present is sparse and situated within seams of the concrete. Species observed were primarily the non-native plants African finger millet (*Eleusine coracana*), six-petal water primrose (*Ludwigia hexapetala*), and Bermuda grass (*Cynodon dactylon*). Within the concrete-lined portion of the Los Angeles River, the OHWM is defined by the structure of the concrete and water stains present on the concrete. Within the Study Area, the OHWM is approximately 250 feet in width. A low-flow channel approximately 25 feet wide is present in the center of the Los Angeles River. The concrete banks of the Los Angeles River are approximately 20 to 30 feet high and slope downward at an approximately 45° angle from the top of the bank. The tops of the banks are concrete.

### 4.2 Rio Hondo

The headwaters of the Rio Hondo originate in the San Gabriel Mountains; as a named river, it begins west of Irwindale and flows southwest to its confluence with the Los Angeles River in South Gate, less than 1 mile south of the Study Area. The entirety of the Rio Hondo within the Study Area is a concrete-lined channel. The Rio Hondo is generally devoid of vegetation and what vegetation is present is sparse and situated within seams of the concrete. Species observed were primarily the non-native plants African finger millet, six-petal water primrose, and Bermuda grass. Within the concrete-lined portion of the Rio Hondo, the OHWM is defined by the structure of the concrete and water stains present on the concrete. Within the Study Area, the OHWM is approximately 100 feet in width. The concrete banks of the Rio Hondo are approximately 10 to 30 feet high and slope downward at an approximately 45° angle from the top of the bank. The tops of the banks are concrete.

### 4.3 San Gabriel River

The headwaters of the San Gabriel River originate in the San Gabriel Mountains. The river flows to the southwest, generally paralleling the Rio Hondo. The river then turns at the City of Downey and flows southward until it reaches the Pacific Ocean. The San Gabriel River is considered a TNW at 2.5 feet above mean sea level, near its confluence with the Pacific Ocean (USACE 1972). Based on stream gauge data (USGS 2020b), the flow rate of the San Gabriel River in Long Beach averages 33.8 cubic feet per second, indicating that the river contributes regular surface-water flows to a TNW during a typical year. The entirety of the San Gabriel River within the Study Area is a concrete-lined channel. Due to its concrete lining, the San

Gabriel River within the Study Area is generally devoid of vegetation. Vegetation present is limited to occasional seams of the concrete. Species observed include an emerging seedling of Mexican fan palm (*Washingtonia robusta*) and flax-leaved horseweed (*Erigeron bonariensis*), which are non-native species. Within the concrete-lined portion of the San Gabriel River, the OHWM is defined by the structure of the concrete and water stains present on the concrete. Within the Study Area, the OHWM is approximately 90 feet in width. A low-flow channel approximately 18 feet wide is present in the center of the San Gabriel River. The concrete banks of the San Gabriel River are approximately 10 to 15 feet high and slope downward at an approximately 45° angle from the top of the bank. The tops of the banks are concrete.

## 5 ASSESSMENT OF JURISDICTIONAL WATERS AND WETLANDS

Based upon the findings of Rincon's jurisdictional delineation, the Los Angeles River, Rio Hondo, and San Gabriel River are subject to USACE, RWQCB, and CDFW jurisdiction. All three drainages contain an OHWM and bed, bank, and channel features, although riparian vegetation is absent. No wetlands are present due to the absence of soils and the extremely limited distribution of vegetation. These drainages are classified as USACE non-wetland waters. No isolated waters of the State are present.

Table 5.1 summarizes the total acreage of jurisdictional waters and wetlands on-site per regulatory agency. Figure 5-1, Figure 5-2, and Figure 5-3 show the location and extent of USACE/RWQCB and CDFW jurisdiction within the Study Area for the Los Angeles River, Rio Hondo, and San Gabriel River, respectively.

**Table 5.1. Potential USACE/RWQCB, and CDFW Jurisdictional Waters within the Study Area**

Drainage	USACE/RWQCB Jurisdiction		CDFW Jurisdiction
	Non-wetland Waters Acres (Linear Feet)	Wetland Waters Acres (Linear Feet)	Streambed/ Riparian Acres (Linear Feet)
Los Angeles River	3.308 (499)	0 (0)	4.783 (844)
Rio Hondo	1.63 (1,324)	0 (0)	3.677 (1,389)
San Gabriel River	0.856 (413)	0 (0)	1.369 (407)
Totals	5.794 (2,236)	0 (0)	9.829 (2,640)

Source: Metro 2020

Notes: CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board; USACE = United States Army Corp of Engineers

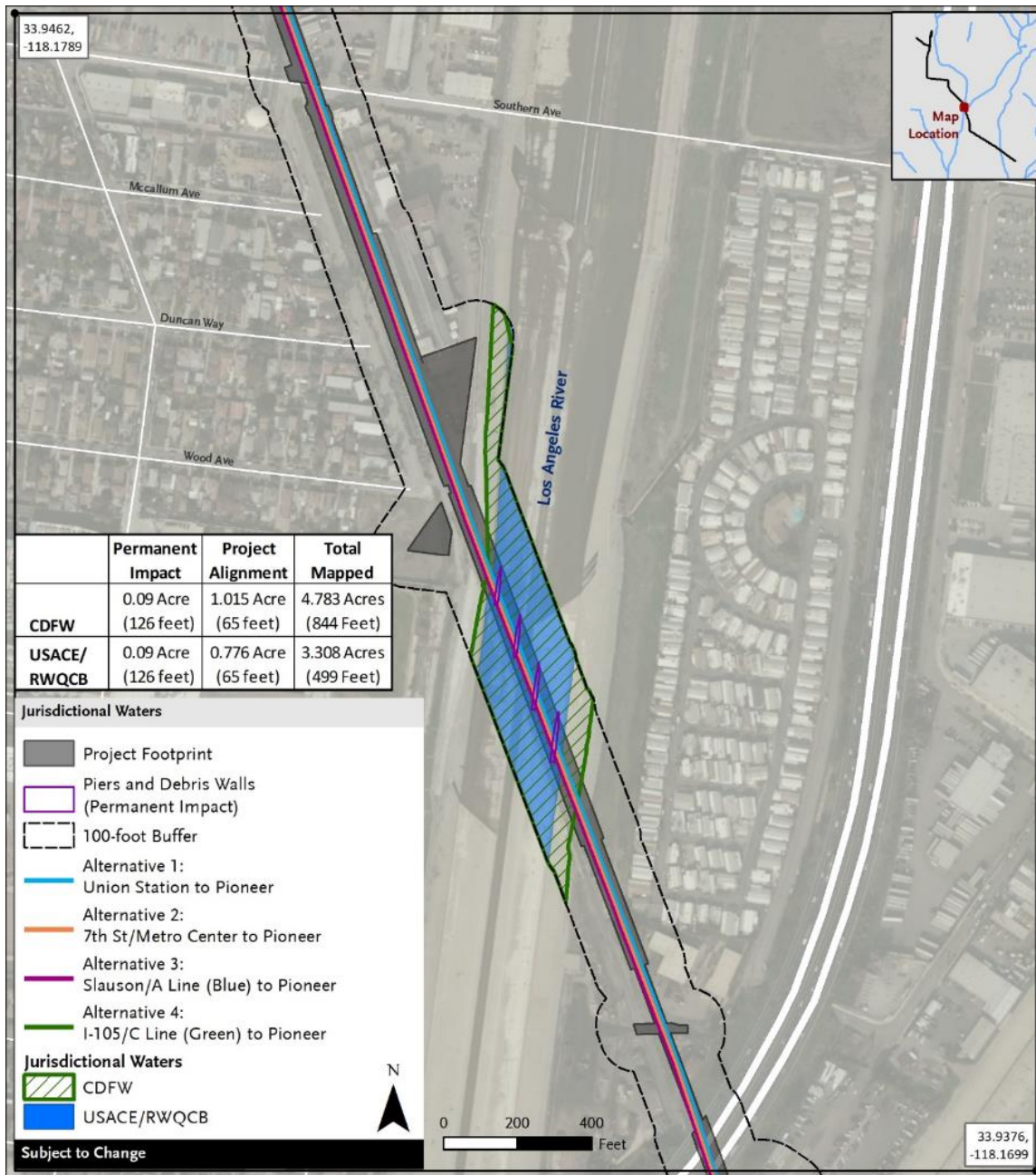
### 5.1 USACE and RWQCB Jurisdiction

Within the Study Area, the Los Angeles River contains 3.308 acres of waters subject to the jurisdiction of the USACE and RWQCB. Since the Los Angeles River is a TNW and a tributary to the Pacific Ocean, it is subject to the jurisdiction of the USACE under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act.

Within the Study Area, the Rio Hondo contains 1.63 acres of waters subject to the jurisdiction of the USACE and RWQCB. Since the Rio Hondo regularly contributes surface flow to the Los Angeles River, a TNW tributary to the Pacific Ocean, it is subject to the jurisdiction of the USACE under Section 404 of the CWA.

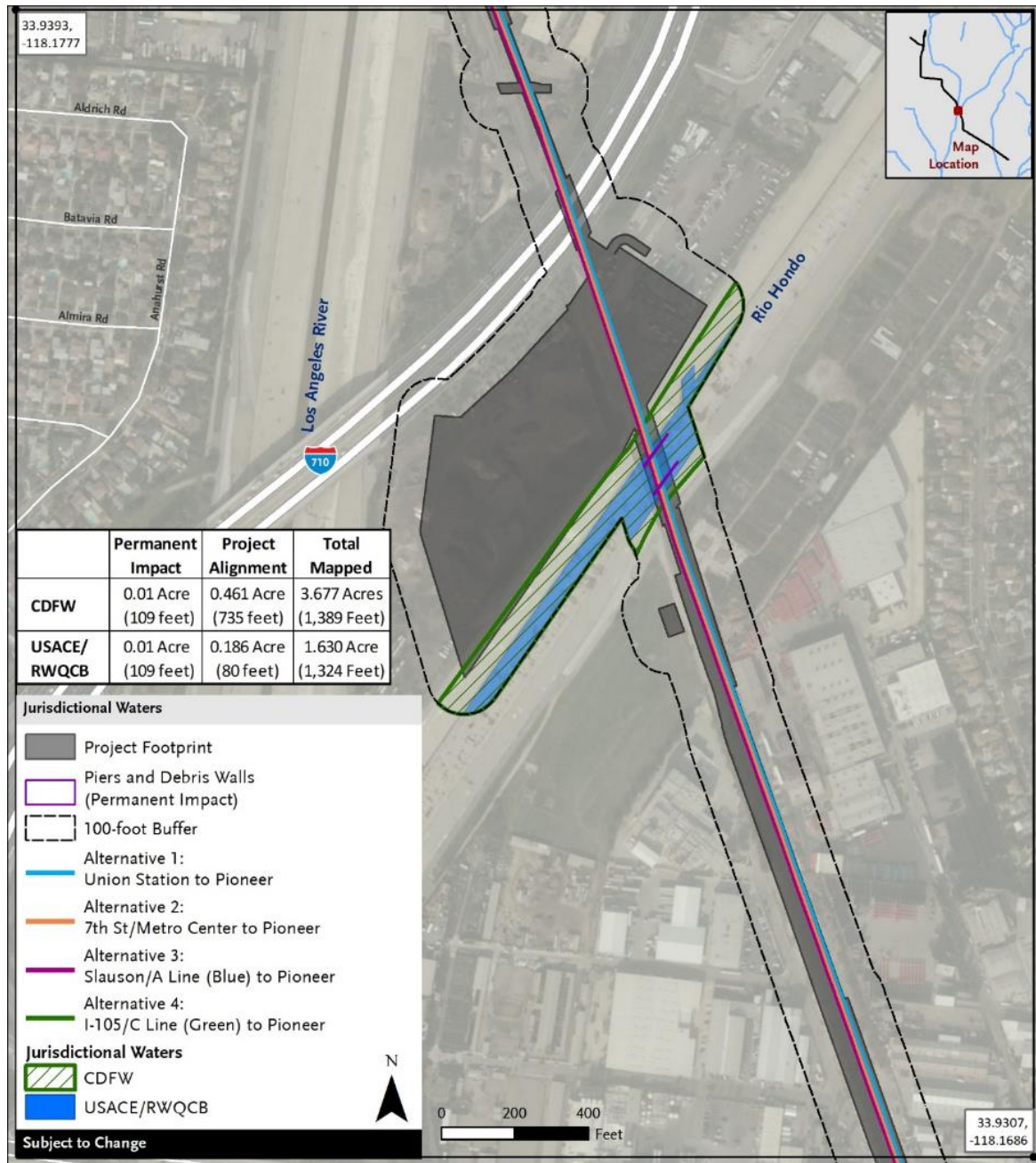
Within the Study Area, the San Gabriel River contains 0.856 acre of waters subject to the jurisdiction of the USACE and RWQCB. Since the San Gabriel River regularly contributes surface flow to the Pacific Ocean in a typical year, it is subject to the jurisdiction of the USACE under Section 404 of the CWA.

Figure 5-1. Aquatic Resources - Los Angeles River



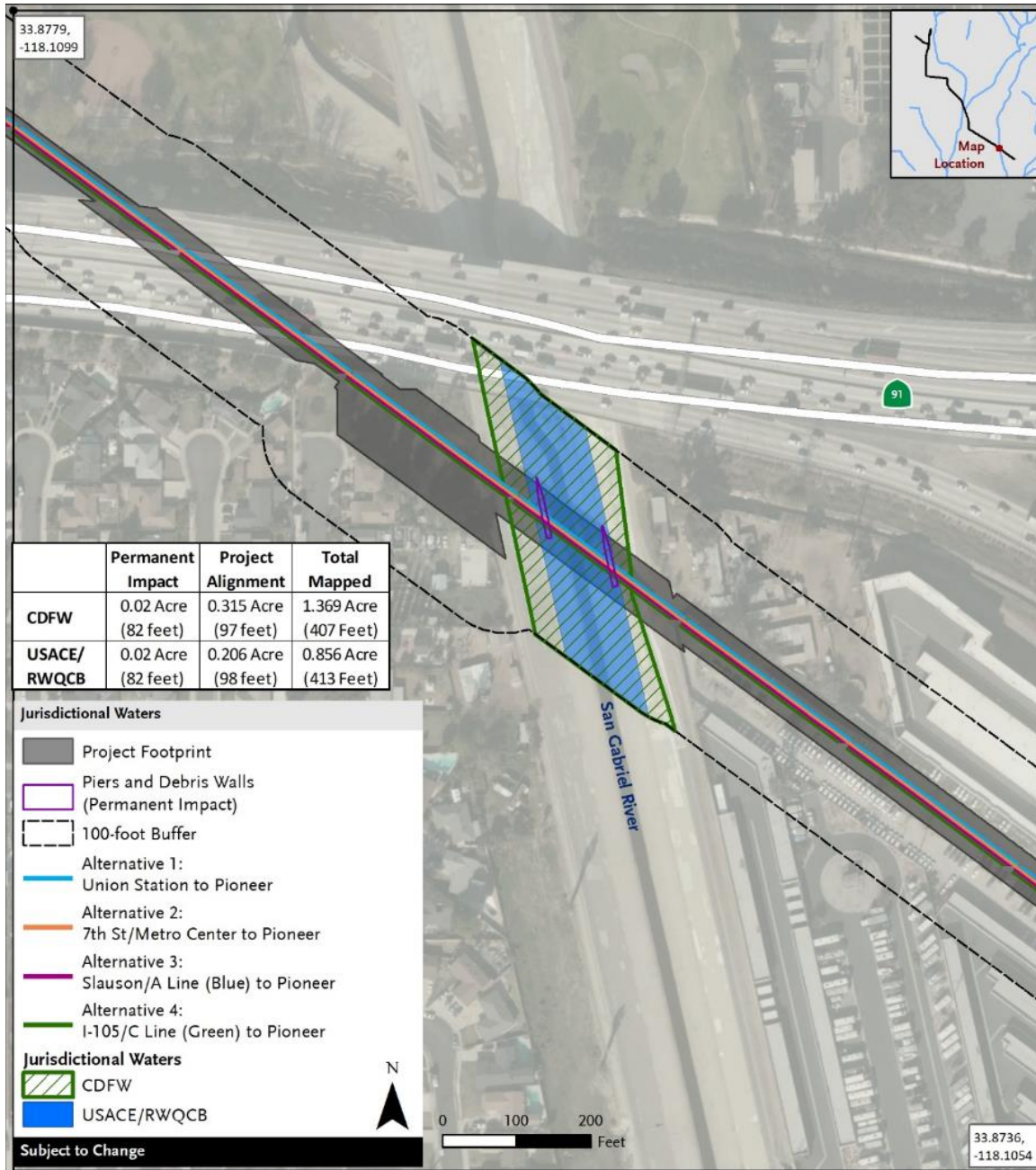
Source: Metro 2020

Figure 5-2. Aquatic Resources - Rio Hondo



Source: Metro 2020

Figure 5-3. Aquatic Resources - San Gabriel River



Source: Metro 2020



## 5.2 CDFW Jurisdiction

Within the Study Area, the Los Angeles River contains 4.783 acres of non-riparian streambed subject to the jurisdiction of the CDFW. This represents the farthest extent of jurisdictional area within the river. The river's measured bank-to-bank width ranged from 320 feet to 345 feet.

Within the Study Area, the Rio Hondo contains 3.677 acres of non-riparian streambed subject to the jurisdiction of the CDFW. This represents the farthest extent of jurisdictional area within the river. The river's measured bank-to-bank width ranged from 170 feet to 190 feet.

Within the Study Area, the San Gabriel River contains 1.369 acre of non-riparian streambed subject to the jurisdiction of the CDFW. This represents the farthest extent of jurisdictional area within the river. The river's measured bank-to-bank width ranged from 135 feet to 155 feet.

## 5.3 Impacts to Jurisdictional Areas

This project has the potential to impact jurisdictional waters and wetlands regulated by the USACE, RWQCB, and CDFW. These proposed impacts are outlined in Table 5.2 and shown on Figure 5-1, Figure 5-2, and Figure 5-3. All proposed impacts to jurisdictional waters are within previously concreted and/or paved areas. As the Project's engineering plans are preliminary in nature, they may be subject to further refinement. The area of temporary impacts associated with project construction is unknown at this time but is not anticipated to result in significant disturbance to the concrete lining of the drainages.

**Table 5.2. Potential USACE, RWQCB, and CDFW Permanent Impacts**

Feature	Impacts to Waters of the U.S./State		Impacts to CDFW Jurisdictional Streambed Acres (Linear Feet)
	Non-wetland Waters of the U.S./State Acres (Linear Feet)	Wetland Waters of the U.S./State Acres (Linear Feet)	
Los Angeles River	0.09 (126)	0 (0)	0.09 (126)
Rio Hondo	0.01 (109)	0 (0)	0.01 (109)
San Gabriel River	0.02 (82)	0 (0)	0.02 (82)
Totals	0.12 (317)	0 (0)	0.12 (317)

Source: Metro 2020

Notes: CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board; USACE = United States Army Corp of Engineers



## 6 CONCLUSIONS AND RECOMMENDATIONS

As described above, the project has the potential to affect jurisdictional waters in a manner regulated by the USACE, RWQCB, and CDFW. USACE Nationwide Permit 14 covers linear transportation projects in waters of the United States with notification to the USACE and RWQCB for projects causing loss of waters of less than 0.5 acre. For projects causing loss of waters greater than 0.5 acre, an individual 404 permit would be required from the USACE. Additionally, a 401 Water Quality Certification from the RWQCB would be required. A CDFW notification of Lake or Streambed Alteration is required for work within the jurisdictional streambed and streambank. These agencies should be consulted to confirm their roles and requirements so that all required permits can be acquired prior to initiating the Project.



## 7 REFERENCES

- California, State of. 2006. *Fish and Game Code*. <http://www.leginfo.ca.gov/calaw.html>
- Lichvar, R.W. 2013. *The National Wetland Plant List: 2013 Wetland Ratings*. Phytoneuron 2013-49: 1-241. <http://rsgisias.crrel.usace.army.mil/NWPL/>
- Los Angeles Department of Water and Power. 2020a. *History of the Los Angeles River*. <https://ladpw.org/wmd/watershed/LA/History.cfm>
- Los Angeles Department of Water and Power. 2020b. *San Gabriel River Watershed*. <http://ladpw.org/wmd/watershed/sg/>
- Natural Resources Conservation Service. 2020 (July). *National Hydric Soils List*.
- Reed, P.B., Jr. 1988. *National List of Plant Species That Occur in Wetlands, California (Region 0)*.
- State Water Resources Control Board (SWRCB). 2019. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. [https://www.waterboards.ca.gov/board\\_info/agendas/2019/apr/040219\\_10\\_procedures\\_clean\\_v032219.pdf](https://www.waterboards.ca.gov/board_info/agendas/2019/apr/040219_10_procedures_clean_v032219.pdf)
- United States Fish and Wildlife Service (USFWS). Biological Report 88(26.10).
- United States Army Corps of Engineers (USACE). 1972. *Public Notice Relative to Navigable Waters within the Los Angeles District*. <https://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/NavigableWater/CorpsSec10pnNov72.pdf?ver=2020-06-25-090821-290>
- United States Army Corps of Engineers (USACE). 1987. *United States Army Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-97-1. United States Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.
- United States Army Corps of Engineers (USACE). 2005. *Regulatory Guidance Letter No. 05-05*. June 14, 2005.
- United States Army Corps of Engineers (USACE). . 2006. *Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of "Waters of the United States" in Arid Southwestern Channels*. Technical Report ERDC/CRREL TR-06-5. February 2006.
- United States Army Corps of Engineers (USACE). . 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. United States Army Corps of Engineers Research and Development Center. Vicksburg, MS. September.
- United States Army Corps of Engineers (USACE). 2008b. *A Field Guide to the Identification of the Ordinary High Water mark (OHWM) in the Arid West Region of the Western United States*. Technical Report ERDC/CRREL TR-08-12. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

- United States Army Corps of Engineers (USACE). 2010. *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. Technical Report ERDC/CRREL TN-10-1. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.
- United States Department of Agriculture. 1973. *Soil Survey, Los Angeles County, California, Southeastern Part*. Natural Resources Conservation Service.
- United States Department of Agriculture. 2020a. *Web Soil Survey*. Accessed July 2020. Soil Survey Area: Los Angeles County, California. Soil Survey Data: Version 10, July 2020. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- United States Department of Agriculture. 2020b. *National Hydric Soils List by State: California*.
- United States Environmental Protection Agency. 2010. *Special Case Evaluation Regarding Status of the Los Angeles River, California, as a Traditionally Navigable Water*. <https://archive.epa.gov/region9/mediacenter/web/pdf/laspecialcaseletterandevaluation.pdf>
- United States Fish and Wildlife Service. 2020. *National Wetlands Inventory*. <http://wetlands.fws.gov>.
- United States Geological Survey (USGS). 2020a. *The National Map Viewer*. Accessed July 2020 <https://viewer.nationalmap.gov/advanced-viewer/>.
- United States Geological Survey (USGS). 2020b. *USGS Surface-Water Annual Statistics for California, Site 11088000*. [https://waterdata.usgs.gov/ca/nwis/annual/?referred\\_module=sw](https://waterdata.usgs.gov/ca/nwis/annual/?referred_module=sw)
- Western Regional Climate Center (WRCC). 2020. Los Angeles (045115) <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5115>

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## APPENDIX A WETLAND DETERMINATION DATA FORMS





## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____
Remarks: _____ _____ _____	

### VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				<b>Prevalence Index worksheet:</b>
1. _____	_____	_____	_____	_____ Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
<u>Herb Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>
1. _____	_____	_____	_____	___ Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 <sup>1</sup>
3. _____	_____	_____	_____	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____
Remarks: _____ _____ _____	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: _____ _____ _____				

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (**LRR C**)
- 1 cm Muck (A9) (**LRR D**)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (**LRR C**)
- 2 cm Muck (A10) (**LRR B**)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_**

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (**Nonriverine**)
- Sediment Deposits (B2) (**Nonriverine**)
- Drift Deposits (B3) (**Nonriverine**)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (**Riverine**)
- Sediment Deposits (B2) (**Riverine**)
- Drift Deposits (B3) (**Riverine**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present? Yes \_\_\_\_\_ No \_\_\_\_\_**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____
Remarks: _____ _____ _____	

### VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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## APPENDIX B REGULATORY OVERVIEW AND DEFINITIONS





## REGULATORY OVERVIEW AND DEFINITIONS

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, State, and local levels. A number of federal and State statutes provide a regulatory structure which guide the protection of jurisdictional waters. Agencies with the responsibility for protection of jurisdictional waters within the project site include:

- United States Army Corps of Engineers (non-wetland waters and wetlands of the United States)
- Central Coast Regional Water Quality Control Board (waters of the State)
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes)
- California Coastal Commission (coastal wetlands)

### B.1 USACE Jurisdiction

The USACE, under provisions of Section 404 of the CWA and USACE implementing regulations, has jurisdiction over the placement of dredged or fill material into “waters of the United States.” Congress enacted the CWA “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” In practice, the boundaries of certain waters subject to USACE jurisdiction under Section 404 have not been fully defined. Previous regulations codified in 1986 defined “waters of the United States” as traditional navigable waters, interstate waters, all other waters that could affect interstate or foreign commerce, impoundments of waters of the United States, tributaries, the territorial seas, and adjacent wetlands.

On April 21, 2020, the USACE and U.S. Environmental Protection Agency published the *Navigable Waters Protection Rule to define “Waters of the United States.”* This rule, effective on June 22, 2020, defines four categories of jurisdictional waters, documents certain types of waters that are excluded from jurisdiction, and clarifies some regulatory terms. Under the *Navigable Waters Protection Rule*, “waters of the United States” include:

- (1) Territorial seas and traditional navigable waters;
- (2) Perennial and intermittent tributaries that contribute surface flow to those waters;
- (3) Certain Lakes and ponds, and impoundments of jurisdictional waters, and;
- (4) Wetlands adjacent to jurisdictional waters.

Tributaries are defined as “a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to the territorial seas or traditional navigable waters in a typical year either directly or through one or more tributaries, jurisdictional lakes, ponds, and impoundments of jurisdictional waters, or adjacent wetlands.” The tributary category also includes a ditch that “either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch is perennial or intermittent and contributes surface water flow to a traditional navigable water or territorial sea in a typical year.”

Adjacent wetlands are defined as wetlands that:

- (i) Abut, meaning to touch at least at one point or side of, a defined Water of the U.S.;
- (ii) Are inundated by flooding from a defined Water of the U.S in a typical year;
- (iii) Are physically separated from a defined Water of the U.S. by a natural berm, bank, dune, or similar natural features or by artificial dike, barrier or similar artificial

structures as long as direct hydrological surface connection to defined Waters of the U.S. are allowed; or,

- (iv) Are impounded of Waters of the U.S. in a typical year through a culvert, flood or tide gate, pump or similar artificial structure.

The Navigable Waters Protection Rule states that the following areas are not considered to be jurisdictional waters even where they otherwise meet the definitions described above:

- (1) Groundwater, including groundwater drained through subsurface drainage systems;
- (2) Ephemeral features that flow only in direct response to precipitation including ephemeral streams, swales, gullies, rills and pools;
- (3) Diffuse stormwater runoff and directional sheet flow over uplands;
- (4) Ditches that are not defined Waters of the U.S. and not constructed in adjacent wetlands subject to certain limitations;
- (5) Prior converted cropland;
- (6) Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- (7) Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- (8) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- (9) Stormwater control features constructed or excavated in uplands or in non-jurisdictional water to convey, treat, infiltrate, or stormwater run-off;
- (10) Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and,
- (11) Waste treatment systems.

USACE jurisdictional limits are typically identified by the OHWM or the landward edge of adjacent wetlands (where present). The OHWM is the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3).

## B.2 Wetland Waters of the U.S.

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). The USACE’s delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

### Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (Lichvar, 2016), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Almost always occur in wetlands
- **Facultative Wetland (FACW).** Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC).** Occur in wetlands or non-wetlands
- **Facultative Upland (FACU).** Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL).** Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the United States Fish and Wildlife Service’s list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

### Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

### Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

## B.3 RWQCB Jurisdiction

The State Water Resources Control Board (SWRCB) and local Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.

The SWRCB or local RWQCB have not established regulations for field determinations of waters of the state except for wetlands currently. The RWQCB are affected by or shares USACE jurisdiction unless isolated conditions or ephemeral waters are present. Each local RWQCB may delineate their jurisdictions of waters of the state differently based on current interpretations of jurisdiction.

Procedures for defining RWQCB jurisdiction pursuant to the SWRCB’s *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB define an area as wetland if, under normal circumstances:

- (i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

- (ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
- (iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State (2020)* states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

## B.4 Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 *et seq.*), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine Regional Water Quality Control Boards (based on hydrogeologic barriers) and the State Water Resources Control Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Resources Control Board provides program guidance and oversight, allocates funds, and reviews Regional Water Quality Control Boards' decisions. In addition, the State Water Resources Control Board allocates rights to the use of surface water. The Regional Water Quality Control Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Resources Control Board and Regional Water Quality Control Boards have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

## B.5 CDFW Jurisdiction

The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. Considering this, four sources of information were reviewed and considered in determining the appropriate limits of CDFW jurisdiction within the site, as discussed below. The principles presented in these materials were used to guide the delineation of on-site streams, with consideration given to the relevance (i.e., jurisdiction, applicability) of each source to the project and resources at hand.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References “river,” “stream,” and “lake”
  - References “natural flow”
  - References “bed,” “bank,” and “channel”
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987)), which interpreted Section 1602’s use of “stream” to be as defined in common law. The Court indicated that a “stream” is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** define “stream” for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation
- **Guidance documents**, including A Field Guide to Lake and Streambed Alteration Agreements (CDFG 1994) and Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife

- Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
- The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied in desert environments. Coastal drainages are delineated predominately based on the following factors:

- Areas that exhibited evidence of hydrologic activity, such as scour, formation of banks, and/or deposition of sediment or material
- Areas where the vegetation community was adapted to the presence of elevated soil moisture levels (i.e., contained mostly hydrophytic species).

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## APPENDIX C SITE PHOTOGRAPHS







Photograph 1. Los Angeles River, facing north.



Photograph 2. Los Angeles River, facing northwest.



**Photograph 3. Los Angeles River, facing south.**



**Photograph 4. Low flow channel within Los Angeles River, facing northeast.**



**Photograph 5. Rio Hondo, facing west.**



**Photograph 6. Rio Hondo, facing south.**



**Photograph 7. San Gabriel River, facing northeast.**



**Photograph 8. Low flow channel within San Gabriel River, facing south.**