

INTERSTATE 405 AT SAN GABRIEL RIVER BRIDGE SCOUR MITIGATION PROJECT

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 | LA-405 [PM 0.02/0.03]
EA 07-32100 / E-FIS 0716000044



DRAFT INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION / ENVIRONMENTAL ASSESSMENT [IS/EA]

Prepared by the State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 as executed by FHWA and Caltrans.



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Interstate 405 at San Gabriel River Bridge Scour Mitigation Project
At Los Angeles County/Orange County line in the City of Long Beach
From post miles 0.02 to 0.03 (Los Angeles County) and post mile 24.1 (Orange County)

INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION / ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

The State of California
Department of Transportation
Lead Agency

California Transportation Commission (CTC)
Responsible Agency

March 10, 2020
Date of Approval

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PROPOSED NEGATIVE DECLARATION

Project Description

The California Department of Transportation (Caltrans) proposes a bridge scour maintenance project at the Interstate 405 (I-405)/Interstate 605 (I-605) interchange – a complex of three (3) bridges that traverse the San Gabriel River at the Los Angeles County/Orange County line. Two of the three bridges exist within the jurisdiction of Caltrans District 7 – Los Angeles (Bridge No. 53-1185 and Bridge No. 53-1737H from post mile 0.2/0.3), and the third bridge exists within the jurisdiction of Caltrans District 12 – Orange County (Bridge No. 53.413F at post mile 24.11). The scope of work for all three bridges includes:

- Retrofit of bridge substructure foundation by constructing pier footing extensions at Pier 3 and Pier 4 at each bridge
- Reinforcement of new footing extensions through placement of new Cast-In-Drilled-Hole (CIDH) piles
- Armoring of substructure retrofit through placement of rip-rap/rock protection around each pier

Determination

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on Aesthetics, Agriculture and Forest Resources, Energy, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Recreation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire.

In addition, the proposed project would have less than significant effects to Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Public Services, and Transportation.

Ron Kosinski
Deputy District Director
Division of Environmental Planning
California Department of Transportation
District 7 – Los Angeles/Ventura Counties

Date

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SUMMARY

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016, for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

The project as proposed and presented in this Initial Study/Environmental Assessment (IS/EA) by Caltrans is subject to state and federal environmental review requirements. The project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under CEQA and NEPA. The Federal Highways Administration's (FHWA's) responsibility for environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Following receipt of public comments on this Draft IS/EA and distribution of the Final IS/EA, Caltrans will determine whether to certify the IS by issuing a Negative Declaration (ND) or Mitigated Negative Declaration (MND) under CEQA and determine if it is appropriate to certify the EA with a Finding of No Significant Impact (FONSI) under NEPA.

The California Department of Transportation (Caltrans) proposes a bridge scour maintenance project at the Interstate 405 (I-405)/Interstate 605 (I-605) interchange – a complex of three (3) bridges that traverse the San Gabriel River at the Los Angeles County/Orange County line. Two of the three bridges exist within the jurisdiction of Caltrans District 7 – Los Angeles (Bridge No. 53-1185 and Bridge No. 53-1737H from post mile 0.2/0.3), and the third bridge exists within the jurisdiction of Caltrans District 12 – Orange County (Bridge No. 53.413F at post mile 24.11). Bridge scour is typically defined as the removal of sediment such as sand and gravel from around bridge abutments or piers. Scour, caused by swiftly moving water, can scoop out scour holes, compromising the integrity of a structure. This environmental document will study the effects of bridge scour maintenance for all three bridges to assess the cumulative impact of the proposed undertaking. The scope of work for all three bridges includes:

- Retrofit of bridge substructure foundation by constructing pier footing extensions at Pier 3 and Pier 4 at each bridge
- Reinforcement of new footing extensions through placement of new Cast-In-Drilled-Hole (CIDH) piles
- Armoring of substructure retrofit through placement of rip-rap/rock protection around each pier

Project Purpose. The purpose of the proposed project is to achieve the following objectives:

- Preserve the structural integrity of the bridge structures in a safe, economic, and environmentally friendly manner
- Increase safety of the traveling public by addressing persisting scour issues, mitigating known and potential deficiencies in bridge substructures – ultimately preventing failure of the facilities/bridge structures

Project Need. The need for the proposed project is based on geotechnical and bridge scour evaluations that indicate site conditions with the potential to affect the integrity of the three bridge structures if not addressed, and ultimately, the safety of the traveling public.

I-405 Mainline Bridge at San Gabriel River (Bridge No. 53-1185). This bridge received a seismic retrofit in 1994 at Abutments 1 and 6. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4, where pile caps are exposed and the potential scour at the piers is up to 7.2 feet and 8 feet, respectively. Underwater investigations show about 50 percent of Pier 3 footing and the entire footing of Pier 4 are currently exposed.

Southbound I-605 to Northbound I-405 Bridge Connector at San Gabriel River (Bridge No. 53-1737H). This bridge also received a seismic retrofit in 1994 at Abutments 1 and 6. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4. The potential scour is estimated to expose Piers 3 and 4 up to 9.7 feet and 10.3 feet, respectively. Currently, the pile caps under Piers 3 and 4 are exposed, with evidence of undermining at Pier 3. At Pier 4, the entire footing is currently exposed and undermined – 5 feet at the north nose and 0.80 feet at the south nose.

Southbound I-405 to Northbound I-605 Bridge Connector at San Gabriel River (Bridge No. 55-0413F). This bridge received a seismic retrofit in 1991 at Abutments 1 and 2, Hinges 1 through 4, and columns under bents 6, 8, 9, 10, 12, 13, and 18. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4, where pile caps are exposed and the potential scour at the piers is up to 18 feet and 18.4 feet, respectively. No undermining is detected along the perimeter of the footings at Piers 3 and 4.

Proposed Action and Alternatives Under Consideration. The proposed alternatives are Alternative 1 (Retrofit Bridge Foundation) and Alternative 2 (No-Build Alternative). This proposed project contains several standardized project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. The measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2 of this environmental document.

Alternative 1 | Retrofit Bridge Foundation. The scope of work proposed with Build Alternative 1 includes a retrofit of the bridge substructure foundation on all three bridges (Bridges No. 53-1185/53-1737H/55-0413) at Piers 3 and Piers 4 within the San Gabriel River by enlarging and deepening existing pile caps, the addition of Cast-In-Drilled-Hole (CIDH) piles, and reinforcement of surrounding areas with rock protection.

Alternative 2 | No-Build Alternative. With Alternative 2, or the No-Build Alternative, none of the proposed improvements would be implemented or constructed and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Summary of Potential Project Impacts

Environmental Resource	Alternative 1 (Retrofit Bridge Foundation)	Alternative 2 (No-Build Alternative)
Existing and Future Land Use	The proposed project does not have the potential to affect existing growth patterns on a local level, and simply aims to repair, rehabilitate, and enhance existing bridge facilities to prevent future deterioration and preserve the life of the structure.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Parks and Recreational Facilities	All community/public park facilities in the project study area are protected under the California Park Preservation Act of 1971, but no permanent full or partial acquisitions, or displacement of these facilities would be required under Alternative 1	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures.
Utilities and Emergency Services	The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and no impacts to utilities are anticipated, and while temporary, construction-related effects related to lane closures are anticipated during construction, Caltrans continues to coordinate with local jurisdictions, and a Transportation Management Plan (TMP) shall be implemented accordingly to provide detailed access and detour strategies that would minimize any effects related to such.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Cultural Resources	Research and examination of previous technical reports and maps for the project study area show that the totality of the APE has been previously disturbed by construction and other development activities, including construction of the existing bridge structures. While the proposed project exists within the Los Angeles County Flood Control Historic District, which is eligible for listing on the NHRP, the proposed project, as designed will not have an adverse effect on this resource.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Hydrology and Floodplain	Preliminary scour analysis assumes there is nothing unique about the soils supporting the bridge foundations that would prevent scour from reaching the predicted scour depths. During a 100-year flood event, hydraulic modeling showed a decrease in water surface elevations for Bridge No. 53.1737H and Bridge No. 55.0413F, while Bridge No. 55-1185 showed an increase in water surface elevations by approximately 0.26-feet. This increase in water surface elevation will not cause any issues for the channel to pass its floodwaters and does not present a scenario where the proposed improvements would constitute a significant encroachment on the floodplain.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Water Quality and Storm Water Runoff	The proposed project, as designed, has the potential to disturb an estimated soil area of 35 acres. Estimated net additional impervious area is calculated at zero (no net increase). Caltrans will comply with the pertinent TMDL standards, and project engineers shall consider treatment controls for the proposed project and consult with the Caltrans NPDES Storm Water Coordinator to achieve compliance.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Geology/Soils/ Seismic/ Topography	Screening-level analyses and evaluations indicated that the potentially liquefiable soils and the other conditions necessary for soil liquefaction to occur appear to be present at the bridge sites and some support locations.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Summary of Potential Project Impacts (continued)

Environmental Resource	Alternative 1 (Retrofit Bridge Foundation)	Alternative 2 (No-Build Alternative)
Hazardous Waste/Materials	Under federal and state environmental laws, acquisition of contaminated property creates permanent liability for the new property owner. Caltrans must exercise due diligence to prevent acquisition of contaminated property that may create long-term liability or detrimentally affect project cost, scope, or schedule. The project, as currently proposed, does not require the permanent acquisition of any property, but Temporary Construction Easements (TCEs) will be required on properties adjacent to the project study area, which will require a parcel-specific Initial Site Assessment (ISA), and potentially a Parcel Site Investigation (PSI) during the next project phase to determine the extent of potential contamination, and to develop construction remediation estimates.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Natural Communities	Temporary impacts to plant communities/land cover within the project limits would occur when cofferdams are installed, and the area is de-watered. The disturbed and ruderal areas will be impacted during construction due to the equipment lay-down area and developed areas will be impacted during equipment movement.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Wetlands and Other Waters	The estimated total area of impact to United States Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdictions is 8.0 acres, including the area from just downstream of the bridge structures to the drop structure at the upper end of the tidal area. It is anticipated that the totality of this area would be impacted during construction dewatering.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Plant Species	Because no special-status plants were observed or expected within the project limits, no temporary or permanent impacts to special-status plants species are expected.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Animal Species	While the California least tern is known to forage within one mile of harbors, bays, and shore, no terns are expected to forage within project limits. The Green sea turtle has been observed within the San Gabriel River, but the potential to affect this species is low.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Threatened and Endangered Species	While the California least tern is known to forage within one mile of harbors, bays, and shore, no terns are expected to forage within project limits. The Green sea turtle has been observed within the San Gabriel River, but the potential to affect this species is low.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.
Invasive Species	The project has the potential to spread invasive species to adjacent native habitats in the BSA by the entering and exiting of construction equipment contaminated by invasive species, the inclusion of invasive species in seed mixtures and mulch, and by the improper removal and disposal of invasive species so that seed is spread along the highway.	If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

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- Geotechnical Evaluation for Scour Critical Program, June 2013
- Natural Environment Study (NES) for the I-405 San Gabriel River Bridge Scour Project, February 2020
- PAED Preliminary Hazardous Waste Assessment, December 2019
- Preliminary Hydraulic Report for the Scour Mitigation Project on the San Gabriel River Bridges (Bridge Numbers 53-1737H, 53-1185, and 55-0413F), June 2016
- Screening Level Soil Liquefaction and Lateral Spreading Hazard Evaluation for Br.#53-1737H and #53-1185, January 2016
- Screening Level Soil Liquefaction and Lateral Spreading Potential Evaluation for Br. #55-0413F, January 2016
- Storm Water Data Report for the Interstate 405 at San Gabriel River Bridge Scour Mitigation Project, January 2020

CHAPTER 1 | PROPOSED PROJECT

1.1 INTRODUCTION

National Environmental Policy Act (NEPA) Assignment

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016, for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Caltrans is the lead agency under the National Environmental Policy Act (NEPA) under Caltrans' assumption of responsibility pursuant to 23 U.S.C. 327, and the lead agency under the California Environmental Quality Act (CEQA). The proposed project is eligible for Federal funding and is thus listed in the Federal Transportation Improvement Program (FTIP ID: LALS04) and is included in the current 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), though the proposed undertaking is not “capacity-increasing” by nature, and therefore not required to conform to or achieve Federal air quality standards. Because the proposed project is exempt from air quality conformity finding contingencies associated with approval for Federal funding, it is not required for inclusion in SCAG's regional air quality model for non-attainment areas, and therefore not listed or designated a unique RTP ID in the 2016 SCAG RTP/SCS.

Proposed Undertaking and General Setting

The California Department of Transportation (Caltrans) proposes a bridge scour maintenance project at the Interstate 405 (I-405)/Interstate 605 (I-605) interchange – a complex of three (3) bridges that traverse the San Gabriel River at the Los Angeles County/Orange County line. Two of the three bridges exist within the jurisdiction of Caltrans District 7 – Los Angeles (Bridge No. 53-1185 and Bridge No. 53-1737H from post mile 0.2/0.3), and the third bridge exists within the jurisdiction of Caltrans District 12 – Orange County (Bridge No. 53.413F at post mile 24.11). Bridge scour is typically defined as the removal of sediment such as sand and gravel from around bridge abutments or piers. Scour, caused by swiftly moving water, can scoop out scour holes, compromising the integrity of a structure. This environmental document will study the effects of bridge scour maintenance for all three bridges to assess the cumulative impact of the proposed undertaking. The scope of work for all three bridges includes:

- Retrofit of bridge substructure foundation by constructing pier footing extensions at Pier 3 and Pier 4 at each bridge
- Reinforcement of new footing extensions through placement of new Cast-In-Drilled-Hole (CIDH) piles

- Armoring of substructure retrofit through placement of rip-rap/rock protection around each pier

Work at the footings within the San Gabriel River will be accomplished through water diversion and the installation of two temporary sheet pile cofferdams, and construction work is anticipated to be performed directly on the bottom and sides of the channel. Construction work will also include continuous pumping and disposal of anticipated groundwater, and removal and disposal of riverbed sediment. Temporary Construction Easements (TCEs) will be required to accommodate contractor access and equipment storage, though no excess soil is expected to be generated from the site as the proposed TCE parcels are currently paved. Temporary and intermittent closure of the San Gabriel River Trail and the Coyote Creek Bikeway in the project study area will be required to mobilize construction equipment and materials, and to ensure the safety of facility users.

Interstate 405 (I-405, or the San Diego Freeway), is part of the National Highway System, and an essential link in both the Metropolitan Los Angeles and Orange County multi-modal transportation networks and is considered a bypass route to Interstate 5 (I-5). It is an Interstate-Interregional Freeway that originates at its most southerly point at the I-5 Junction in the City of Irvine (Orange County/Caltrans District 12), with its northerly terminus roughly 48.5 miles north at the I-5 Junction near Mission Hills in the City of Los Angeles (Los Angeles County/Caltrans District 7). I-405 primarily serves the major coastal cities in the Los Angeles Basin and Orange County and is a heavily used commuter and freight route that is considered one of the busiest and most congested freeways in the United States. The I-405 facilities are used for international, interstate, and interregional travel and shipping through a corridor that is highly urbanized. The facilities also serve the four major import-export terminals of Los Angeles International Airport, Long Beach Municipal Airport, and the Ports of Los Angeles and Long Beach, in addition to John Wayne Airport in Santa Ana (Orange County). Through Los Angeles County, I-405 functions as a major collector and distributor route that feeds State Routes 19, 47, 213, 107, 90, 187, 2, and 118, Interstates 710, 110, 105, and 10, and U.S. Highway 101.

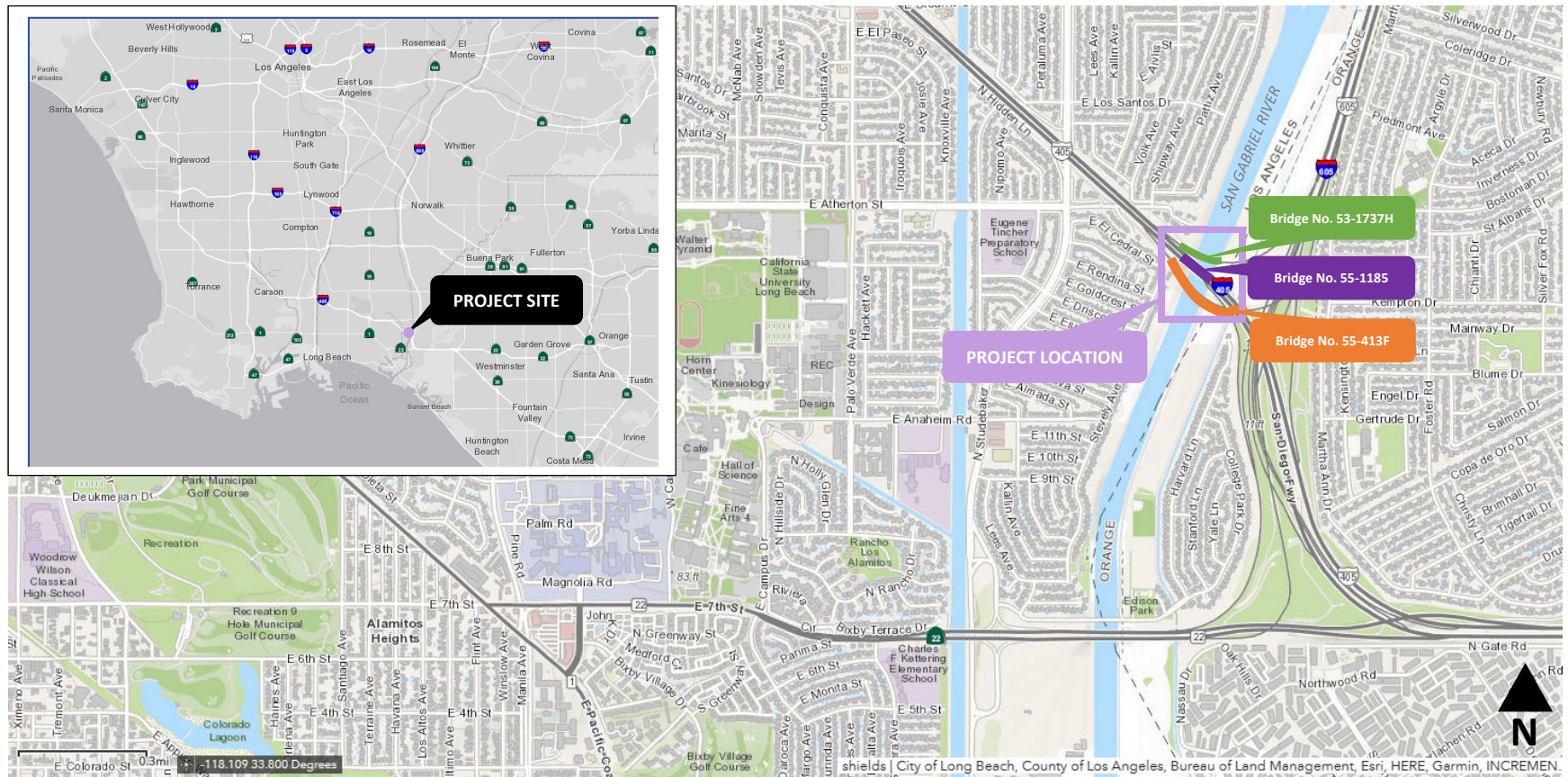
Interstate 605 (I-605, or the San Gabriel River Freeway), is also part of the National Highway System, and is a major north-south highway that originates at I-405 in Long Beach/Seal Beach in the south and terminates roughly 27 miles north at Interstate 210 (I-210, or Foothill Freeway) in the City of Duarte. The facility runs parallel to the San Gabriel River and largely serves the Gateway Cities of the Los Angeles Basin before crossing the Whittier Narrows and providing a connection to the San Gabriel Valley. I-605 also functions as a major collector and distributor route that feeds State Routes 22, 91, and 60, in addition to Interstates 405, 105, 5, 10, and 210.

Within project limits, the I-405 highway facility and complex of bridge structures traverse the San Gabriel River approximately 3.6 miles upstream from Alamitos Bay/Pacific Ocean and 1.5 miles outside of the Coastal Zone Boundary as established by the California Coastal Act of 1976. The following table is a summary of historic and geometric information, and existing facility conditions for each bridge.

Table 1.1-a | Historic/Geometric Bridge Information and Existing Operational Conditions

Bridge No.	Year Built	No. of Lanes	Length (ft)	Minimum Curve Radius (ft)	Service Volume (vehicles per day)	Remarks
53-1185 Northbound/ Southbound I-405 Mainline Bridge	1964	10	399	2400	255,000 (5% trucks)	Continuous, 5-span, RC box girder bridge on solid RC piers, open-end, seated abutments on drive piles
53-1737H Southbound I-605 to Northbound I-405 Connector	1966	2	377	990	40,000 (4% trucks)	Continuous, 5-span, reinforced concrete (RC) box girder bridge on solid RC pier walls, open-end, seated abutments
53-0413F Southbound I-405 to Northbound I-605 Connector	1966	2	1,796	838	20,500 (3% trucks)	Continuous, 17-span RC box girder bridge on RC single-column bents with RC seated abutments

Figure 1.1-a | Proposed Project Location and Vicinity



1.2 PURPOSE AND NEED

Project Purpose. The purpose of the proposed project is to achieve the following objectives:

- Preserve the structural integrity of the bridge structures in a safe, economic, and environmentally friendly manner
- Increase safety of the traveling public by addressing persisting scour issues, mitigating known and potential deficiencies in bridge substructures – ultimately preventing failure of the facilities/bridge structures

Project Need. The need for the proposed project is based on geotechnical and bridge scour evaluations that indicate site conditions with the potential to affect the integrity of the three bridge structures if not addressed, and ultimately, the safety of the traveling public.

I-405 Mainline Bridge at San Gabriel River (Bridge No. 53-1185). This bridge received a seismic retrofit in 1994 at Abutments 1 and 6. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4, where pile caps are exposed and the potential scour at the piers is up to 7.2 feet and 8 feet, respectively. Underwater investigations show about 50 percent of Pier 3 footing and the entire footing of Pier 4 are currently exposed.

Southbound I-605 to Northbound I-405 Bridge Connector at San Gabriel River (Bridge No. 53-1737H). This bridge also received a seismic retrofit in 1994 at Abutments 1 and 6. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4. The potential scour is estimated to expose Piers 3 and 4 up to 9.7 feet and 10.3 feet, respectively. Currently, the pile caps under Piers 3 and 4 are exposed, with evidence of undermining at Pier 3. At Pier 4, the entire footing is currently exposed and undermined – 5 feet at the north nose and 0.80 feet at the south nose.

Southbound I-405 to Northbound I-605 Bridge Connector at San Gabriel River (Bridge No. 55-0413F). This bridge received a seismic retrofit in 1991 at Abutments 1 and 2, Hinges 1 through 4, and columns under bents 6, 8, 9, 10, 12, 13, and 18. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4, where pile caps are exposed and the potential scour at the piers is up to 18 feet and 18.4 feet, respectively. No undermining is detected along the perimeter of the footings at Piers 3 and 4.

Independent Utility and Logical Termini. Federal Highway Administration (FHWA) regulations [23 CFR 771.111(f)] require that this evaluation of the proposed undertaking connects logical termini and be of sufficient length to address environmental matters on a broad scope. Further, it stipulates that the proposed project have independent utility or independent significance, in that it be usable and require a reasonable expenditure even if no additional transportation improvements in the area are made. Lastly, it stipulates that the proposed project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The proposed project is a stand-alone project intended to preserve the structural integrity of the bridge structures in a safe, economic, and environmentally friendly manner. It is independent of other Caltrans projects on I-405, and its purpose and need cannot be fulfilled by any other Caltrans project. Furthermore, the proposed project is in no way dependent on the implementation of other Caltrans projects on I-405, prior or subsequent, to this proposed undertaking. This environmental document studies the entire project area and is in no way dependent on the environmental document or mitigation proposals of any other project. Lastly, the proposed project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements. Based on the aforementioned, and pursuant to 23 CFR 771.11(f), this project has independent utility and logical termini.

1.3 PROJECT DESCRIPTION

This section describes the proposed actions and project alternatives that were developed to meet the identified purpose and need of the project. As previously stated, the Caltrans proposes a bridge scour maintenance project at the Interstate 405 (I-405)/Interstate 605 (I-605) interchange – a complex of three (3) bridges that traverse the San Gabriel River at the Los Angeles County/Orange County line (Bridges No. 53-1185, 53-1737H, and 53.413F). The scope of work for all three bridges includes:

- Retrofit of bridge substructure foundation by constructing pier footing extensions at Pier 3 and Pier 4 at each bridge
- Reinforcement of new footing extensions through placement of new Cast-In-Drilled-Hole (CIDH) piles
- Armoring of substructure retrofit through placement of rip-rap/rock protection around each pier

The proposed alternatives are Alternative 1 (Retrofit Bridge Foundation) and Alternative 2 (No-Build Alternative). This proposed project contains several standardized project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. The measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2 of this environmental document.

Alternative 1 | Retrofit Bridge Foundation. The scope of work proposed with Build Alternative 1 includes a retrofit of the bridge substructure foundation on all three bridges (Bridges No. 53-1185/53-1737H/55-0413) at Piers 3 and Piers 4 within the San Gabriel River by enlarging and deepening existing pile caps, the addition of Cast-In-Drilled-Hole (CIDH) piles, and reinforcement of surrounding areas with rock protection.

Alternative 2 | No-Build Alternative. With Alternative 2, or the No-Build Alternative, none of the proposed improvements would be implemented or constructed and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Selection of the Preferred Alternative and the Final Decision-Making Process

After the public circulation period, all comments will be considered, and the Department will select a preferred alternative and make the final determination of the project's effect on the environment. Under the California Environmental Quality Act (CEQA), if no unmitigable significant adverse impacts are identified, the Department will prepare a Negative Declaration (ND) or Mitigated ND.

Similarly, if the Department, as assigned by the Federal Highway Administration (FHWA), determines the National Environmental Policy Act (NEPA) action does not significantly impact the environment, the Department will issue a Finding of No Significant Impact (FONSI).

Alternatives Considered but Eliminated from Further Discussion

Install Concrete Channel Lining (previously Alternative 2). During the preliminary design and planning phases of the proposed undertaking, installation of concrete channel lining within the riverbed (with limits adjacent to each bridge structure) presented a viable option in terms of mitigating bridge scour issues at all three structures, but the impacts associated with this alternative present challenges in terms of mitigation and cost. Implementation of this build alternative would require significant and infeasible mitigation with the United States Army Corps of Engineers

(USACE), the California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB).

The sensitive nature of habitat in the project study area and the potential adverse impact and loss of habitat associated with this build alternative would require extensive mitigation that would require Caltrans to obtain, preserve, and restore off-site and “in-kind” habitat of value at a rate of as little as 5:1 and likely as much as 10:1 – essentially, for each one acre of river bottom lined with concrete, Caltrans would be required to obtain, preserve, and restore as much as 5-10 times the amount of impact. The challenge in this scenario is that suitable, “in-kind” habitat of value within the same watershed no longer occurs at that amount. Additionally, the high costs associated with such mitigation yield this proposal as infeasible, and as a result, this build alternative was eliminated from further consideration and discussion.

1.4 PERMITS AND APPROVALS NEEDED

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction:

Agency	PLAC	Status
US Army Corps of Engineers	Clean Water Act (CWA), Section 404 permit for filling or dredging waters of the United States	Application for Section 404 permit expected after Final IS/EA approval
California Department of Fish and Wildlife	1602 Agreement for Streambed Alteration	Application for 1602 permit expected after Final IS/EA approval
California Water Resources Board	Section 401 Water Discharge Permit/Certification	Application for Section 401 permit/certification expected after final IS/EA approval
Multiple Agencies	Right-of-Entry permitting for temporary construction easements and temporary access roads	Applications for Right-of-Entry expected after final IS/EA approval

CHAPTER 2 | AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

2.1 ENVIRONMENTAL TOPICS CONSIDERED BUT DETERMINED NOT TO BE RELEVANT

As part of the scoping and environmental analysis carried out for the proposed project, the following environmental topics were considered but no adverse impacts were identified. As a result, there is not further discussion regarding these topics in this environmental document.

ENVIRONMENTAL TOPIC	CONTEXT FOR OMISSION
Air Quality	The proposed project consists only of improvements to existing roadway facilities, and is not capacity-increasing in nature, and in consideration of the scope of the proposed work, regional and/or project-level air quality conformity is not required and is exempt from respective analyses. The proposed project is exempt from air quality conformity under 40 CFR 93.126, under Table 2 – “projects that correct, improve, or eliminate a hazardous location or feature.”
Coastal Zone	Within the project study area, the I-405 highway facility and complex of bridge structures traverse the San Gabriel River approximately 3.6 miles upstream from Alamitos Bay/Pacific Ocean and 1.5 miles outside of the Coastal Zone Boundary as established by the California Coastal Act of 1976.
Community Character and Cohesion	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to adversely affect social or economic change in the project study area.
Energy	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope of the proposed work, the associated physical changes do not present any potential for adverse effects to direct or indirect energy, nor will they contribute to increased wasteful, inefficient, or unnecessary use of energy resources.
Environmental Justice	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to affect social or economic change on minority and/or low-income populations. To identify and determine any potential effects to minority and/or low-income populations, a project study area was defined, utilizing a roughly 1-mile radius surrounding the proposed project location, and further defined by delineating boundaries via census tracts as drawn by the U.S. Census Bureau. As a result, no minority or low-income populations were identified that would be adversely affected by the proposed project.
Farmlands	The proposed project is located in a highly urbanized setting, and consists only of improvements to existing roadway facilities, and no potential exists for direct or indirect irreversible conversion of protected farmlands.
Growth	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to adversely affect growth in the project study area.
Noise	The proposed project consists only of improvements to existing roadway facilities, and is not capacity-increasing in nature, and in consideration of the scope of the proposed work, the associated physical changes do not present any potential for adverse effects in terms of noise in the project study area. Additionally, noise abatement is not required under 23 CFR 772 as the proposed undertaking is not classified as a Type I Project.
Paleontology	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope and nature of the proposed work, the type and extent of excavation, and the geologic setting (e.g. proximity of fossiliferous strata), it was determined that paleontological resources are not an issue of concern.
Relocations and Real Property Acquisitions	The proposed project consists only of improvements to existing roadway facilities, and no relocations or permanent acquisition of real property are required.
Timberlands	The proposed project is located in a highly urbanized setting, and consists only of improvements to existing roadway facilities, and no potential exists for direct or indirect irreversible conversion of protected timberlands.
Traffic and Transportation/Pedestrian and Bicycle Facilities	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to adversely affect traffic and transportation and/or pedestrian and bicycle facilities in the project study area.

Environmental Topics Considered but Determined not to be Relevant (continued)

ENVIRONMENTAL TOPIC	CONTEXT FOR OMISSION
Visual/Aesthetics	The proposed project consists only of improvements to existing roadway facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to adversely affect visual resources or aesthetics in the project study area.
Wild and Scenic Rivers	Within the project study area, the San Gabriel River is not a Designated Wild and/or Scenic river, therefore the proposed project does not have the potential to adversely affect resources protected by the National Wild and Scenic Rivers Act (CA Public Resources Code [PRC] Section 5093.50 et seq.).
Wildfire	The proposed project is not located in or near a state responsibility area or land classified as a very high fire hazard severity zone.

2.2 HUMAN ENVIRONMENT

2.2.1 EXISTING AND FUTURE LAND USE

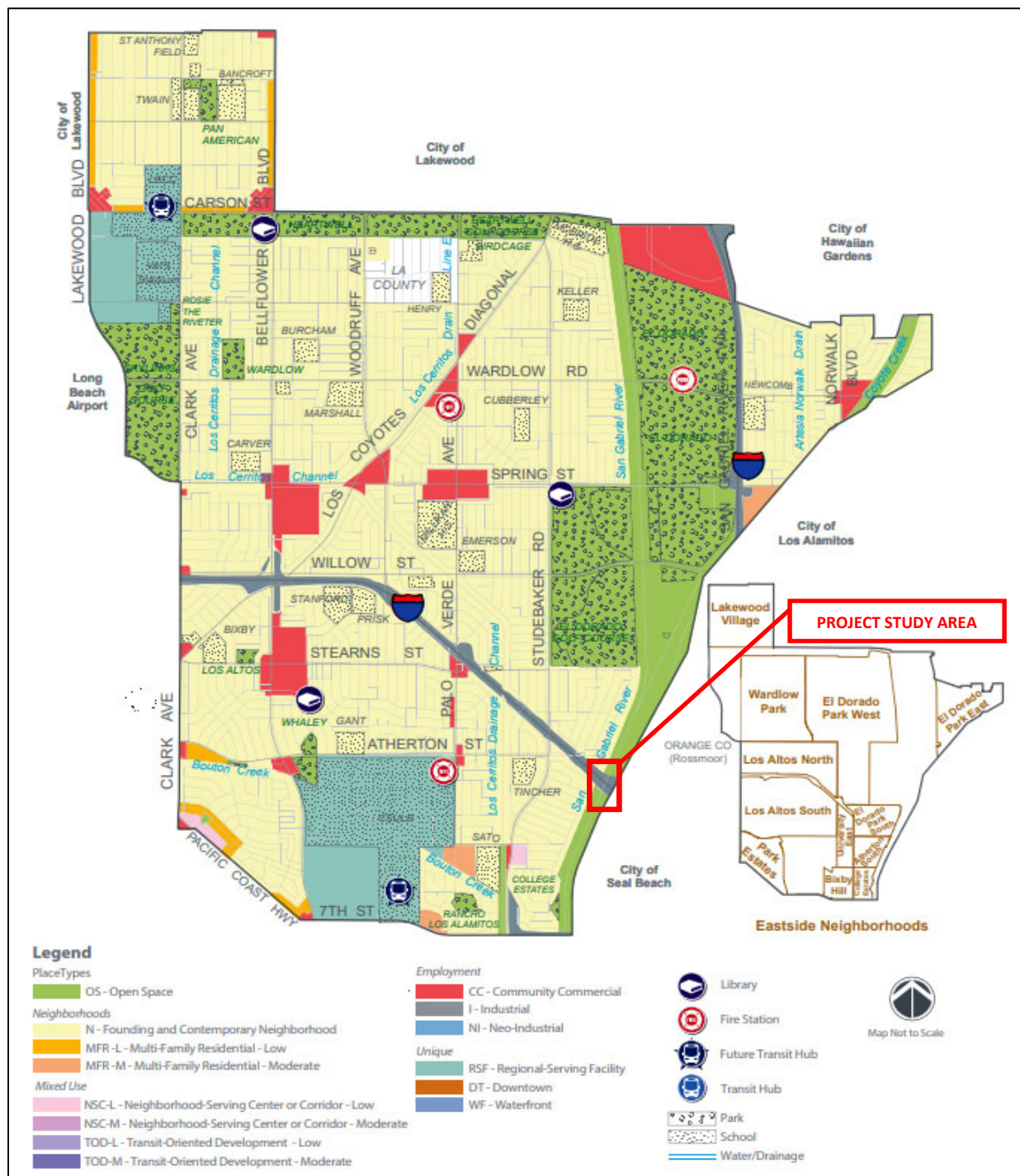
City of Long Beach

There are 70 neighborhoods identified within the City of Long Beach General Plan (2019), and the Land Use Element of this plan categorizes all neighborhoods within nine distinct “community plan areas.” Community plan areas are defined by strong physical boundaries such as freeways, rivers, city boundaries and railroad tracks. The project study area exists within the Eastside community plan area, which is bounded by the cities of Los Alamitos and Hawaiian Gardens to the east, the city of Lakewood to the north, and State Route 22 (SR-22) to the south. The eastern boundary of the Eastside community plan area is delineated by State Route 1 (SR-1)/Pacific Coast Highway and East 7th street to the south.

The Eastside Community Plan Area comprises the largest land area in Long Beach, and predominantly consists of low-density, single-family homes built during the Post-World War II era. Major streets consist of wide, tree-lined boulevards once favored in construction of postwar, suburban neighborhoods. Several large, auto-oriented shopping centers, schools and religious institutions serve Eastside residents. El Dorado Park is one of the largest regional parks in the area, with over 800-acres of open space, a community center, a 100-acre nature center, basketball and volleyball courts, softball and soccer fields, a skate parks, an outdoor archery range, picnic sites, a disc golf course, tennis center, an 18-hole golf course, playgrounds, three fishing lakes, and a fishing pond.

The Land Use Element of the City of Long Beach General Plan (2019) introduces “PlaceTypes,” in lieu of traditional zoning designations in an effort to de-emphasize specific land uses and focus on the form and character of each unique neighborhood and district. PlaceTypes allow for a wider variety of compatible and complementary land uses to create distinct and complete residential neighborhoods, employment centers, open spaces, and other areas. The following Figure 2.2.1-a illustrates the current land use planning designations, or “PlaceTypes” for the Eastside community plan area as outlined in the 2019 Land Use Element (a component of the City of Long Beach General Plan).

Figure 2.2.1-a | Generalized Land Use, Eastside Community Plan Area – City of Long Beach General Plan (2019)



Source: City of Long Beach General Plan – Land Use Element, 2019

Within the project study area, the dominant PlaceType is “Founding and Contemporary Neighborhood,” which is represented by low-density, residential neighborhood development typical to post-World War II suburban housing tracts with predominantly single-family homes. The other dominant PlaceType is “Open Space,” which is strictly limited to bicycle facilities and areas adjacent to the San Gabriel River within the project study area.

Land use strategies for the Eastside Community Plan Area are limited as it is highly developed, and mostly focused on preservation of existing housing stock and open space, and traffic and pedestrian circulation and mobility. There are three regional-serving facilities within the plan area in Long Beach City College (approximately 10 miles northwest of the project study area), California State University Long Beach (approximately 2 miles west of the project study area), and the Veterans Administration Medical Center (approximately 3 miles west of the project study area), which are all either planning, or in the process, of expanding to serve a growing population. Other development trends are summarized in the following Table 2.2.1-a.

Table 2.2.1-a | Development Trends in the Project Study Area – Long Beach/Eastside Land Use Planning Area

Name of Development/Location	Lead Agency/Jurisdiction	Proposed Use	Current Status
Dorado Residential Development Project <i>N. Norwalk Avenue and 226th Street</i>	City of Long Beach	Demolition of 27,709 square foot church facility and construction of forty (40) four-bedroom, single-family residences. 5.8 total acres, residential lots average 4,005 square feet in size.	In construction
Pacific Pointe East Development Project <i>Lakewood Boulevard and Conant Street</i>	City of Long Beach	Development of approximately 25-acre parcel with three new industrial buildings (light industrial, light manufacturing, warehouse, office, and/or research & development). Total floor area of 494,000 square feet.	In construction

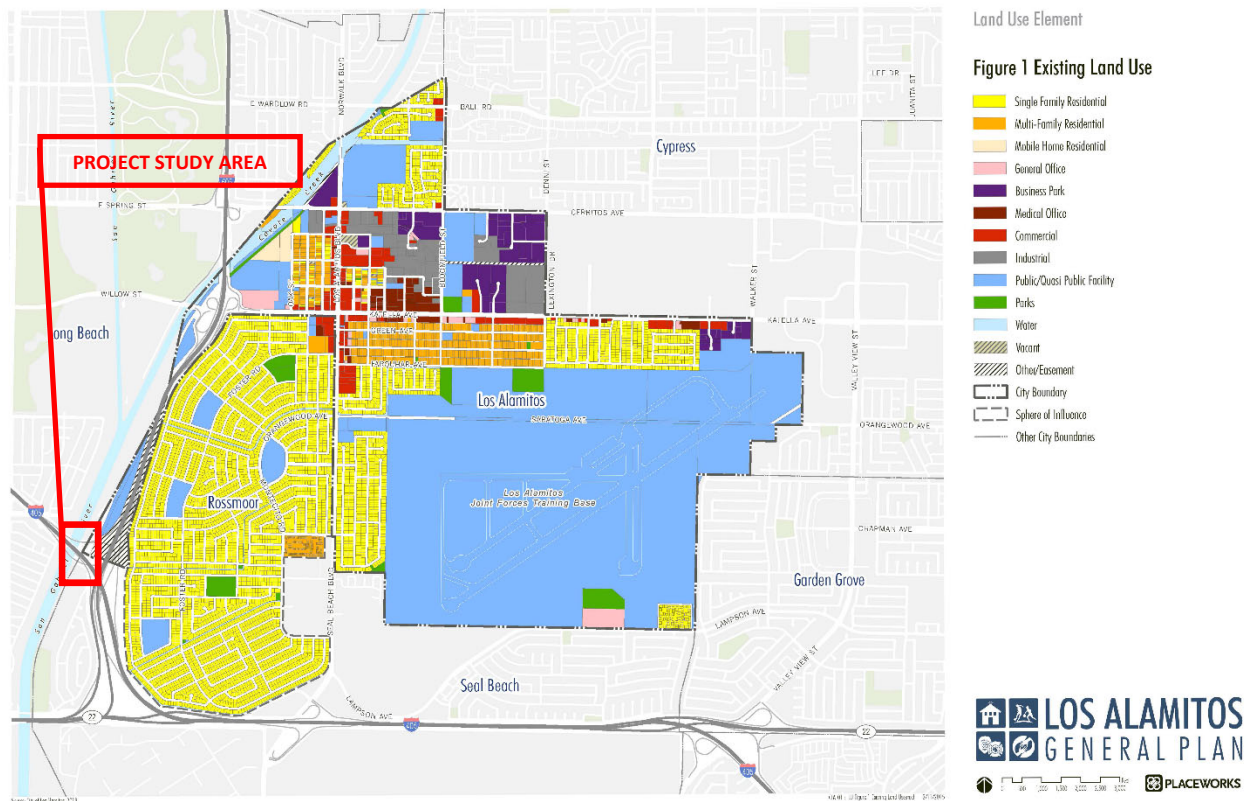
City of Los Alamitos/Rossmoor

The City of Los Alamitos General Plan (2015) guides land use and development for the entire Los Alamitos planning area, which includes the City, Army Reserve/National Guard Joint Forces Training Base (JFTB), and the community of Rossmoor. While the JFTB is within the City’s municipal boundaries, the City of Los Alamitos has no jurisdiction or land use authority on this United States military installation. The community of Rossmoor, which is adjacent to the proposed project site and within the project study area is an unincorporated community governed by the land use and planning authorities of the County of Orange, but is included in the City of Los Alamitos General Plan as a sphere of influence, and to understand future demands for services, and implications for growth within the Rossmoor community and the City of Los Alamitos as a whole.

The community of Rossmoor came to be in the 1950s, by a developer named Ross W. Cortese, who had a vision to construct a large, exclusive, master-planned community nestled between Los Alamitos, Long Beach, and Seal Beach. The Rossmoor Corporation was formed, and the land was purchased from the Fred Bixby Ranch Company, with the first homeowners moved in by June of 1957. The community of Rossmoor remains unincorporated today despite several incorporation and annexation attempts, but in 2009, the Local Agency Formation Commission placed Rossmoor in the Los Alamitos’ sphere of influence.

Today, Rossmoor’s land use patterns remain largely the same, with roughly 10,000 people residing within its boundaries. The dominant land use in Rossmoor is single-family residential, complemented by a small amount of multi-family units, elementary schools, a church, parks, and shops and restaurants. The following Figure 2.2.1-b illustrates the current land use planning designations for the Rossmoor Community as outlined in the 2015 City of Los Alamitos General Plan.

Figure 2.2.1-b | Generalized Land Use – Community of Rossmoor, City of Los Alamitos General Plan (2015)



Source: City of Los Alamitos General Plan – Land Use Element, 2015

Like areas east of the San Gabriel River in the Long Beach/Eastside planning area, development in Rossmoor is typical of post-World War II suburban development and is primarily single-family residential. Commercial activities are centered on a number of districts within the community, and particularly at Rossmoor Village Square at Los Alamitos Boulevard and Rossmoor Way. Annexed by the City of Seal Beach in 1967, and not depicted in the previous land use figure are the Shops at Rossmoor – represented by the “blank” area at the southern end of Seal Beach Boulevard between Rossmoor Center Way and St. Cloud Drive. The Shops at Rossmoor is a 376,200 square-foot development anchored by a number of national retail chains, with of host of restaurants and local businesses that serve Rossmoor and the local community.

Land use strategies in the Rossmoor community are severely limited as the area is highly developed, and its proximity to the airport at the Los Alamitos JTB restricts building heights far below the federally-defined limitation of 88-to-200 feet. Potential growth would be limited to a few areas of the city as a whole, and would only represent incremental increases in building space, and would not introduce sensitive land uses that are not already present. The following table highlights development trends in the project study area.

Table 2.2.1-b | Development Trends in the Project Study Area – Los Alamitos/Rossmoor Land Use Planning Area

Name of Development/Location	Lead Agency/Jurisdiction	Proposed Use	Current Status
LA Fitness Health Club <i>Seal Beach Boulevard and Rossmoor Center Way</i>	City of Seal Beach	Construction of a 37,000 square foot, single story private health club at the Shops at Rossmoor.	Environmental studies complete. Development on-hold.
Los Alamitos Medical Center Expansion <i>Katella Avenue and Bloomfield Street</i>	City of Los Alamitos	Three-phase master planned expansion estimated for construction over the course of a 25-year period. Provision of additional 164 hospital beds, 2 new hospital buildings, 1 new medical office building, and an additional 849 parking spaces.	In construction.

2.2.2 CONSISTENCY WITH STATE, REGIONAL, AND LOCAL PLANS AND PROGRAMS

Federal Transportation Improvement Program (FTIP) and the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The proposed project is eligible for Federal funding and is thus listed in the Federal Transportation Improvement Program (FTIP ID: LALS04) and is included in the current 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), though the proposed undertaking is not “capacity-increasing” by nature, and therefore not required to conform to or achieve Federal air quality standards. Because the proposed project is exempt from air quality conformity finding contingencies associated with approval for Federal funding, it is not required for inclusion in SCAG’s regional air quality model for non-attainment areas, and therefore not listed or designated a unique RTP ID in the 2016 SCAG RTP/SCS.

City of Long Beach General Plan (2019). The Long Beach General Plan is a policy document that establishes the goals, policies, and directions the city will take to achieve the vision of the community and guide future development. The adopted plan contains Land Use, Transportation (or Mobility), Housing, Conservation, Noise, Open Space, and Safety elements, and also addresses Air Quality, Historic Preservation, Seismic Safety, and Urban Design. Additionally, the General Plan also encompasses a certified Local Coastal Program (LCP) as required by the California Coastal Act of 1976 for cities with coastal areas within planning jurisdictions.

City of Los Alamitos General Plan (2015). As previously stated, the community of Rossmoor, which is adjacent to the proposed project site and within the project study area is an unincorporated community governed by the land use and planning authorities of the County of Orange, but is included in the City of Los Alamitos General Plan as a sphere of influence, and to understand future demands for services, and implications for growth within the Rossmoor community and the City of Los Alamitos as a whole. The Los Alamitos General Plan establishes the goals and policies relevant to land use, growth, and development of the City for a variety of topics and provides a framework for municipal decision-making, and to help inform decisions of those investing in the local area – residents, businesses, and organizations. The adopted plan contains Land Use, Economic Development, Housing, Open Space/Recreation/Conservation, Mobility/Circulation, Public Facilities/Safety, and Growth Management elements as mandated by California law.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation) and Consistency of Proposed Project with Applicable State, Regional, and Local Land Use, Transportation, and Habitat Conservation Programs. The proposed project does not have the potential to affect existing growth patterns on a local level, and simply aims to repair, rehabilitate, and enhance existing bridge facilities to prevent future deterioration and preserve the life of the structure. Therefore,

the proposed undertaking is consistent with applicable state, regional, local land use, transportation, and habitat conservation plans and programs adopted for the area. Within the project study area, the I-405 highway facility and complex of bridge structures traverse the San Gabriel River approximately 3.6 miles upstream from Alamitos Bay/Pacific Ocean and 1.5 miles outside of the Coastal Zone Boundary as established by the California Coastal Act of 1976 and is therefore not subject to policies as outlined in the Local Coastal Program (LCP) for the City of Long Beach.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

The proposed undertaking does not have the potential to impact land use and/or affect existing grown patterns on a local level, therefore, no avoidance, minimization, and/or mitigation measures are proposed.

2.2.3 PARKS AND RECREATIONAL FACILITIES

Regulatory Setting

The Park Preservation Act (California Public Resources Code (PRC Sections 5400-5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

Within the project study area, there are a number of parks, open space areas, and recreational facilities that are available for public enjoyment. Depending on location along the San Gabriel River, these facilities are owned, managed, and operated by the City of Long Beach, Los Angeles County Department of Public Works, Southern California Edison Electric, and the City of Seal Beach.

San Gabriel River Trail. The San Gabriel River Trail is a 37.8-mile, multi-use trail that runs north-south and stretches from City of Azusa in the foothills of the San Gabriel Mountains on the northern end, to the City of Seal Beach and the Pacific Ocean at its southern terminus. Though the trail travels through a primarily urban environment, adjacent parks and natural features help diversify the landscape. The San Gabriel Mountains provide a scenic backdrop to the northern portions of the trail, while the Pacific Ocean serves as a destination point in the south. Within the project study area, the San Gabriel River Trail is directly adjacent to the three bridges where construction activities will take place and traverses the eastern side/bank of the river, perpendicular to the bridge structures. The San Gabriel River Trail is owned and operated by the Los Angeles County Department of Public Works, but the portion of the trail within the project study area is maintained by the City of Long beach.

Coyote Creek Bikeway. The Coyote Creek Bikeway is a 9.5-mile, Class 1 bike path in Los Angeles County that runs north-south from its origin at Santa Fe Springs at its northern fork, before passing through industrial areas that consist of warehouses and light manufacturing. The bikeway extends south and cuts through residential neighborhoods in Cerritos and Hawaiian Gardens before it joins the San Gabriel River Trail approximately 1.3 miles north of the proposed project site at Willow Street/Katella Avenue. The portion of the Coyote Creek Bikeway in the project study area is owned and operated by the Los Angeles County Department of Public works (and

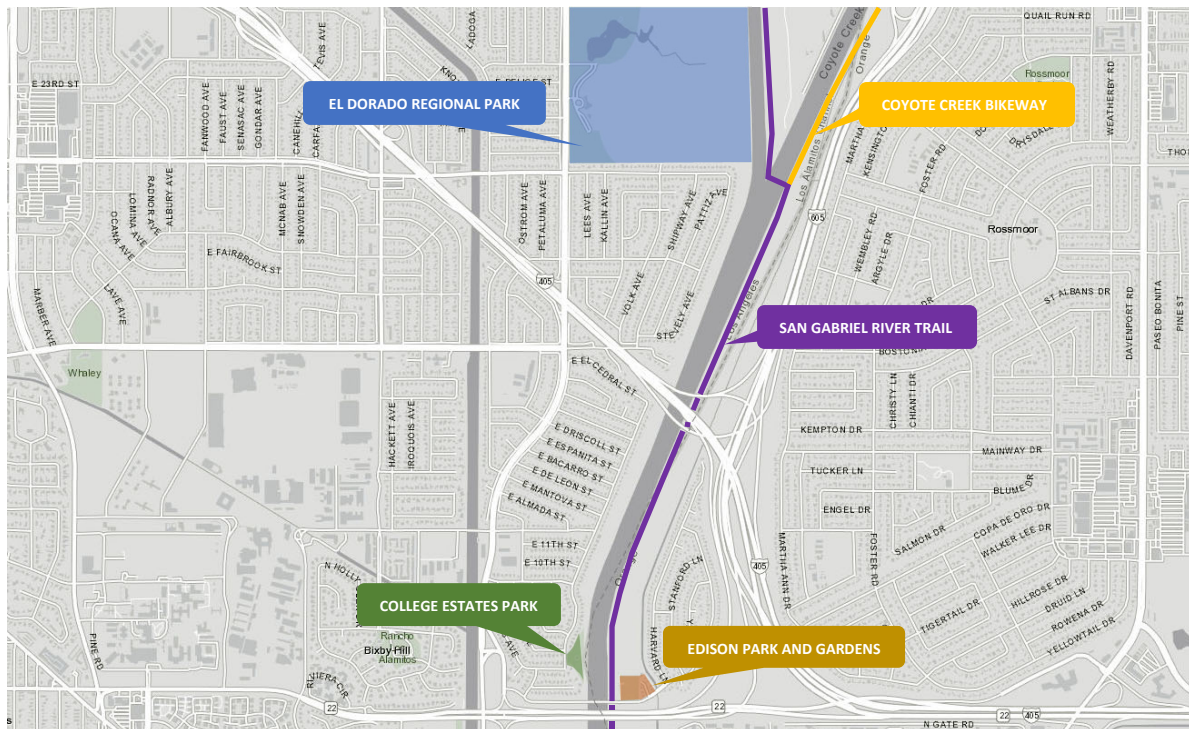
maintained by the City of Long Beach), but the remainder of the bikeway north of this area is owned and operated by the Orange County Department of Public Works.

El Dorado Regional Park. Connected to the San Gabriel River Trail, El Dorado Regional Park is set in a flood zone, and in addition to serving the region in a recreational capacity, it also serves as protection to residential areas adjacent to the park from spillover from the nearby San Gabriel River. The park was developed in 1968 after the land was sold to the City of Long Beach by members of the Bixby family, and the varied topography was a result of soil removal during construction of Interstate 605/San Gabriel Freeway which runs parallel on its eastern boundary. With a current land area of approximately 388 acres, the park features a community center, basketball and volleyball courts, softball and soccer fields, a skate park, picnic sites, cross-country running, a disc golf course, archery range, physical fitness course, roller hockey court, tennis center, an 18-hole golf course, playground, multiple duck ponds, a 100-acre nature center, an airfield for remote control planes, and a radio-controlled model sailboat area. El Dorado Regional Park is approximately 1.4 miles north of the proposed project site, and is owned, operated, and maintained by the City of Long Beach.

College Estates Park. College Estates Park is a 2.3-acre neighborhood park donated by the developer of the housing project surrounding the parcel in 1962. The park features a basketball court, community center, playground, tennis court, volleyball court, picnic area, and a sports field. College Estates Park is located approximately 1.2 miles south of the proposed project site, just beyond the western bank of the San Gabriel River, and is owned, operated, and maintained by the City of Long Beach.

Edison Park and Gardens. Edison Park and Gardens is a 10-acre facility developed in an open space plot in the Southern California Edison Electric right-of-way. The park features basketball courts, picnic areas, soccer fields, softball fields, volleyball courts, playground, and a community garden with plots available to residents in the local area. Edison Park and Gardens is located approximately 0.8 miles south of the proposed project site, is owned by Southern California Edison, and maintained by the City of Seal Beach.

Figure 2.2.3-a | Parks and Recreational Facilities in the Project Study Area



Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation) and the California Park Preservation Act of 1971. Public Resource Code Section 5400-5409, as codified in the Public Park Preservation Act of 1971, states that “No city, city and county, county, public district, or agency of the state, including any division department or agency of the state government, or public utility, shall acquire any real property, which property is in use as a public park at the time of such acquisition, for the purposes of utilizing such property for any non-park purpose, unless the acquiring entity pays or transfers to the legislative body of the entity operating the park sufficient compensation or land, or both.”

All the aforementioned community/public park facilities are protected under the California Park Preservation Act of 1971, but no permanent full or partial acquisitions, or displacement of these facilities would be required under Alternative 1 or Alternative 2 (No-Build Alternative). Therefore, there would be no effect to the aforementioned community facilities within the context of the California Public Park Preservation Act of 1971.

Alternative 1 (Retrofit Bridge Foundation) and Section 4(f) / Code of Federal Regulations, Title 23, Part 774 (23 CFR 774). Since the mid-1960s, federal transportation policy has reflected an effort to preserve publicly owned parks and recreation areas, waterfowl and wildlife refuges, and historic sites considered to have national, state, or local significance. The Department of Transportation Act of 1996 included a special provision to carry out this effort, which was 23 CFR 774, or Section 4(f). Section 4(f) stipulated that the Federal Highway Administration (FHWA) and other U.S. Department of Transportation agencies cannot approve the use of land from a significant publicly owned park, recreation area, wildlife or waterfowl refuge, or any significant historic site unless there is no feasible and prudent alternative to the use of land; and the action includes all possible planning to minimize harm to the property resulting from use.

Caltrans considered the proposed project alternatives within the context of Section 4(f), and because it was found that there is no potential for effects on waterfowl and wildlife refuges, analyses were focused on 1) publicly owned parks and recreation areas within the project study area, and 2) historic sites considered to have national, state, or local significance.

While all of the previously listed parks and recreational facilities within the project study area qualify as Section 4(f) protected properties, Alternative 1, as currently proposed, does not have the potential to affect every property. Caltrans further screened all Section 4(f) properties in the project study area and found that the proposed undertaking would only have the potential to affect two (2) publicly owned properties/facilities in the project study area. Section 4(f) protections also extend to historic sites within the project study area, and one (1) property was identified where the proposed undertaking has the potential to affect that resource. The following Table 2.2.3-a summarizes the results of this screening, and a more detailed analysis of Section 4(f) resources in the project study area can be referenced in the Appendices of this environmental document.

Table 2.2.3-a | Results of Screening of Section 4(f) Properties and Proposed Use Determinations

Section 4(f) Protected Property/Resource	Jurisdiction	Location in Relation to Proposed Project Site	Section 4(f) Use Determination	Remarks
Publicly Owned Parks and Recreation Areas				
San Gabriel River Trail	Los Angeles County Department of Public Works	Adjacent to proposed project site, east bank of San Gabriel River	Temporary Occupancy (<i>de minimis</i>)	No permanent acquisition of lands required. Temporary and intermittent closure of facilities within project limits and within work and staging zone required for duration of construction.
Coyote Creek Bikeway	Los Angeles County Department of Public Works	1.3 miles north of project site	Temporary Occupancy (<i>de minimis</i>)	No permanent acquisition of lands required. Temporary and intermittent closure of the facilities within project limits and within work and staging zone required for duration of construction.
El Dorado Regional Park	City of Long Beach	1.4 miles north of project site	No use	No permanent acquisition of lands required. No direct or indirect effect on Section 4(f) protected property.
College Estates Park	City of Long Beach	1.2 miles south of project site	No use	No permanent acquisition of lands required. No direct or indirect effect on Section 4(f) protected property.
Edison Park and Gardens	Southern California Edison	0.8 miles south of project site	No use	No permanent acquisition of lands required. No direct or indirect effect on Section 4(f) protected property.
Historic Sites Considered to Have National, State, or Local Significance				
Los Angeles County Flood Control Historic District (LACFCHD)	United States Army Corps of Engineers/ Los Angeles County Flood Control District	Within jurisdictional right-of-way	Direct Use (<i>de minimis</i>)	Finding of No Adverse Effect with Standard Conditions (FNAE-SC). Addition of footing extensions and rock slope protection around Piers 3 and 4 of three (3) non-contributing bridges, as well as the temporary cofferdams will not diminish the characteristics that make the contributing San Gabriel River Channel (contributor) or the LACFCHD eligible for listing in the National Register of Historic Places (NRHP).

The previous table shows that the proposed undertaking will result in a “Temporary Occupancy” of the San Gabriel River Trail and the Coyote Creek Bikeway, and a *de minimis* finding is appropriate within the context of Section 4(f) as the proposed actions would not significantly affect the activities, features, and attributes of the resources. The table also shows a “Direct Use” of the Los Angeles County Flood Control Historic District (LACFCHD), and a *de minimis* finding is appropriate within the context of Section 4(f) as the addition of footing extensions and rock slope protection around Piers 3 and 4 of three (3) non-contributing bridges, as well as the temporary cofferdams will not diminish the characteristics that make the contributing San Gabriel River Channel (contributor) or the LACFCHD eligible for listing in the National Register of Historic Places (NRHP). Reference the appendices of this environmental document for more details on these Section 4(f) resources and findings.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance, Minimization, and/or Mitigation Measures as Applicable to Park Facilities Protected under the California Park Preservation Act of 1971. As previously mentioned, all the aforementioned community/public park facilities are protected under the California Park Preservation Act of 1971, but no permanent full or partial acquisitions, or displacement of these facilities would be required under Alternative 1 or Alternative 2 (No-Build Alternative). Therefore, there would be no effect to the aforementioned community facilities within the context of the California Public Park Preservation Act of 1971, and no avoidance, minimization, and/or mitigation measures are required.

Avoidance, Minimization, and/or Mitigation Measures as Applicable to Section 4(f) Protected Properties. For details regarding avoidance, minimization, and/or mitigation measures as they pertain to the San Gabriel River Trail, Coyote Creek Bikeway, and the Los Angeles County Flood Control Historic District (LACFCHD), reference Section 4(f) chapter in the appendices of this environmental document. Additional details regarding avoidance, minimization, and/or mitigation measures for impacts to the Los Angeles County Flood Control Historic District (LACFCHD) can be referenced in Section 2.2.5 Cultural Resources.

2.2.4 UTILITIES AND EMERGENCY SERVICES

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking. The following information regarding utilities/emergency services were obtained from Caltrans Right-of-Way Estimates and Data Reports, and general research performed by the Caltrans Division of Environmental Planning.

Public and Private Utilities

Electricity. Southern California Edison (SCE) provides electricity to the City of Long Beach. SCE delivers power to more than 14 million people with a service area of approximately 50,000 square miles that covers central, coastal, and Southern California. Electricity in the project study area is provided by the SCE Alamitos Substation.

Natural Gas. The City of Long Beach Energy Resources Department provides natural gas to approximately 500,000 residents and businesses in the City of Long Beach and Signal Hill.

Wastewater. The Long Beach Water Department (LBWD) owns, operates, and maintains the sanitary sewer system that carries water from toilets, showers, sinks, and dish and clothes washers away from homes and businesses. LBWD operates and maintains over 700 miles of sanitary sewer lines, safely collecting and delivering over 40 million gallons of wastewater per day to the Sanitation Districts of Los Angeles County for treatment. The Long Beach Water Reclamation Plant is located approximately 1.7 miles upstream from the proposed project site, just north of the confluence of the San Gabriel River and Coyote Creek.

Water Supply. The City of Long Beach receives its drinking (potable) water from two main sources – groundwater and imported water. Approximately 60 percent of the water supply is local groundwater, where the rest of the city's drinking water comes from two imported water sources: the Colorado River, via the 242-mile Colorado River

Aqueduct, and Northern California's Bay-Delta region, via the 441-mile California Aqueduct. The Metropolitan Water District of Southern California (MWD) is the city's water wholesaler and is responsible for bringing these imported water sources into Southern California.

Telephone and Cable Services. AT&T, Frontier Communications (formerly Verizon FiOS), and Spectrum Communications (formerly Charter Communications) are the major telephone and cable service providers in the City of Long Beach, with cable and fiber optic infrastructure throughout the project study area.

Emergency Services

Fire Protection Services. The Long Beach Fire Department provides fire protection and emergency medical services through 23 fire stations in the City of Long Beach, and in addition to a service area of 55 square miles, the department's Marine Safety Division provides service patrols to waterways and beach front areas within the jurisdiction.

Police Protection Services. Protection services in the project study area are provided by the Long Beach Police Department (LBPD), providing law enforcement services to the 7th largest city in the state, with over 800 sworn officers and a total staffing of 1,200 personnel. The LBPD also provides contracted law enforcement services to the Port of Long Beach, Long Beach Airport, Long Beach Transit, and Long Beach City College.

Medical Institutions. There are no emergency rooms within the immediate vicinity of the project site, though the following facilities exist just beyond the project study area:

- Veterans Administration Long Beach Healthcare System (approximately 2.3 miles west)
- Los Alamitos Medical Center (approximately 2.7 miles northeast)
- Long Beach Memorial Medical Center (approximately 7 miles west)
- College Medical Center (approximately 7.2 miles west)
- Saint Mary Medical Center (approximately 6 miles west)

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation). The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and no impacts to utilities are anticipated, and while temporary, construction-related effects related to lane closures are anticipated during construction, Caltrans continues to coordinate with local jurisdictions, and a Transportation Management Plan (TMP) shall be implemented accordingly to provide detailed access and detour strategies that would minimize any effects related to such.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

UTL-01 | Early and Continuing Coordination with Utility Providers. Early communication and planning with affected utility providers before and during construction will ensure that all affected infrastructure will be relocated with consideration, and to minimize any disruption of services and any effects as much as possible.

TMP-01 | Transportation Management Plan (TMP). A Transportation Management Plan (TMP) shall be implemented to provide detailed access and detour strategies that would minimize any effects on response times for fire, police, and emergency services. Caltrans shall maintain close coordination with local agencies and jurisdictions, including fire protection services, police, schools, and park agencies via a public outreach campaign during the construction phase of the proposed project.

TMP-02 | Early and Continuing TMP Coordination with the City of Long Beach. Caltrans shall initiate early coordination with the City of Long Beach to achieve consensus and obtain concurrence on traffic management strategies during construction, and to ensure public access and availability of emergency and public services during the construction period.

2.2.5 CULTURAL RESOURCES

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical

resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU) between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking. The ensuing discussion is based on a review of the Historic Properties Survey Report (HPSR) as prepared for the proposed project by the Caltrans Division of Environmental Planning, District 7 – Cultural/Archaeological Resources Branch, March 2020, the Assumption of Eligibility Request for EA 07-32100, LA & ORA 405 Bridge Scour Maintenance Project, Los Angeles and Ventura County (February 2020), and the Application of the Secretary of the Interior’s Standards (SOIS) for Los Angeles County Flood Control Historic District (February 2020).

Area of Potential Effects (APE). An Area of Potential Effects (APE) was established as the area of direct and indirect effect. All direct, permanent, and temporary project effects, as well as potential indirect effects have been considered and estimated to occur within the boundaries of the delineated APE. The Direct APE is limited to the area of physical work, as well as areas of potential indirect effects beyond the direct project footprint, encompassing historic properties that have been assumed eligible for the purposes of the proposed project. Of the 15 acres composing the Direct APE, total ground disturbance is limited to 4.4 acres within the artificial bed of the San Gabriel River encompassing the bridge piers of Interstate 405.

Study Methods

A California Historical Resources Information System (CHRIS) records search was conducted for the proposed project, that included the current project site, and the adjacent area north (approximately 0.25-mile) to the existing terminus of the channelized portion of the San Gabriel River. The CHRIS records search also included screening as it applies to initial proposed project alternatives that have since been removed from further consideration. The records search identified 35 cultural resource studies within a 1.0-mile radius of the APE and 3 cultural resource reports within the APE. Additional sources consulted as part of the record search included:

- California Historical Landmarks (CHL)
- California Points of Historical Interest
- California Register of Historical Resources (CRHR)
- Caltrans Historic Bridge Inventory
- Caltrans Cultural Resources Database (CCRD)
- National Historic Landmarks (NHL)
- National Register of Historic Places (NRHP)
- Historic USGS topographical maps
- Historic Aerials, National Environmental Title Research (NETR) Online

The CHRIS records search identified a total of 5 previously identified archaeological resources within 1.0-mile of the APE, as well as 6 non-archaeological resources within 0.125-mile of the APE. These sites included an eastern recorded location for the prehistoric village site of Puyunga (P-19-000306/CA-LAN-306) upon the higher elevations

of Bixby Hill, P-19-001001/CA-LAN-1001, and 3 trace sites (P-19-120038, P-19-120039, P-19-120050). None of the resources identified are located within, or directly adjacent to the APE.

Native American Consultation

An initial request for a search of the Native American Heritage Commission Sacred Lands File was sent by Caltrans on September 25, 2018. No response was received and follow up requests were sent on October 31, 2018 and February 10, 2020. A copy of the Sacred Lands File negative search results and list of Native American contacts was received on February 10, 2020.

A response was received from the Gabrieleno Band of Mission Indians – Kizh Nation, stating that the project was located within the ancestral territory of the Gabrieleno Band of Mission Indians-Kizh Nation and may have potential for discoveries of cultural resources. A request was made for Native American monitoring of ground disturbance, and a follow up meeting and consultation (October 26, 2018) and phone conference (December 12, 2018) relayed further information on the project scope within the river channel, as well as the nature of the built environment of the San Gabriel River. Meetings concluded that the party's concerns were addressed and that there was no further comment. Upon receiving the Sacred Lands File search results and Native American contact list, additional and follow up Section 106 consultation notification letters were sent by mail (February 20, 2020) and email (February 19, 2020).

Based upon the nature of the proposed work within the artificial channel of the San Gabriel River, the results of the records search, and consultation with Native American consulting parties, Caltrans PQS determined that an Archaeological Survey Report (ASR) was not necessary for this undertaking.

Historic Properties Identified

Caltrans, in accordance with Section 106 PA Stipulation VIII.C.5 and as applicable PRC 5024 MOU Stipulation VIII.C.5 has determined there are cultural resources within the APE that were previously determined not eligible for inclusion in the NRHP and/or not eligible for registration as a California Historic Landmark (CHL) with SHPO concurrence and those determinations remain valid. Those identified cultural resources are Bridge No. 53-1185, Bridge No. 55-1737H, and Bridge No. 55-0413F as included in the scope of work for the proposed project. This is supported by a review of the Caltrans Historic Bridge Inventory that shows that the bridges are listed as Category 5 (previously determined not eligible for listing in the NHRP), and those determinations remain valid.

The following properties within the APE are considered eligible for inclusion in the NRHP and/or CHLs for the purposes of this project only, because evaluation was not possible, in accordance with Section 106 PA Stipulation VIII.C.4 and as applicable PRC 5024 MOU Stipulation VIII.C.4:

- **Los Angeles County Flood Control Historic District (LACFCHD)**
 - San Gabriel River Channel – Contributor
 - Coyote Creek Channel – Contributor
 - Bridge No. 53-1185 – Non-Contributor
 - Bridge No. 53.1737H – Non-Contributor
 - Bridge No. 55-0413F – Non-Contributor

Los Angeles County Flood Control Historic District. The Los Angeles County Flood Control District is a historic district made up of the county-wide flood control efforts of the Los Angeles County Flood Control District (LACFCHD) and the United State Army Corp of Engineers (USACE); consisting of a collection of dams, concrete lined river and creek channels, bridges, and drainage systems. The district's period of significance is from 1934 to 1966.

The Los Angeles River and its many associated waterways flooded frequently throughout the City and County of Los Angeles' early history of the late 1800s/early 1900s. The state legislature formed the LACFD in 1914 in response to the costliest flood in the area to that date. Planning and construction was slow going until the early 1930s and included effort to obtain funds from the federal government. The district's period of significance starts with the flood of 1934, the most devastating of its time. Afterwards, the LACFD put together a more comprehensive plan, consisting of sixty-four (64) separate projects totaling close to one billion dollars, and sought federal aid. In 1936, the passage of the Flood Control Act by the United State Congress expanded the USACE supervision of flood control projects. The LACFD with the help of the USACE and Works Progress Administration (WPA) funds, began construction of the county wide flood control system consisting of concrete lined channels for waterways, a series of concrete dams, and associated drainage systems to funnel water to the channels and ultimately out to the Pacific Ocean. The period of significance ends in 1966 upon the completion of the majority of the major projects associated with the flood control plan.

The LACFCHD is considered eligible for listing in the NRHP at the local level of significance under Criterion A for its important influence on the region's physical development and its role in controlling floods waters within the county. While certain elements of the district are individually eligible for their engineering role as a design prototype, the district itself is not eligible under Criterion C for this role.

San Gabriel River Channel. The San Gabriel River Channel is considered a contributing resource to the LACFCHD. The roughly fifty-eight (58) mile river is one of the three major rivers in Los Angeles County. It starts north in the San Gabriel Mountains and runs roughly south through Los Angeles County, as well as along portions of its border with Orange County, and ultimately terminates in the Pacific Ocean. The majority of the river consists of a concrete lined channel, completed in 1964. Small portions of the river are still soft-bottom, most notably the approximate last four (4) miles; which starts within the project's APE.

Coyote Creek Channel. The Coyote Creek Channel is considered a contributing resource to the LACFCHD. The roughly 13.7-mile creek and tributary of the San Gabriel River. It starts near Brea and runs southwest to its confluence with the San Gabriel River Channel, which is within the project's APE. Coyote Creek, like most other waterways within the district was converted a concrete lined channel, completed in 1962.

Bridge No. 53-1185. The San Gabriel River Bridge (Bridge No. 53.1185) is a non-contributing resource to the LACFCHD. It is a 399-foot long 5-span reinforced concrete box-girder bridge structure built in 1964. While the bridge was constructed within the district's period of significance, it is not associated with the construction of the LACFCHD or the channelization of the San Gabriel River. The bridge crosses over the soft-bottom segment of the San Gabriel River. It is more associated with the planning and construction of Interstate 405, which began before the concrete channelization of the San Gabriel River. The subject bridge is also listed as Category 5, not individually eligible, in the Caltrans Historic Bridge Log.

Bridge No. 53-1737H. The Southbound I-605 to Northbound I-405 connector (Bridge No. 53-1737H) is a non-contributing resource to the LACFCHD. It is a 377-foot long five-span reinforced concrete box-girder bridge built in 1966. While the bridge was constructed within the district's period of significance, it is not associated with the construction of the LACFCHD or the channelization of the San Gabriel River. The bridge crosses over the soft-bottom segment of the San Gabriel River. It is more associated with the planning and construction of Interstate 405, which began before the concrete channelization of the San Gabriel River. The subject bridge is also listed as Category 5, not individually eligible, in the Caltrans Historic Bridge Log.

Bridge No. 55-0413F. The Southbound I-405 to Northbound I-605 Connector Overcrossing (Bridge No. 55-0413F) is a non-contributing resource to the LACFCD. It is a 1,796-foot long seventeen-span reinforced concrete box-girder bridge built in 1966. While the bridge was constructed within the district's period of significance, it is not associated with the construction of the LACFCHD or the channelization of the San Gabriel River. The bridge crosses over the soft-bottom segment of the San Gabriel River. It is more associated with the planning and construction of Interstate 405, which began before the concrete channelization of the San Gabriel River. The subject bridge is also listed as Category 5, not individually eligible, in the Caltrans Historic Bridge Log.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation). Research and examination of previous technical reports and maps for the project study area show that the totality of the APE has been previously disturbed by construction and other development activities, including construction of the existing bridge structures.

Finding of No Adverse Effect with Standard Conditions (FNAE-SC) for the Los Angeles County Flood Control Historic District (LACFCHD). The proposed project, as designed, will not have an Adverse Effect on the Los Angeles County Flood Control Historic District (LACFCHD) because it will be protected by using Standard Conditions with a Secretary of the Interior's Standards Action Plan (SOIS AP). The addition of footing extensions and rock slope protection around the footing extensions to Piers 3 and 4 of three (3) non-contributing bridges, as well as the temporary cofferdams will not diminish the characteristics that make the contributing San Gabriel River Channel (contributor) or the LACFCHD eligible for listing in the National Register of Historic Places (NRHP).

The Secretary of the Interior's Standards for the Treatment of Historic Properties (the Standards) provide a general approach to historic preservation practices and the treatment of historic properties. The appropriate approach for the proposed project are the Standards for Rehabilitation:

- The Standards for Rehabilitation allows minimal change to allow for a property's continued use through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

In addition to the Standards, Caltrans will ensure that all proposed project work will be performed as per the Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California (Los Angeles District Corps of Engineers, December 1999). This will also ensure that the project plans are consistent with the Standards to maintain the essential form and integrity of the channel segment is unimpaired. The following table provides an analysis of how the proposed project work related to the LACFCHD meets the intent of the Standards for Rehabilitation and demonstrates/supports the rationale for the a "Finding of No Adverse Effect with Standard Conditions (FNAE-SC)" finding for the LACFCHD.

Table 2.2.5-a | Secretary of the Interior’s Standards for Rehabilitation – LACFCHD

No.	Standard for Rehabilitation	Project Review
1	A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.	The LACFCHD, and the contributing resources within the APE, will continue to be used as a county-wide flood control management system.
2	The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.	The proposed project work will preserve the character of the historic property. The small amount of riverbed soil that will be removed to add footing extensions and rock slope protection around the piers does not constitute enough of an alteration as to interfere with features, spaces, or spatial relations that characterize the district or contributing resources. The addition of footing extensions will be underwater on the soft-bottom river bed and will not be visible.
3	Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.	Because the proposed project work will not be visible (underwater on the riverbed around the piers), no changes to the historic district will appear to have been made; therefore, retaining the historic district’s ability to be recognized as a physical record of its time.
4	Changes to a property that have acquired historic significance in their own right will be retained and preserved.	The project does not propose to remove or alter any portions of the historic district or contributing resources that may have acquired significance in their own right.
5	Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.	The proposed project work will not alter any portions of the historic district or contributing resources that characterize the property.
6	Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.	The proposed project work does not include any repair or replacement of historic features.
7	Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.	No chemical or physical treatments are proposed.
8	Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.	There are no known archaeological resources within the APE or vicinity of Piers 3 and 4 of the three (3) subject bridges.
9	New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.	The proposed project does not include any new additions, exterior alterations, or related new construction that will destroy historic materials, features, and spatial relationship that characterize the property. For example, the proposed project will not alter the path of San Gabriel River Channel or lower the river-bed or change any contributing resources.
10	New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.	The new additions (footing extensions and rock slope protection) will be attached to Piers 3 and 4 of three (3) non-contributing resources as well as the soft-bottom river bed portion of the contributing San Gabriel River. The proposed work is not meant to be removed. However, if it was to be removed, simple infill of the river bottom with soil will retain the essential form and integrity of the historic property, leaving the environment unimpaired.

Discovery of Cultural Materials. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

Discovery of Human Remains. If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area

suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Kimberly Harrison, PQS Co-Principal Investigator, Prehistoric Archaeology at Caltrans District 7 Division of Environmental Planning, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Section 4(f) Protected Historic Resources in the Project Study Area. In addition to publicly owned parks and recreation areas, Section 4(f) protections also extend to historic sites, sometimes referred to as cultural resources. In order to qualify for protection under Section 4(f), a historic site must meet the following criteria:

- It must be of national, state or local significance
- It must be on or eligible for listing on the National Register of Historic Places (NRHP)

As previously mentioned, The Los Angeles County Flood Control Historic District (LACFCHD) is considered eligible for inclusion in the NRHP and or CHLs for the purposes of this project only, because evaluation was not possible, in accordance with Section 106 PA Stipulation VIII.C.4 and as applicable PRC 5024 MOU Stipulation VIII.C.4. Assumption of eligibility of the LACFCHD on the NRHP qualifies this resource for protection under Section 4(f), and a *de minimis* Determination has been proposed, as supported by the Finding of No Adverse Effect with Standard Conditions (FNAE-SC) for the proposed undertaking. Reference the appendices of this environmental document for additional details on this Section 4(f) *de minimis* Determination.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

CRA-01 | Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD). To ensure protection of the Los Angeles County Flood Control Historic District (LACFCHD), all project activities shall be governed by a Secretary of the Interior's Standards (SOIS) Action Plan with responsibilities outlined as follows:

Table 2.2.5-b | Secretary of the Interior’s Standards (SOIS) Action Plan

Project Phase	Responsible Parties	Task
Pre-Construction	Caltrans Architectural Historian* Caltrans Environmental Construction Liaison (ECL)* Caltrans Generalist	The Caltrans Architectural Historian will review for approval the Project, Specifications & Estimates Packages at 65%, 95% and 100% stages to ensure that proposed project work conforms to the SOIS.
	Caltrans Architectural Historian* Caltrans ECL* Caltrans Generalist*	The Caltrans Architectural Historian, Generalist, and ECL will ensure the SOIS Action Plan as well as the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> are included in the Environmental Commitments Record (ECR).
	Caltrans Design Manager* Caltrans Design Engineer*	The Caltrans Design Manager and Design Engineer will ensure the necessary and relevant sections and pages from the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> are included in the final plans. This should, at a minimum, include the Standard Plans and Data Sheets for San Gabriel River Channels within the project area (SGR-A-2, SGR-1-3, and SGR-C-1).
	Caltrans Architectural Historian* Caltrans ECL* Caltrans Resident Engineer* Contractor*	<p>The Caltrans Architectural Historian and the ECL will provide information related to the preservation of the LACFCD to the other responsible parties at the pre-construction meeting.</p> <p>This discussion will include describing the LACFCD and how it will be protected during construction by using the SOIS and the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i>.</p> <p>Training can be provided to the contractor and their staff should it be deemed necessary by the Caltrans Resident Engineer and the Caltrans Architectural Historian.</p>
During Construction	Caltrans Architectural Historian* Caltrans ECL Caltrans Resident Engineer Contractor	<p>The Caltrans Architectural Historian and Caltrans ECL will periodically monitor the progress of the construction to ensure the work conforms to the SOIS.</p> <p>Should any work not conform to the SOIS, the Caltrans Architectural Historian and ECL shall inform the Caltrans Resident Engineer. Construction will stop, and a plan will be developed to correct the work to comply with the SOIS. Only then will work resume.</p>
	Caltrans Resident Engineer* Contractor*	Should any portion of the LACFD need reconstruction during construction of this project, the contractor will reconstruct the subject portions in accordance to the guidance found in the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> . This includes but is not limited to Appendix VI, Project Data Sheets (SGR-A-2, SGR-1-3, and SGR-C-1), and any subsequent or related applicable guidance.
Post-Construction	Caltrans Architectural Historian* Caltrans ECL*	Following the completion of construction, the Caltrans Architectural Historian will confirm the project work conformed to the SOIS.
	Caltrans Architectural Historian*	Ensure that all above listed tasks have been completed and logged on this list.

*denotes primary responsibility

2.3 PHYSICAL ENVIRONMENT

2.3.1 HYDROLOGY AND FLOODPLAIN

Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

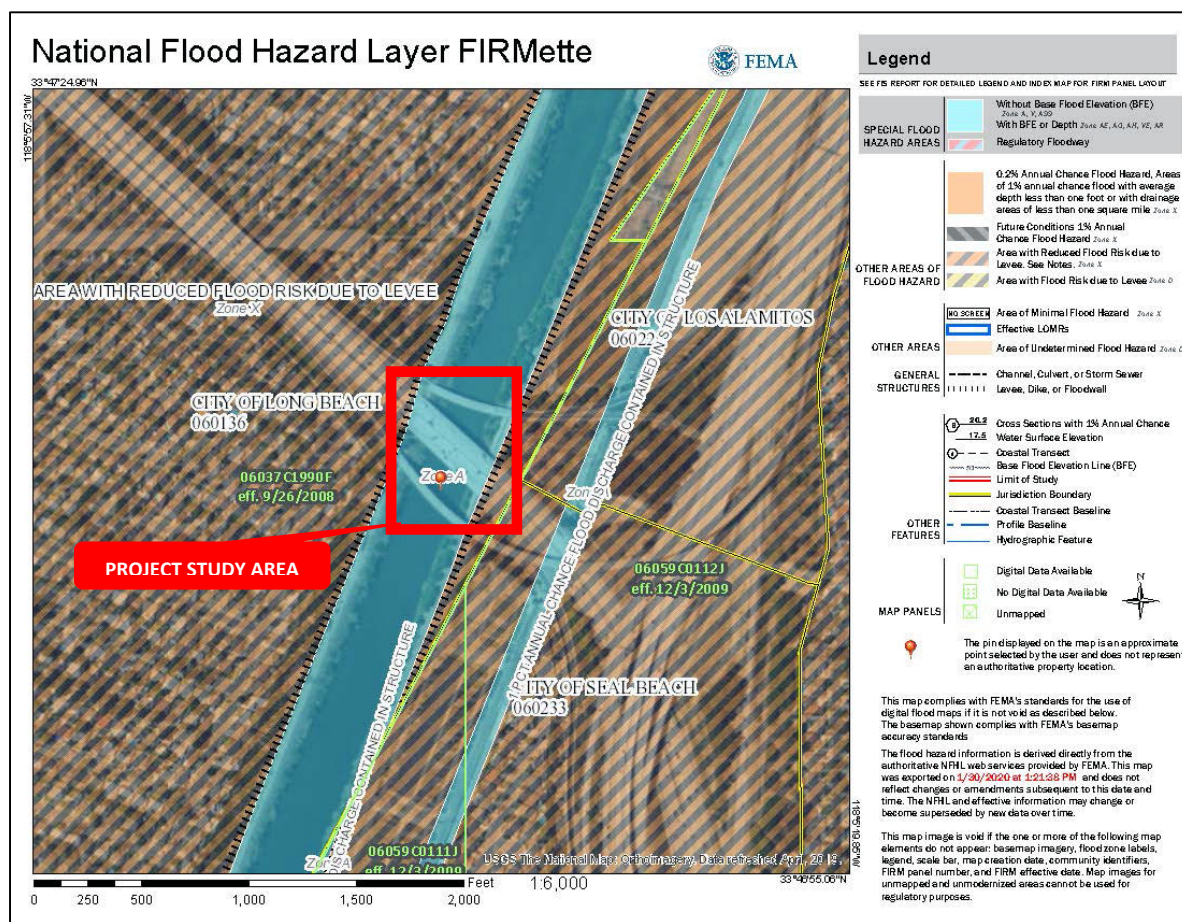
Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking. The ensuing discussion is based on a review of the Preliminary Hydraulic Report for the Scour Mitigation Project on the San Gabriel River Bridges (Bridge Numbers 53-1737H, 53-1185, and 55-0413F) [June 2016], and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the project area on I-405 at the San Gabriel River (January 2020). All hydraulic and scour information is preliminary and subject to change pending further detailed analyses that will be completed during the next project phase and contained within a Final Hydraulic Report.

In general, Long Beach and the project study area have a warm-summer Mediterranean climate, which is strongly influenced by the Pacific Ocean. Typically, Mediterranean climates are characterized by dry summers where subtropical high-pressure dominates, and mild, rainy winters where the bulk of annual precipitation is incurred. While winter rainfall in the project study area can be scant, the region is subject to periods of intense and sustained precipitation that often results in flooding. Localized flooding tends to occur along the coast, in low-lying areas, and in creeks during peak storm events, which can become hazardous in areas where human activity has encroached onto floodplains, where the landscape has been modified with a customary increase in the amount of impervious surfaces, and/or where structures are built in areas that are meant to convey excess water during these events.

Local Hydrology. The San Gabriel River Watershed upstream of the existing bridge structures drains a large watershed of approximately 625 square miles (mi²). The San Gabriel River is one of three major watersheds in the Los Angeles Basin. The San Gabriel River, the smallest river of the three watersheds, flows approximately 60.6 miles from its headwaters to its mouth at Alamitos Bay between the cities of Long Beach and Seal Beach, draining a total of 640 mi². The San Gabriel River Watershed is comprised of three distinct hydrologic areas: the rugged southern slopes of the San Gabriel Mountains, the urbanized San Gabriel Valley, and the developed coastal plain of the Los Angeles Basin. The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the county before becoming a soft-bottomed channel once again near the project study area.

Designated Flood Zones. Federal Emergency Management Agency (FEMA) flood hazard areas identified on the Flood Insurance Rate Map (FIRM) are shown as a Special Flood Hazard Area (SFHA). SFHAs are defined as areas that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded). The following Figure 2.3.1-a illustrates how the project study area is located within a SFHA designated as “Zone A,” or an area that possesses a 1% annual chance of flooding and a 26% chance of flooding over 30 years.

Figure 2.3.1-a | Project Location within FEMA Designated “Zone A” Area of FIRM



Assessment of the watershed indicates an estimated flood frequency discharge for the 100-year flood event at 55,900 cubic feet per second (cfs). The 100-year design flood discharge is based on the United States Army Corps of Engineers' (USACE) report titled, "*Los Angeles County Drainage Area Final Feasibility Interim Report.*" Discharge shall be further analyzed during the construction season of April 1st to October 1st in order to assist in designing temporary, sheet-pile cofferdams to control both river and tidal flow conditions. A conservative flow value of 500 cfs was used in analyses. The following table provides the preliminary and estimated design flood discharges for the proposed project.

Table 2.3.1-a | Preliminary Design Flood Discharges at the San Gabriel River Bridges

Flood Frequency	Design Flood Discharges (cfs)
During the Construction Season	500
100-Year Flood Event	55,900

Tidal Fluctuations at the Mouth of the San Gabriel River. With the San Gabriel River channel profile on a very flat grade (0.00074 ft/ft) and the existing San Gabriel River bridge structures only 3.6 miles upstream from the Pacific Ocean, tidal exchange will reach the project location. Therefore, the tidal exchange between the San Gabriel River and the Pacific Ocean will be accounted for in the hydraulic design of the scour mitigation design of Alternative 1. The hydraulic design will be based on the extreme tidal events of the Mean Lower Low Water (MLLW) tidal elevation and the Mean Higher High Water (MHHW) tidal elevation. The MLLW and the MHHW tidal elevations will provide a conservative hydraulic design in regard to velocity and water surface elevations. Additional, since the upland riverine flood flows from the San Gabriel River are substantial, a steady flow analysis with the tail water conditions set at normal depth must be checked as the riverine flood flows may control over the tidal conditions. The MLLW and MHHW tidal elevations were obtained from the National Oceanic and Atmospheric Administration (NOAA) tidal gage in Los Angeles, Los Angeles Harbor, California (Station ID 6410660).

Existing Conditions. The "during construction" discharge of 500 cfs and the 100-year flood discharge of 55,900 cfs were modeled through the San Gabriel River bridge structures using an existing conditions hydraulic model. The following tables summarize the existing hydraulic results for the upstream edge of deck for the three bridge structures. The existing conditions hydraulic analysis provides a baseline comparison to the proposed conditions analysis for Alternative 1.

Table 2.3.1-b | Preliminary Hydraulic Analysis for the Existing Conditions at the 'During Construction' Design Discharge

San Gabriel River Bridge (Bridge No.)	Design Discharge (cfs)	Water Surface Elevation (ft)		
53-1737H	500	1.21	1.21	2.95
53-1185	500	0.15	0.15	1.95
55-0413F	500	0.11	0.11	1.94

Table 2.3.1-c | Preliminary Hydraulic Analysis for the Existing Conditions at the 100-year Design Discharge

San Gabriel River Bridge (Bridge No.)	Design Discharge (cfs)	Water Surface Elevation (ft)		
		Without Tidal Effects	With a MLLW Tidal Event	With a MHHW Tidal Event
53-1737H	55,900	23.71	23.69	24.52
53-1185	55,900	23.00	22.98	23.84
55-0413F	55,900	22.65	22.63	23.53

Environmental Consequences

Hydraulic Modeling Results for Alternative 1 (Retrofit Bridge Foundation). Tables 2.3.1-d and 2.3.1-e summarize the hydraulic results from the proposed conditions hydraulic model for Alternative 1, which is a structural fix to retrofit/place footing extensions around the existing footings; insert supplemental three-foot diameter Cast-In-Drilled-Hole (CIDH) piles; place a final grade to the new top of footing elevations; and placement of rock riprap channel armoring. The results are expressed utilizing the ‘during construction’ discharge and the 100-year flood discharge.

Table 2.3.1-d | Preliminary Hydraulic Analysis for Alternative 1 at the ‘During Construction’ Design Discharge

San Gabriel River Bridge (Bridge No.)	Design Discharge (cfs)	Water Surface Elevation (ft)		
		Without Tidal Effects	With a MLLW Tidal Event	With a MHHW Tidal Event
53-1737H	500	2.60	2.60	2.60
53-1185	500	2.46	2.46	2.47
55-0413F	500	0.61	0.61	1.72

Table 2.3.1-e | Preliminary Hydraulic Analysis for Alternative 1 at the 100-Year Design Discharge

San Gabriel River Bridge (Bridge No.)	Design Discharge (cfs)	Water Surface Elevation (ft)		
		Without Tidal Effects	With a MLLW Tidal Event	With a MHHW Tidal Event
53-1737H	500	23.55	23.54	24.36
53-1185	500	23.26	23.24	24.11
55-0413F	500	22.37	22.36	23.30

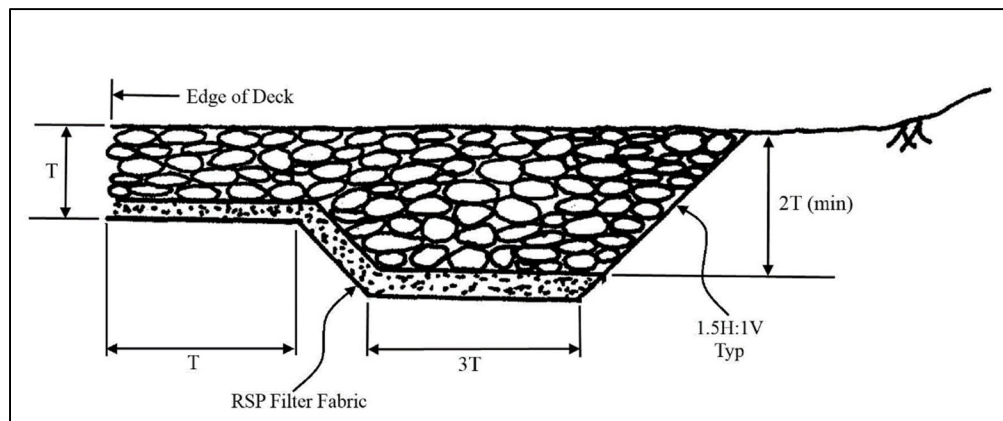
During a 100-year flood event, hydraulic modeling showed a decrease in water surface elevations for Bridge No. 53.1737H and Bridge No. 55.0413F, while Bridge No. 55.1185 showed an increase in water surface elevations by approximately 0.26-feet. This increase in water surface elevation will not cause any issues for the channel to pass its floodwaters and does not present a scenario where the proposed improvements would constitute a significant encroachment on the floodplain. It should be noted that this hydraulic model is preliminary and more analysis with better assumptions (such as a channel grading plan) can result in more favorable conclusions, which will be performed during the next project phase.

Sheet-Pile Cofferdam. During the construction season of April 1st to October 1st, two temporary sheet pile cofferdams will be installed at the approximate river stationing of 193+50 and 199+50 to control upland river flows and the tidal effects of the ocean. Using the assumed ‘during construction’ discharge of 500 cfs, the estimated top of sheet-pile cofferdam will be set at 3.25-feet (top of wall elevation).

Rock Riprap Channel Armoring Design. The rock riprap channel armoring is designed to resist the maximum channel velocity of the existing river channel and thus any scour issues. The rock riprap channel armoring scour countermeasure will be used with the following recommendations:

- Piers 3 and 4 of all the San Gabriel River Bridges are recommended to have the rock riprap channel armoring applied
- The rock riprap channel armoring will include a single layer of Caltrans standard rock size of 1-ton with a design riprap layer thickness (T) of 9.0-feet (minimum)
- The top of the rock riprap channel armoring shall be placed flush with the channel final grade (at top of existing or proposed footings)
- The rock riprap channel armoring will include an embedded toe as an end treatment on the upstream and downstream limits (see following figure)
- The rock riprap channel armoring width will begin 32.0-feet (laterally) off the face of the footings for Piers 3 and 4 at all three bridges. In addition, the rock riprap channel armoring will completely cover Span 3 of all bridge structures
- Against the original grade of the river channel (the pre-excavated hole to hold the rock riprap channel armoring) a Class-8 filter fabric will be placed
- The filter fabric extent will be 2/3 the extent of the rock riprap channel armoring

Figure 2.3.1-b | Rock Riprap Channel Armoring End Treatment



Scour Analysis. A preliminary scour analysis was performed for scour mitigation as it applies to Alternative 1, but without the rock channel armor as final design of this feature is pending – analysis will be revised and updated in the Final Hydraulic Report in the next project phase. By applying the 100-year flood even and in accordance with the guidelines set forth by the Federal Highway Administration’s (FHWA) *Hydraulic Engineering Circular Number 18 – Evaluating Scour at Bridges, 5th Edition*, the following Tables 2.3.1-f, 2.3.1-g, and 2.3.1-h provide the preliminary total scour conditions for the San Gabriel River Bridge structures.

Through the use of historical channel cross-sections collected at the upstream face of the existing structures, a long-term projected degradation trend was analyzed. From 1964/1996 (the as-built channel grades) to 2011, the river channel near the existing structures have experience from 10-to-16 feet of degradation. Projecting this long-term degradation trend to the bridges’ design life of 75 years resulted in substantial degradation of 3.6 to 14.6 feet depending on which structure. However, the channel has not degraded (or show much change and has been stable since 2001. Since it is difficult to calculate a long-term degradation trend with using historical cross-sections, degradation is not included in the scour analysis at this time and analysis will be revised when project design is more finalized, with results updated in the Final Hydraulic Report in the next project phase.

The San Gabriel River is flowing straight under all the bridges and all flood flows are contained within the channel with the abutments outside of the floodwater elevations. Therefore, contraction scour is not expected to occur and will not be analyzed as part of the total scour conditions.

For the local scour conditions, only Piers 3 and 4 of all bridge structures were analyzed. Both Abutments and Piers 2 and 5 were not analyzed as they were not part of the scour mitigation work proposed with this project. With the new proposed footing design, aligned with the flow, and no appreciable debris accumulation resulted in scour depths of 15.3 feet, 15.2 feet, and 17.8 feet for Bridge No. 53.1737H, Bridge No. 53.1185, and Bridge No. 55-0413F, respectively.

Table 2.3.1-f | Preliminary Scour Analysis for Bridge No. 53-1737H

Substructure Component	Long-Term Scour Depths		Short-Term Scour Depths	Total Scour Depth (ft)
	Degradation (ft)	Contraction Scour (ft)	Local Scour (ft)	
Pier 3	--	0.0	15.3	15.3
Pier 4	--	0.0	15.3	15.3

Table 2.3.1-g | Preliminary Scour Analysis for Bridge No. 53-1185

Substructure Component	Long-Term Scour Depths		Short-Term Scour Depths	Total Scour Depth (ft)
	Degradation (ft)	Contraction Scour (ft)	Local Scour (ft)	
Pier 3	--	0.0	15.2	15.2
Pier 4	--	0.0	15.2	15.2

Table 2.3.1-h | Preliminary Scour Analysis for Bridge No. 55-0413F

Substructure Component	Long-Term Scour Depths		Short-Term Scour Depths	Total Scour Depth (ft)
	Degradation (ft)	Contraction Scour (ft)	Local Scour (ft)	
Pier 3	--	0.0	17.8	17.8
Pier 4	--	0.0	17.8	17.8

According to the 1964 as-built Log of Test Borings, the foundations for the San Gabriel River bridges rest on a thick layer of loose-to-slightly compact, brown, mottles clayey silt, silty clay, and clay over layers of slightly compact sandy silt and fine sand; and very stiff and compact brown carbonaceous clayey silt, and clay with interbedded silty fine sand.

This preliminary scour analysis assumes there is nothing unique about the soils supporting the bridge foundations that would prevent scour from reaching the predicted scour depths. As previously mentioned – during a 100-year flood event, hydraulic modeling showed a decrease in water surface elevations for Bridge No. 53.1737H and Bridge No. 55.0413F, while Bridge No. 55-1185 showed an increase in water surface elevations by approximately 0.26-feet. This increase in water surface elevation will not cause any issues for the channel to pass its floodwaters and does not present a scenario where the proposed improvements would constitute a significant encroachment on the floodplain. It should be noted that this hydraulic model is preliminary and more analysis with better assumptions (such as a channel grading plan) can result in more favorable conclusions, which will be performed during the next project phase. Determinations regarding project site subsurface conditions and resistance to total scour depths will also be investigated by the Caltrans Office of Geotechnical Services during the next project phase.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

HYR-01 | Preparation of Draft Final Hydraulic Report. Caltrans Structures Hydraulics shall prepare a Draft Final Hydraulic Report (dFHR) during the next project phase to obtain additional survey data, further evaluate hydrology, and consider climate change impacts. The dFHR shall also include other environmental considerations including floodplain requirements and habitat restoration and evaluate hydraulic conditions to determine flow regime effects of objectionable backwater conditions and velocity changes caused by any floodplain encroachment. Lastly, the dFHR shall further assess adequate waterway area and any potential scour as a result of the proposed undertaking.

2.3.2 WATER QUALITY AND STORM WATER RUNOFF

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were

developed by the U.S. EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4). Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the

Department as an owner/operator of an MS4 under federal regulations. The Department's MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department's MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

1. The Department must comply with the requirements of the Construction General Permit (see below);
2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking. The ensuing discussion regarding water quality and storm water runoff has been excerpted from multiple sources, including the Preliminary Storm Water Data Report as prepared by the Caltrans office of Design (January 2020), the Lower San Gabriel River Watershed Management Program (2015, revised 2017), and independent research performed by the Caltrans Division of Environmental Planning.

Regionally, the proposed project lies within the San Gabriel River Watershed, which receives drainage from 689 square miles of eastern Los Angeles County. Its headwaters originate in the San Gabriel Mountains, and the watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. Much of the watershed of the West Fork and East Fork of the river is set aside as a wilderness area, and other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams, and further downstream, large spreading grounds are utilized for groundwater recharge. The watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir (normally only during high storm flows).

The project study area for the proposed project lies within the lower portion of the San Gabriel River Watershed, where the river flows through a concrete-lined channel in a heavily urbanized portion of the county before becoming a soft bottom channel once again near the ocean in the City of Long Beach. Some adjacent uses to the river include large electrical infrastructure, nurseries, small stable areas, and storage facilities.

Water quality issues in the lower portion of the San Gabriel River Watershed include pollution from dense clusters of residential and commercial activities that have impaired water quality, and tertiary effluent from several sewage treatment plants that enter the river from the watershed's middle reaches. Several landfills are located within the watershed, and two power generating stations discharge cooling water into the river's estuary.

This map illustrates the San Gabriel River Watershed, which is outlined in blue. The watershed area is shaded in light blue. Major rivers and channels are shown in red, including the San Gabriel River, San Antonio River, and San Dimas River. Dams, lakes, and reservoirs are marked with blue symbols. The map also shows unincorporated areas in yellow and surrounding cities in white. A legend in the bottom right corner defines the symbols used. A scale bar and north arrow are located in the bottom center.

LEGEND

- SAN GABRIEL RIVER WATERSHED
- UNINCORPORATED AREA
- DAM / LAKE / RESERVOIR
- MAJOR RIVER
- MAJOR CHANNEL

Map Labels: San Gabriel River, San Antonio River, San Dimas River, San Gabriel Reservoir, San Antonio Reservoir, San Dimas Reservoir, San Gabriel Dam, San Antonio Dam, San Dimas Dam, San Gabriel Canyon, San Antonio Canyon, San Dimas Canyon, San Gabriel Valley, San Antonio Valley, San Dimas Valley, San Gabriel Mountains, San Antonio Mountains, San Dimas Mountains, San Gabriel National Forest, San Antonio National Forest, San Dimas National Forest, San Gabriel National Monument, San Antonio National Monument, San Dimas National Monument, San Gabriel National Park, San Antonio National Park, San Dimas National Park, San Gabriel National Preserve, San Antonio National Preserve, San Dimas National Preserve, San Gabriel National Wildlife Refuge, San Antonio National Wildlife Refuge, San Dimas National Wildlife Refuge, San Gabriel National Historic Site, San Antonio National Historic Site, San Dimas National Historic Site, San Gabriel National Battlefield, San Antonio National Battlefield, San Dimas National Battlefield, San Gabriel National Shrine, San Antonio National Shrine, San Dimas National Shrine, San Gabriel National Cemetery, San Antonio National Cemetery, San Dimas National Cemetery, San Gabriel National Mausoleum, San Antonio National Mausoleum, San Dimas National Mausoleum, San Gabriel National Temple, San Antonio National Temple, San Dimas National Temple, San Gabriel National Church, San Antonio National Church, San Dimas National Church, San Gabriel National Mosque, San Antonio National Mosque, San Dimas National Mosque, San Gabriel National Synagogue, San Antonio National Synagogue, San Dimas National Synagogue, San Gabriel National Temple, San Antonio National Temple, San Dimas National Temple, San Gabriel National Church, San Antonio National Church, San Dimas National Church, San Gabriel National Mosque, San Antonio National Mosque, San Dimas National Mosque, San Gabriel National Synagogue, San Antonio National Synagogue, San Dimas National Synagogue.

DRAFT INITIAL STUDY/ENVIRONMENTAL ASSESSMENT
Interstate 405 at San Gabriel River Bridge Scour Mitigation Project

Environmental Consequences

Alternative 1 (Retrofit Bridge Structure) and Disturbed Soil Area (DSA) / Net Additional Impervious Area.

Disturbed Soil Areas (DSAs) include all proposed project construction activity that disturbs native soil and fill within project limits. This does not include routine or preventative maintenance activities to maintain existing highways, structure, and existing functions. Asphalt concrete, Portland cement concrete, aggregate base, shoulder backing, bridge decks, sidewalks, buildings, road side ditches, gutters, dikes, and culverts are all part of existing highway facilities, and are not considered in the calculation of DSA.

In general, proposed project construction can involve grading and soil compaction, an increase in impervious surfaces (roadways, roofs, sidewalks, parking lots, etc.), or a reduction of vegetative cover, all of which reduce infiltration and increase the amount of rainfall that ends up as runoff. When precipitation soaks into the ground, or infiltrates, some of it moves very slowly toward stream channels as groundwater and is gradually released over days, weeks, or months. Increasing the tributary area by paving undeveloped areas and draining into the existing storm drain system would increase impervious areas, thus collecting more surface runoff, which in general, tends to move more rapidly into channels than infiltration. Therefore, increasing the amount of impervious area in a watershed increases the total amount of water that a receiving channel must convey, and also increases the peak flow rate. The following table presents estimates of DSA and Net Additional Impervious Area for the proposed undertaking.

Table 2.3.2-a | Estimated Project Disturbed Soil Area (DSA) and Net Additional Impervious Area

Project Alternative	Total Disturbed Soil Area (DSA) in acres	Net Additional Impervious Area in acres
Alternative 1	35	0
Alternative 2 (No-Build Alternative)	0	0

Alternative 1 (Retrofit Bridge Foundation) and Total Maximum Daily Loads (TMDLs). As previously stated, the proposed project lies within the San Gabriel River Watershed, and storm water runoff in the project study area discharges through the storm drain systems and eventually out into two receiving 303(d) listed water bodies. The 303(d) list is a list of impaired and threatened waters (stream/river segments, lakes) that the Clean Water Act (CWA) requires prioritization and development of TMDLs based on the severity of pollution and the sensitivity of the uses to be made of the waters. The 303(d) listed water bodies within the project study area are the San Gabriel River Reach 1, and the San Gabriel River Estuary.

A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. Water quality standards are set by the California Regional Water Quality Control Board, who identifies the uses for each waterbody, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific data to support that use. A TMDL is the sum of allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the waterbody can be used for the purposes the State has designated. The calculation must also account for seasonal variation in water quality. The Clean Water Act (CWA), Section 303, establishes the water quality standards and TMDL programs.

Established TMDLs for the San Gabriel River Reach 1, and the San Gabriel River Estuary

TMDLs for Indicator Bacteria in the San Gabriel River, Estuary, and Tributaries. The TMDLs for Indicator Bacteria in the San Gabriel River, Estuary, and Tributaries has been adopted by the Los Angeles Regional Water Quality Control Board (Region 4) and was made effective on June 14, 2016. The TMDL requires responsible agencies, including Caltrans, to achieve compliance with Wasteload allocations within 20

years. The TMDL sets numeric targets for indicator bacteria based on numeric water quality objected provided in the Basin Plan. The TMDL assigns waste load allocations and load allocations to municipal separate storm sewer systems (MS4) discharges, other non-MS4 National Pollutant Discharge Elimination System (NPDES), and nonpoint source discharges to attain water quality objectives for bacteria set to protect public health based on the water contact recreation and on-contact recreation beneficial uses of these waterbodies.

TMDLs for Trash for the East Fork of the San Gabriel River. The Trash TMDL for the East Fork of the San Gabriel River has been in effect since April 17, 2001. The TMDL addresses impairment to water quality due to trash being deposited in and along the stream by recreational users. The TMDL sets a numeric target of ‘no trash in the river,’ which implicitly incorporates a margin of safety, based on a conservative interpretation of narrative water quality objectives. Caltrans is not a responsible party.

TMDLs for Metals and Selenium in the San Gabriel River and Impaired Tributaries. The TMDLs for Metals and Selenium in the San Gabriel River and Impaired Tributaries was approved by the United States Environmental Protection Agency (USEPA) on March 26, 2007. The TMDL assigned Dry Weather wasteload allocations to MS4 Permittees and Caltrans for copper in the San Gabriel River Estuary, Reach 1, and Coyote Creek, and for selenium in San Jose Creek Reaches 1 and 2. The TMDL assigns Wet Weather wasteload allocations to MS4 Permittees and Caltrans for lead in the San Gabriel River Reach 2 and upstream reaches and tributaries, and for copper, lead, and zinc in Coyote Creek and its tributaries.

TMDLs for Toxic Pollutants for the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters. The TMDLs for Toxic Pollutants for the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters became effective on March 23, 2012. Targeted pollutants are copper, lead, zinc, Polycyclic Aromatic Hydrocarbons (PAHs), Dichlorodiphenyltrichloroethane (DDT), Polychlorinated Biphenyls (PCBs), benzopyrene, and dieldrin for water columns in the channel and harbors, and for sediments in the harbors. The TMDL requires the dischargers of the Los Angeles River and the San Gabriel River to monitor water quality at the mouth of each river.

Regional Water Quality Control Board special requirements/concerns, including TMDLs and/or effluent limits as they pertain to the proposed project will occur during the next project phase. Caltrans will comply with the pertinent TMDL standards, and project engineers shall consider treatment controls for the proposed project and consult with the Caltrans NPDES Storm Water Coordinator to achieve compliance.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

WDP-01/SRP-01 | Measures Relating to Section 404 of the Clean Water Act (CWA). The improvements and construction activities associated with the proposed project are subject to Section 404 of the Clean Water Act (CWA), which was established to regulate the discharge of dredged or fill material into Waters of the United States, including wetlands. The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment, or (2) the nation’s waters would be significantly degraded. A Section 404 Nationwide Permit Program (NWP) No. 14 (Linear Transportation Project), and NWP No. 33 (Temporary Construction, Access, and Dewatering), will need to be obtained from the United States Army Corps of Engineers (USACE) in compliance with the CWA for proposed activities in “Waters of the United States.” During construction of the proposed project, the following measures will be implemented as they relate to Section 404 of the CWA:

- **WDP-01.** A Water Diversion Plan shall be developed and implemented in consultation with the Caltrans Project Biologist, National Oceanic and Atmospheric Administration (NOAA), California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and the Regional Water Quality Control Board (RWQCB) to divert water through the project site to reduce turbidity and prevent sediments from entering areas downstream of the project site.
- **SRP-01.** A Stream Restoration Plan will be developed by Caltrans in conjunction with a qualified hydraulic engineer and the appropriate resource agencies to address the need to clean dewatered areas to reduce or eliminate potential contaminants from entering the water when temporary sheet-pile cofferdams are removed.

SWP-01 | Stormwater Pollution Prevention Plan (SWPPP). Generally, construction project with a Disturbed Soil Area (DSA) of more than one (1) acre require a Stormwater Pollution Prevention Plan, to address water pollution control for the proposed undertaking. The Construction General Permit (CGP) requires that all stormwater discharges associated with construction activity, where said activity results in soil disturbance of one acre or more land area, must be permitted under the CGP and have a fully developed site SWPPP on-site prior to beginning any soil disturbing activities. As previously mentioned, construction of the proposed project will require an estimated soil disturbance of 35 acres, in which a SWPPP shall be developed and implemented to improve construction site water quality practices and control the impacts of stormwater pollution through Best Management Practices. Construction activities for the proposed project is estimated to cover approximately 3 years. The temporary construction BMP categories suitable for controlling potential pollutants to be considered for the proposed project will be refined during the next project phase, and shall include, but not limited to the following:

- Soil stabilization measures
- Sediment control measures
- Wind erosion control measures
- Tracking control measures
- Non-stormwater management
- Waste management and materials pollution control

2.3.3 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Department’s Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the Department’s Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking. The ensuing discussion regarding geology/soils/seismicity/topography is based on a review of the Geotechnical Evaluation for Scour Critical Program for San Gabriel River Bridge No. 53-1185 (June 2013), the Screening Level Soil Liquefaction and Lateral Spreading Hazard Evaluation for Bridge No. 53-1737H and 53-1185 (January 2016), the Screening Level Soil Liquefaction and Lateral Spreading Hazard Evaluation for Bridge No. 55-0413F, and independent research performed by the Caltrans Division of Environmental Planning.

Regional Geology. The proposed project site is located within the United States Geological Survey (USGS) *Los Alamitos* 7.5-minute quadrangle, which lies within the southwestern block of the Los Angeles Basin, and within the northwestern Peninsular Ranges geomorphic province. The Peninsular Ranges geomorphic province consists of a series of mountain ranges separated by long valleys, formed from faults branching from the San Andreas Fault. The topographic trend is similar to the Coast Ranges, but the geology is more typical of the Sierra Nevada, with granitic rocks intruding the older metamorphic rocks. The Los Angeles Basin and the Channel Islands of Santa Catalina, Santa Barbara, San Clemente, and San Nicolas are included in this province. Also included is the surrounding continental shelf (cut by deep submarine fault troughs). The Peninsular Ranges extend south across the international border into Baja California, forming the spine of Baja California.

In general, the Peninsular Ranges province includes rocks that range in age from Quaternary to Paleozoic. Basement rocks include Jurassic and Cretaceous igneous rocks of the Peninsular Ranges batholith that intrude Triassic and Jurassic metasedimentary sequences. The western margin of the province contains large areas of Jurassic and Cretaceous prebatholithic and synbatholithic volcanic, metavolcanic, and metasedimentary rocks. Thick sequences of post-batholithic sedimentary and volcanic rocks of Upper Cretaceous and Tertiary age flank the older rocks on the west. The youngest deposits are marine, lagoonal, and fluvial sediments of Quaternary age that crop out discontinuously over the entire province. Dramatic series of emergent marine, wave-cut terraces and their overlying paralic sediments are common along the coastal margin of the province. These terraces, coupled with isotopic data, provide clear evidence of regional uplift during the past million years.

The Los Alamitos Quadrangle covers an area of approximately 62 square miles in Los Angeles County and northwestern Orange County, including all or parts of the cities of Anaheim, Artesia, Bellflower, Buena Park,

Cerritos, Cypress, Garden Grove, Hawaiian Gardens, Huntington Beach, Lakewood, La Mirada, La Palma, Long Beach, Los Alamitos, Seal Beach, Stanton, and Westminster.

The Los Alamitos Quadrangle includes the broad southern margin of the Los Angeles Basin, which culminates abruptly with coastal hills and mesas associated with the Newport-Inglewood Uplift/Fault. This uplift of broadly warped coastal mesas, represented by Landing Hill and Alamitos Heights in the Los Alamitos Quadrangle, are composed of late Pleistocene marine terrace deposits, which are covered with a veneer of older alluvium. The coastal mesas in the Los Alamitos Quadrangle are separated by the Alamitos Gap, a deeply incised by the antecedent drainage of the latest Pleistocene-to-earliest Holocene ancestral Rio Hondo and San Gabriel River.

Geology and Soils at the Proposed Project Location. The geology underlying the project study area consists of approximately 30 feet of loose-to-medium dense clayey silt, silt and silty clay, and clay. Underlying this layer is medium-dense, clayey silty fine-to-medium sand overlying an interbedded layer of dense-to-very dense medium-to-course gravelly sand. In general, this soil profile is considered scourable.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation) and Screening Level Soil Liquefaction and Lateral Spreading Hazard Evaluation. The Caltrans Office of Geotechnical Design performed a screening level soil liquefaction and lateral spreading hazard evaluation at all the support locations for Bridge No. 53-1737H/53-1185 utilizing existing a series of As-Built Logs of Test Borings, Foundation Recommendation Reports, As-Built Plans, Geotechnical Evaluations, and Bridge Inspection Reports. The purpose of the analyses is to evaluate, based on a review of available information, the presence of potentially liquefiable soils and other conditions necessary for soil liquefaction and lateral spreading to occur. The following tables present the results of the screening and the potential for lateral spreading hazards in the instance of soil liquefaction.

Table 2.3.3-a | Summary of Screening Level Analysis for Potential Soil Liquefaction and Lateral Spreading Hazards for Bridge No. 53-1737H

Bridge Support	Bottom of Footing Elevation (feet)	Ground Water Elevation (feet) ^{1,2}	Lowest Elevation of Potentially Liquefiable Soils (feet)	Approximate Thickness of Potentially Liquefiable Soils Below Bottom of Footing (feet)	Lateral Spreading Hazard Potential in Case of Soil Liquefaction
Abutment 1	+22.5	(-) 7.9	(-)20	20	High
Pier 2	(-) 8.5	n/a	(-)45	37	High
Pier 3	(-) 8.5	n/a	(-)45	37	Low³
Pier 4	(-) 8.5	n/a	(-)45	37	Low³
Pier 5	(-) 8.5	n/a	(-)45	37	High
Abutment 6	+23.0	(-)15.0	(-)20	20	High

Notes: 1) Interpreted based on the groundwater depth, where reported, within the nearby existing boring included on the As-Built LOTBs. n/a = no information available at this time. 2) For the screening analysis, groundwater is assumed to be at 0.0 feet elevation. 3) Seismic ground oscillation hazards hazard exists at the intermediate supports where the adjacent ground surface is relatively flat.

Table 2.3.3-b | Summary of Screening Level Analysis for Potential Soil Liquefaction and Lateral Spreading Hazards for Bridge No. 53-1185

Bridge Support	Bottom of Footing Elevation (feet)	Ground Water Elevation (feet) ^{1,2}	Lowest Elevation of Potentially Liquefiable Soils (feet)	Approximate Thickness of Potentially Liquefiable Soils Below Bottom of Footing (feet)	Lateral Spreading Hazard Potential in Case of Soil Liquefaction
Abutment 1	+23.75	(-)14.9	(-)25	25	High
Pier 2	(-)	n/a	(-)45	40	High
Pier 3	(-)	n/a	(-)45	40	Low³
Pier 4	(-)	n/a	(-)45	40	Low³
Pier 5	(-)	n/a	(-)45	40	High
Abutment 6	+23.75	n/a	(-)35	35	High

Notes: 1) Interpreted based on the groundwater depth, where reported, within the nearby existing boring included on the As-Built LOTBs. n/a = no information available at this time. 2) For the screening analysis, groundwater is assumed to be at 0.0 feet elevation. 3) Seismic ground oscillation hazards hazard exists at the intermediate supports where the adjacent ground surface is relatively flat.

Table 2.3.3-c | Summary of Screening Level Analysis for Potential Soil Liquefaction and Lateral Spreading Hazards for Bridge No. 53-0413F

Bridge Support	Bottom of Footing Elevation (feet)	Ground Water Elevation (feet) ^{1,2}	Lowest Elevation of Potentially Liquefiable Soils (feet)	Approximate Thickness of Potentially Liquefiable Soils Below Bottom of Footing (feet)	Lateral Spreading Hazard Potential in Case of Soil Liquefaction
Abutment 1	+22.0	n/s	(-)35	35	High
Pier 2	(-)9.7	n/s	(-)45	35	High
Pier 3	(-)9.7	+0.3	(-)45	35	Low³
Pier 4	(-)9.7	(-)5.3	(-)45	35	Low³
Pier 5	(-)9.7	(-)5.3	(-)30	20	High
Bent 6	+8.5	(-)14.3	(-)25	25	High
Bent 7	+7.5	n/a	(-)25	25	Low³
Bent 8	+11.5	n/a	(-)25	25	Low³
Bent 9	+16.5	(-)8.2	(-)25	25	Low³
Bent 10	+12.0	n/a	(-)35	35	Low³
Bent 11	+7.5	n/a	(-)35	35	High
Bent 12	+31.5	n/a	(-)35	35	High
Bent 13	+33.5	n/a	(-)35	35	High
Bent 14	+25.5	(-)14.9	(-)35	35	High
Bent 15	+6.5	(-)14.9	(-)35	35	Low³
Bent 16	+3.5	n/a	(-)35	35	Low³
Bent 17	+10.5	(-)15.0	(-)30	30	High
Abutment 18	+31.5	(-)15.0	(-)30	30	High

Notes: 1) Interpreted based on the groundwater depth, where reported, within the nearby existing boring included on the As-Built LOTBs. n/a = no information available at this time. 2) For the screening analysis, groundwater is assumed to be at 0.0 feet elevation. 3) In case of soil liquefaction, seismic ground oscillation hazard exists at the intermediate supports where the adjacent ground surface is relatively flat.

The result of the previously detailed analyses and evaluation indicated that the potentially liquefiable soils and the other conditions necessary for soil liquefaction to occur appear to be present at the bridge sites and some support locations. Further geotechnical investigations, laboratory testing, and engineering analyses are required to determine subsurface conditions that will continue to inform the final design of the proposed substructure retrofit during the next design phase of the proposed project.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three

bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization and/or Mitigation Measures

GTI-01 | Additional Geotechnical Investigations for Final Design of Bridge Substructure Retrofit. Further geotechnical investigations, laboratory testing, and engineering analyses are required to determine subsurface conditions that will inform the final design of the proposed substructure retrofit during the next design phase of the proposed project. These investigations will include localized studies of surface and groundwater, rocks/soils, geologic hazards to include seismic hazards (strong ground shaking, liquefaction, fault rupture, tsunami, seismically-induced landslides, rock fall, settlement, and subsidence), and any loss of mineral resources, as applied to the proposed design and the project study area.

GSE-02 | Minimization of the Effects of Groundwater and Soil Excavation During Construction. It is recommended that remedial measures be taken to minimize the effect of groundwater and soil excavation during construction. Shoring and a dewatering system may be required during footing construction and the stability of these excavations is dependent on the total time the excavation is exposed, groundwater conditions, granular nature of the soil, and contractor operations.

2.3.4 HAZARDOUS WASTE/MATERIALS

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use. The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976. The purpose of CERCLA, often referred to as “Superfund,” is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency

planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

The ensuing discussion regarding hazardous waste and materials of concern is based on a review of the Preliminary Hazardous Waste Assessment (December 2019) as prepared for the proposed project by the Caltrans Division of Environmental Planning, Office of Environmental Engineering – District Hazardous Waste Branch (South Region).

Currently, there are two alternatives proposed for the project - Alternative 1 (Build Alternative) and Alternative 2 (No-Build). The Hazardous Waste Assessment (HWA) prepared for the proposed project includes a screening and assessment of the following scope of work as associated with Alternative 1 (Build Alternative):

- Construct pier footing extensions at Pier 3 and Pier 4 at all three bridge structures
- Placement of additional Cast-In-Drilled-Hole (CIDH) piles beneath new footing extensions at all three bridges
- Installation of two temporary sheet-pile cofferdams within the San Gabriel River and adjacent to bridge structures for water diversion during construction
- Temporary closure of bike trail adjacent to the San Gabriel River to mobilize construction equipment and materials

Environmental Consequences

The HWA prepared for the proposed project is limited, in that it is based on a review of preliminary design plans and data, and while the scope of work and construction items have been defined, further assessments and investigations will be required when project design is more advanced and preliminary estimates are available in the next project phase.

Further assessments and investigations in the next project phase shall include:

- Parcel-specific Initial Site Assessment (ISA), and potentially a Parcel Site Investigation (PSI) to determine the extent of potential contamination in proposed Temporary Construction Easements (TCEs), and to develop construction remediation estimates
- Project-specific Site Investigation (SI) to evaluate existing soil conditions and the extent and degree of contamination regarding ADL and heavy metals within the project study area

Alternative 1 (Retrofit Bridge Foundation) and Potentially Contaminated Properties and Project Related Right-of-Way Requirements. Under federal and state environmental laws, acquisition of contaminated property creates permanent liability for the new property owner. Caltrans must exercise due diligence to prevent acquisition of contaminated property that may create long-term liability or detrimentally affect project cost, scope, or schedule. The project, as currently proposed, does not require the permanent acquisition of any property, but Temporary Construction Easements (TCEs) will be required on properties adjacent to the project study area, which will require a parcel-specific Initial Site Assessment (ISA), and potentially a Parcel Site Investigation (PSI) during the next project phase to determine the extent of potential contamination, and to develop construction remediation estimates.

Potential Disturbance of Materials Containing Hazardous Waste Concentrations of Aerially Deposited Lead (ADL) and Heavy Metals. The proposed construction of a maintenance access road and temporary cofferdams (for water diversion within the San Gabriel River), installation of Cast-In-Drilled-Hole piles, widening of pile cap footings, and excavation and placement of rock slope protection associated with the project have the potential to generate excess soils at unpaved/dry areas. ADL from the historic use of leaded gasoline, exists along roadways throughout California. There is the likely presence of soil with elevated concentrations of lead as a result of ADL on the state highway system right-of-way, and within the limits of the project study area. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met. A project-specific Site Investigation (SI) shall be conducted in the next project phase to evaluate existing soil conditions and the extent and degree of contamination regarding ADL and heavy metals. This evaluation shall be in conformance with Caltrans' adopted special handling and waste management requirements.

Removal of Traffic Striping and Pavement Markings Containing Lead (Non-Yellow and Non-Hazardous). The proposed project may require the removal of existing white (non-yellow) traffic striping/pavement marking at bridge decks. Residue from the removal of existing white (non-yellow) thermoplastic and lead-based painted traffic striping/pavement parking are classified as non-hazardous and do not require disposal at a permitted California Class I hazardous waste disposal facility.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

HWS-01 | Preparation of Parcel-Specific Initial Site Assessment (ISA) for Temporary Construction Easements (TCEs). A Parcel-specific Initial Site Assessment (ISA), and potentially a Parcel Site Investigation (PSI) shall be prepared during the next project phase to determine the extent of potential contamination in proposed Temporary Construction Easements (TCEs), and to develop construction remediation estimates.

HWS-02 | Preparation of Project Specific Site Investigation (SI) for ADL and Heavy Metals. A Project-specific Site Investigation (SI) shall be prepared during the next project phase to evaluate existing soil conditions and the extent and degree of contamination regarding ADL and heavy metals within the project study area.

HWS-03 | Survey for Asbestos Containing Materials (ACM) and Lead Based Paint (LBP). In the event that existing bridge railings will be disturbed, removed, and/or replaced during construction, an ACM and LBP survey shall be prepared in compliance with the South Coast Air Quality Management District Air Quality Management Plan (AQMP) and National Emissions Standards for Hazardous Air Pollutants as regulated by the California Air Resources Board (CARB).

2.4 BIOLOGICAL ENVIRONMENT

2.4.1 NATURAL COMMUNITIES

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species, Section 2.4.5. Wetlands and other waters are also discussed later in Section 2.4.2

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

A series of field investigations were performed to survey the existing biological environment and how the proposed project alternatives and undertaking would affect such. The findings of these investigations were incorporated in the Natural Environment Study (NES) for the 405 San Gabriel River Bridge Scour Project, published February 2020, by the Caltrans Division of Environmental Planning, Biology Unit – District 7. The NES is based on the aforementioned field investigations, reviews of relevant literature on the biological resources of the project study area and the surrounding vicinity (including biological databases), and a search for any applicable regional Habitat Conservation Plan (HCP) or Multiple Species Conservation Plan (MSCP).

The Biological Study Area (BSA) was defined during development of the project purpose and need. The BSA is approximately 200 yards upstream to the point of concrete-lined channel bottom and downstream to the river mouth. Boundaries were determined based on project limits and biological resources within the surrounding area. There are no plant community types within the BSA and four land cover types: open water (marine tidal), disturbed non-native trees and shrubs, ruderal, and developed including rock rip-rap and pavement. Several non-native plants occur within the rock rip-rap at the waters' edge and along the banks of the river. Descriptions of each are below:

Open Water/Marine Tidal – The reach of the San Gabriel River within the project limits is tidal. Substrate along this reach of the river is clay with no seagrass or algae observed. Typical mollusks and marine organisms of this area such as bay mussels and barnacles were observed on the bridge pilings. Few fish were observed from the banks and are presumed to be jack smelt, top smelt and California grunion because these species are known to commonly occur within this tidally influenced portion of the river. Other fish known to occur within this area are guitarfish and spot-fin croaker which are expected to occur within this tidal reach of the river. Because of the heavy scour known to occur, benthic organisms and other marine life found in nearby areas such as eelgrass, algae, oyster beds, and various invertebrate organisms are not found here.

Disturbed Non-Native Trees and Shrubs – This land cover type is located along the river banks and outside of the banks. Plant species are: castor bean, various ornamental species, with few fan palms (*Washingtonia sp.*),

presumed to be desert fan palm (*Washingtonia filifera*) but could be the naturalized Mexican fan palm (*Washingtonia robusta*).

Ruderal – This area is found on the east side of the river within the area to be used as a lay-down area during construction. Plant species within this cover class include various annual grass species such as ripgut brome and Madrid brome, and herbaceous annuals including bristly ox tongue (*Helminthotheca echioides*) and summer mustard.

Developed – These areas are found along the banks of the river and above the banks in the form of rock rip-rap and paved bicycle paths.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation). Temporary impacts to these areas within the project limits would occur when the coffer dams are installed, and the area is de-watered. The disturbed and ruderal areas will be impacted during construction due to the equipment lay-down area and developed areas will be impacted during equipment movement. Reference Table 2.4.1-a for estimated temporary impact amounts to each land cover type and further below for impacts resulting from each structure. Once the coffer dams are removed and water flows again, the marine tidal area is expected to recover within a relatively short period (days) due to tidal flow. Tables 2.4.1-b presents estimated permanent impacts to land cover types, specifically for each of the bridge structures.

Table 2.4.1-a | Estimated Permanent and Temporary Impacts to Plant Communities/Land Cover

Plant Community/Land Cover	Permanent Impact (acres)	Temporary Impact (acres)
Open Water/Marine Tidal	2.0	8
Disturbed Non-native Trees and Shrubs	0.01	1
Ruderal	0	2.5
Developed	0	2.0
Total	2.01	13.5

Table 2.4.1-b | Estimated Permanent and Temporary Impacts to Plant Communities/Land Cover Types by Bridge Structure

Bridge Structure		Permanent Impacted Area			Temporary Impacted Area (Structures Only)		
Bridge No.	Pier No.	Length (ft)	Width (ft)	Area (sq. ft.)	Length (FT)	Width (ft)	Area (sq. ft.)
53-1185	3	272	72	19,584	210	146	30,660
	4	269	72	19,368	210	146	30,660
53-1737H	3	155	72	11,160	210	146	30,660
	4	155	72	11,160	210	146	30,660
55-0413F	3	155	82	12,710	210	146	30,660
	4	155	82	12,710	210	146	30,660
Subtotal				86,692			183,960

The following tables present estimated impacts to land cover types for excavation activities and placement/backfill of rip-rap reinforcement.

Table 2.4.1-c | Estimated Excavation Impacts by Bridge Structure

Bridge Structure		Excavation Impact (Bridge Footings)				
Bridge No.	Pier No.	Length (ft)	Width (ft)	Net Area (sq. ft.)	Height (ft)	Volume (cubic yards)
53-1185	3	162	18	2,043	5	378
	4	159	18	2,010	5	372
53-1737H	3	45	20	699	5	130
	4	45	20	699	5	130
55-0413F	3	45	30	710	5	131
	4	45	30	710	5	131
Subtotal			6,872			1,273

Table 2.4.1-d | Estimated Excavation and Backfill Impacts for Rip-Rap Reinforcement

Bridge Structure		Excavation Impact (Rip Rap)				Backfill (Rip-Rap)			
Bridge No.	Pier No.	Length (ft)	Width (ft)	Height (ft)	Volume (cu. ft.)	Length (ft)	Width (ft)	Height (ft)	Volume (cu. ft.)
53-1185	3	272	72	17	12,331	272	72	17	12,331
	4	269	72	17	12,195	269	72	17	12,195
53-1737H	3	155	72	17	7,027	155	72	17	7,027
	4	155	72	17	7,027	155	72	17	7,027
55-0413F	3	155	82	17	8,003	155	82	17	8,003
	4	155	82	17	8,003	155	82	17	8,003
Subtotal					54,584				54,584

The following table presents estimated temporary impacts for construction easements and construction access activities.

Table 2.4.1-e | Estimated Temporary Impacts for Construction Easements and Construction Access Activities

Parcel APN No.	Area (sq. ft.)
7235-004-801	184,000
7238-030-800	40,000
086-501-18	50,000
7238-030-802	7,000
086-011-51	40,000
7238-030-906	59,000
7238-030-273	22,000
Subtotal	402,000

The following table summarizes the estimated total permanent and temporary impacts for all proposed improvements and activities, and the total excavation volume for the project as a whole.

Table 2.4.1-f | Summary of Estimated Total Permanent/Temporary Impacts and Total Excavation Volume

Total Permanent Impacted Area (sq. ft.):	86,692
Total Temporary Impacted Area (sq. ft.):	585,960
Total Excavation Volume (cu. yd.):	55,856

Heavy equipment would be used during construction within the de-watered, soft bottom of the river. As such, there is potential for oil and fuel leaks to occur within the soft bottom area. Should this occur, impacts to water quality from hydrocarbons would occur when coffer dams are removed. Several non-native plant species (castor bean and two non-native grasses) are within the project limits. Fan palms (*Washingtonia sp.*) occur along the banks of the river.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

NAT-01 Minimization of Impacts to Natural Communities. Permanent impacts to natural communities are limited to Tidal, Disturbed Non-Native Trees and Shrubs, and Developed Area land cover types. Bridge foundation retrofit and placement of rock rip-rap reinforcement shall be designed to minimize effects to the aforementioned land cover types and to be as small as necessary, impacting as little an area as possible yet still meet project needs.

2.4.2 WETLANDS AND OTHER WATERS

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high-water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not

issue a permit if there is a “least environmentally damaging practicable alternative” (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

A series of field investigations were performed to survey the existing biological environment and how the proposed project alternatives and undertaking would affect such. The findings of these investigations were incorporated in the Natural Environment Study (NES) [February 2020] and the Jurisdictional Delineation Report (February 2020) for the 405 San Gabriel River Bridge Scour Project, as prepared by the Caltrans Division of Environmental Planning, Biology Unit – District 7. The ensuing discussion regarding Wetlands has been excerpted from these reports.

Wetlands are areas frequently inundated or saturated by surface water or groundwater sufficient to support vegetation adapted for life in saturated soil conditions (USACE, 1987). Riparian areas are the areas adjacent to streams and rivers, and have a distinct vegetative community associated with the higher groundwater level adjacent to the drainages.

Streams and other waters with a defined bed and bank are subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW), in accordance with Fish and Game Code Sections 1600-1607. The CDFW regulates activities that would alter the flow, bed, channel or bank of streams, lakes and other drainages by requiring a Streambed Alteration Agreement (SAA). In riparian areas, CDFW jurisdictional limits are usually delineated by the top of the stream or lake banks, or the outer edge of riparian vegetation; whichever is wider.

Waters of the U.S. include all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. These waters are regulated by U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) pursuant to Sections 404 and 401 of the Clean Water Act, respectively. Wholly upland waters, such as intermittent tributaries with no flow and no riparian vegetation (i.e. no hydrological or biological connectivity to Waters of the U.S.), are not regulated by the USACE and the RWQCB pursuant to Sections 404 and 401 of the Clean Water Act, respectively.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation). The estimated total area of impact to United States Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdictions is 8.0 acres, including the area from just downstream of the bridge structures to the drop structure at the upper end of the tidal area. It is anticipated that the totality of this area would be impacted during construction dewatering. The following Figure 2.4.2-a presents the jurisdictional resource boundaries as they pertain to the proposed undertaking, and Table 2.4.2-a summarizes temporary and permanent impacts to USACE and RWQCB jurisdictional resources.

Figure 2.4.2-a | USACE/CDFW/RWQCB Jurisdictional Resources Boundary Map

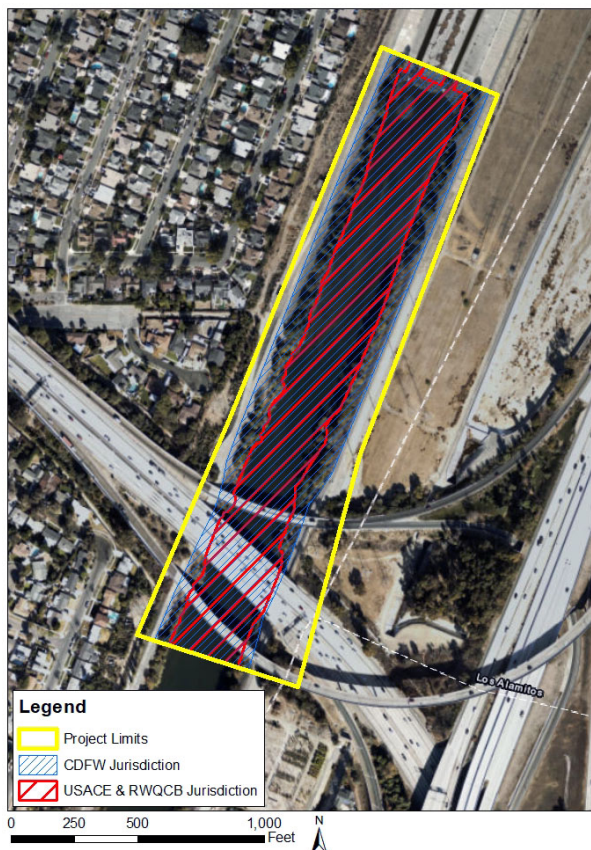


Table 2.4.2-a | Estimated Impacts to USACE, RWQCB, and CDFW Jurisdictional Wetlands

Agency	Permanent Impacts (Acres)	Temporary Impact (Acres)
USACE Jurisdiction	2.0	8.0
RWQCB Jurisdiction	2.0	8.0
CDFW Jurisdiction	2.0	9.0

The San Gabriel River and surrounding area within the project limits were evaluated. No other riparian vegetation was noted above the Ordinary High-Water Mark or OHWM (non-wetland Waters of the U.S.) and therefore no other areas subject to USACE and RWQCB pursuant to sections 404 and 401 of the CWA and CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code is present outside of the San Gabriel River.

All the areas satisfying the USACE jurisdictional criteria for Waters of the U.S. are also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. In addition, areas on the bank above the OHWM may be included as CDFW jurisdiction. This area is calculated to be 1.0 acre for the total area to be 9.0 acres. Specific area calculations will be determined at the time of Streambed Alteration Agreement (SAA) application submittal.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

WET-01 | Minimization of Impacts Through Strategic Placement of Cofferdams During Construction and Placement of Permanent Rock Rip-Rap Reinforcement. The placement of the cofferdams will affect the tidal waters within and upstream of the proposed project site. Diversion of fresh-water flow within the river will affect this jurisdictional area as well. These dams shall be placed as close to the downstream side of the bridge structures as possible to allow equipment to move safely, but no further to minimize the de-watered area. Placement of permanent rock rip-rap is designed to be as small as necessary, impacting as little an area as possible yet still meet project needs.

WET-02 | Minimization of Impacts Through Strategic Placement of Temporary Construction Staging Areas. Temporary construction staging areas and access roads shall be strategically placed to avoid and/or minimize impacts to USACE, RWQCB, and CDFW jurisdictional waters to the extent feasible and shall be enhanced to pre-project conditions.

WET-03 | Construction Work Window Restrictions. All work within San Gabriel River shall be conducted outside of the rainy season (November 1st- April 1st).

2.4.3 PLANT SPECIES

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the following Threatened and Endangered Species Section 2.4.5 in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

A series of field investigations were performed to survey the existing biological environment and how the proposed project alternatives and undertaking would affect such. The findings of these investigations were incorporated in the Natural Environment Study (NES) for the 405 San Gabriel River Bridge Scour Project, published February 2020, by the Caltrans Division of Environmental Planning, Biology Unit – District 7. The ensuing discussion has been excerpted from this report.

As previously outlined in the Natural Communities Section 2.4.1, four plant communities/land cover types are identified within the project impact area – Open Water/Marine Tidal, Disturbed Non-Native Trees and Shrubs, Ruderal, and Developed. These four types are presented below with a broader overview of dominant plant species occurring in each and special-status plants with potential to occur. The following Table 2.4.3-a presents all potential special-status plants species known to occur within the vicinity and therefore with potential to occur within the impact zone.

Table 2.4.3-a | Special-Status Plants Known to Occur Within the Vicinity of the Project Study Area

Common Name Scientific Name	Status	Habitat Requirements	Rationale	Potential for Occurrence
Plants				
Ventura Marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	US: FE CA: SE CNPS 1B.1	Coastal salt marsh and wetland-riparian at 0 to 50 meters elevation (0-160 feet).	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.
Southern tarplant <i>Centromadia parryi</i> ssp. <i>Australis</i>	CNPS 1B.1	Found in marshes and swamps, valley and foothill grasslands, and vernal pools at 0-1,575 feet.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.
Salt marsh bird's beak <i>Chordylanthus maritimus</i> ssp. <i>maritimus</i>	US: FE CA: SE CNPS 1B.1	Coastal salt marshes.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>Coulteri</i>	CNPS 1B.1 BLM: S	Coastal salt marshes, playas, vernal pools.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.
Coast wooly-heads <i>Nemacaulis denudate</i> var. <i>denudata</i>	CNPS 1B.2	Coastal dunes.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	CNPS 2B.2 USFS: S	Playas, chaparral, coastal scrub, lower montane.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.
San Bernardino aster <i>Symphyotrichum defoliatum</i>	CNPS 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, marshes and swamps.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species.

US: FE = United States Fish and Wildlife Service: Federally Endangered
CA: SE = California Department of Fish and Wildlife: State Endangered
CNPS 1B.1 = California Native Plant Society Rare Plant Rank 1B (rare throughout range)
CNPS 2B.2 = California Native Plant Society Rare Plant Rank 2B (not federally endangered, but eligible for state listing)

Open Water/Marine Tidal. The reach of the San Gabriel River within the project limits is tidal. As such, only seagrasses have the potential to occur within this zone, and none were observed during focused surveys. Therefore, no vascular plants were observed within this land cover type.

Disturbed Non-native Trees and Shrubs. This land cover type is located along the river banks and outside of the banks. Plant species are: castor bean, various ornamental species, with few fan palms (*Washingtonia* sp.), presumed to be desert fan palm (*Washingtonia filifera*) but could be the naturalized Mexican fan palm (*Washingtonia robusta*). Because this area is highly disturbed and dominated by non-native plants, there is little potential for native plants to occur. This area was surveyed as part of the site visit and no special-status plants species were noted.

Ruderal. This area is found on the east side of the river within the area to be used as a lay-down area during construction. Plant species within this cover class include various annual grass species such as ripgut brome and Madrid brome, and herbaceous annuals including bristly ox tongue (*Helminthotheca echioides*) and summer mustard. Because this area is highly disturbed and dominated by non-native plants, there is little potential for native plants to occur. This area was surveyed as part of the site visit and no special-status plants species were noted.

Developed. These areas are found along the banks of the river and above the banks in the form of rock rip-rap and paved bicycle paths. Little or no plants are observed within this area. Those few plants that were observed are non-native grasses. Because this area is developed with little or no plants observed and those that were observed are non-native, there is little or no potential for native plants to occur. This area was surveyed as part of the site visit and no special-status plants species were noted.

Environmental Consequences

The following Table 2.4.3-b presents the impacts of the proposed undertaking – both temporary and permanent – to each of the aforementioned land cover types. Because no special-status plants were observed or expected within the project limits, no temporary or permanent impacts to special-status plants species are expected.

Table 2.4.3-b | Impacts to Plant Communities/Land Cover Types

Plant Community/Land Cover	Permanent Impact (acres)	Temporary Impact (acres)
Open Water/Marine Tidal	2.0	8
Disturbed Non-native Trees and Shrubs	0.01	1
Ruderal	0	2.5
Developed	0	2.0
Total	2.01	13.5

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

No special-status plant species is known to occur within the project limits. As such, no avoidance, minimization or mitigation measures are proposed at this time. However, an additional focused plant survey shall be conducted on site prior to construction to reassess existing conditions and detect any potential presence of any special-status plants.

2.4.4 ANIMAL SPECIES

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the following Threatened and Endangered Species Section 2.4.5. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

A series of field investigations were performed to survey the existing biological environment and how the proposed project alternatives and undertaking would affect such. The findings of these investigations were incorporated in the Natural Environment Study (NES) for the 405 San Gabriel River Bridge Scour Project, published February 2020, by the Caltrans Division of Environmental Planning, Biology Unit – District 7. Also, a focused study for presence/absence of Essential Fish Habitat was conducted. The ensuing discussion has been excerpted from these reports.

A total of thirteen (13) special-status animal species, including Essential Fish Habitat, were identified as potentially occurring within the USGS topographical quadrangle of the Biological Study Area (BSA) based on preliminary literature research, and historical documentation including California Natural Diversity Database (CNDDDB) occurrences. After further evaluation and site investigations, a total of two (2) Listed species as Federal or State Endangered or Threatened were observed within the project limits and two (2) otherwise special-status species have the potential to occur within the BSA based on habitat requirements and nearby observations for these species. The two Threatened and Endangered species are discussed in Section 2.4.5 of this environmental document and the two special-status species (western pond turtle and burrowing owl) are discussed below. The following Table 2.4.4-a presents all potential special-status animal species known to occur within the vicinity of the project study area and therefore with potential to occur within the impact zone.

Table 2.4.4-a | Special Status Animal Species Known to Occur in the Project Study Area

Common Name <i>Scientific Name</i>	Status	Habitat Requirements	Rationale	Potential for Occurrence
Fishes				
SC Steelhead DPS <i>Oncorhynchus mykiss</i>	US: E Anadromous fish	Streams, creeks and rivers in southern California	Water quality is poor in SG river. None known to occur.	Not expected to occur and therefore no-effect on species.
Essential Fish Habitat Groundfish	NMFS: Protected	Wide range of habitat: estuarine, rocky shelf, non-rocky shelf, canyon, continental slope/basin, neritic zone, and oceanic zone.	No suitable habitat within the BSA.	Not expected to occur and therefore no-effect on species. None was observed during field surveys.
Essential Fish Habitat Coastal pelagic	NMFS: Protected	All marine and estuary waters in southern California.	Marginal suitable habitat within the BSA. Poor water quality.	Potential to occur within limits of the project. None were observed during field surveys.
Reptiles				
Green sea turtle <i>Chelonia mydas</i>	US: FT	Marine.	Suitable habitat within the BSA.	Present. Observed during surveys.
Western pond turtle <i>Emys marmorata</i>	CDFW: SSC BLM: S USFS: S	Occurs in permanent and intermittent waters, including marshes, streams, rivers, ponds, and lakes. They favor habitats with large numbers of emergent logs or boulders, where they aggregate to bask	Suitable habitat occurs within the BSA.	Potential to occur. Not observed during focused surveys.
Coast horned lizard <i>Phrynosoma blainvillii</i>	CDFW: SSC BLM: S	Occurs in annual grassland, coastal sage scrub, chaparral, and woodland communities. Prefers open country, especially sandy areas, washes, and floodplains. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs in Siskiyou County, in the Central Valley and adjacent foothills below 1,210 meters (4,000 feet) elevation, in coastal areas of central California, and in non-desert areas of Southern California below 1,820 meters (6,000 feet) elevation, and in Baja California, Mexico	No suitable habitat occurs within the BSA.	Not expected to occur and therefore no-effect on species.
Birds				
Tricolored blackbird <i>Agelaius tricolor</i>	CA: SE BLM: S	Lowland species breeds in freshwater marshes with tall emergent vegetation, in upland habitats (especially thickets of non-native Himalayan blackberry), and in silage fields. Forages in agricultural areas where livestock is present and grass is short	No suitable habitat occurs within the BSA.	Not expected to occur therefore no-effect on species
US: United States Fish & Wildlife Service CA: California Department of Fish & Wildlife Service (CDFW) FE: Federally Endangered FT: Federally Threatened SE: State Endangered ST: State Threatened CT: Candidate Threatened CDFW: SSC – Species of Special Concern CDFW: FP – Fully Protected CDFW: WL – Watch List BLM: S – Sensitive USFS: S – Sensitive WBWG: M – Western Bat Working Group: Medium Priority NMFS: National Marine Fisheries Service				

Table 2.4.4-a (continued) | Special Status Animal Species Known to Occur in the Project Study Area

Common Name Scientific Name	Status	Habitat Requirements	Rationale	Potential for Occurrence
Birds (continued)				
Burrowing owl <i>Athene cunicularia</i>	CDFW: SSC	Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, margins of highways, golf courses, and airports. Resident over most of Southern California (sparsely distributed over desert areas)	Marginal suitable habitat occurs within the BSA.	None observed during site visits therefore no-effect on species.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	US: FT CDFW: SSC	Sandy beaches, salt and pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	No suitable habitat occurs within the BSA.	Not expected to occur therefore no-effect on species
California least tern <i>Sterna antillarum browni</i>	US: FE CA: SE	Colonial breeder on bare or sparsely vegetated flat substrates: sandy beaches. Nests along the coast from San Francisco Bay south to Northern Baja California. Hunts along coastal inshore or back-bay waters for small fishes.	Suitable habitat occurs within the BSA.	Present. Observed during site surveys.
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	US: FT CA: SSC	Breeds and nests in coastal sage scrub.	No suitable habitat occurs within the BSA.	Not expected to occur therefore no-effect on species
Mammals				
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	US: FE CA: SE	Prefers dense chaparral and forages along the edges between shrubs and small open areas. Uncommonly found in arid grassland, desert, and coastal scrub habitats.	No suitable habitat occurs within the BSA.	Not expected to occur therefore no-effect on species
Pinnipeds	NMFS: Protected	Marine environment, open water, within harbors, bays.	Marginal suitable habitat present.	Potential to occur. Observed within vicinity but not expected this far up the river.
US: United States Fish & Wildlife Service CA: California Department of Fish & Wildlife Service (CDFW) FE: Federally Endangered FT: Federally Threatened SE: State Endangered ST: State Threatened CT: Candidate Threatened		CDFW: SSC – Species of Special Concern CDFW: FP – Fully Protected CDFW: WL – Watch List BLM: S – Sensitive USFS: S – Sensitive WBWG: M – Western Bat Working Group: Medium Priority NMFS: National Marine Fisheries Service		

Western Pond Turtle. Western pond turtles are designated as a species of special concern (SSC) by CDFW but are not listed under ESA or CESA. They are often found in slow-moving waterways where movement to upland habitat and presence of basking sites is necessary. Upland habitat is necessary as that is where egg laying occurs. They also burrow underground over winter. Basking occurs in the warmer months on logs and boulders. They are aquatic and require a perennial water source for breeding. Their carapace is dark brown to olive colored, with a lack of prominent markings.

No western pond turtle individuals were observed within the project limits or BSA. However, individual occurrences were noted in the public agency databases of being at the confluence of the San Gabriel River and Coyote Creek and at the mouth of the river. Individuals are also known to occur at the nearby El Dorado East Regional Park in the City of Long Beach, located upstream. Breeding habitat does not currently occur for this species within the project limits.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation)

California Least Tern. The California least tern is a migratory bird spending breeding season, March through July, in southern California. Winter months are spent in Central and South America. This species is a ground nesting bird on open sandy beaches. It feeds on small fish along the coastal area and calm back bay areas, including the tidal areas of the San Gabriel River. Suitable hunting habitat for this species occurs within the BSA and individuals were noted within the river during site visits, although down-stream. Also, occurrences of this species are in the resource agencies public databases. Terns are known to forage within one mile of harbors, bays, and shore. Because the proposed project site is several miles upstream, no terns are expected to forage within project limits and therefore no foraging terns would be impacted. With the inclusion of avoidance measures it is expected that no affect to this species would occur because none would be present during the work period.

The proposed project site within the San Gabriel River will require de-watering during the dry season (April-September) for bridge foundation retrofit work, which would temporarily eliminate potential hunting habitat for the California least tern. The California least tern is known to occur within the region, with a breeding season of approximately late-March to summer, when they return to their wintering areas to the south. Although this species is known to hunt for fishes in open water, near-shore, and within harbors and bays within close proximity to the coast, it is possible for the species to hunt within the reach of the San Gabriel River within the project study area. Because this reach of the river is located approximately 3.6 miles inland, and because of the paucity of fishes present at the upper end of the tidal area, this reach of the river is not likely an important hunting ground for the California least tern. As such, the removal of this potential hunting water is not likely to substantially impact the terns' ability to find food.

There is potential for the California least tern to hunt for fishes downstream of the project site within the mouth of the river and harbor. Because there is potential for contaminants such as sediment, hydrocarbons for equipment, etc. to leave the site and travel downstream, potential exists to impact hunting waters downstream.

Green Sea Turtle. The Green sea turtle has been observed within the San Gabriel River and it is noted that one of the species was observed during site investigations performed for the proposed project. This is supported by a tracking study of 22 individuals by the Aquarium of the Pacific in Long Beach, California with observance of the species within the San Gabriel River. The number of individuals that use the river and to what extent is unknown; however, due to Caltrans observations and those noted in public databases it is thought that although the river is used from time to time, it is not likely to be an important source for this species as no seagrass beds were observed and no sandy beaches for breeding are located within the immediate vicinity of the project. Therefore, it is thought that individuals could investigate this reach of the river but not likely stay long as no resources appear present.

As previously mentioned, the proposed project site within the San Gabriel River will require de-watering during the dry season (April-September) for bridge foundation retrofit work. The Green sea turtle is known to exist within the vicinity of the project study area and has been observed within this reach of the river, and construction activities have the potential to affect feeding activities for this species within the de-watered area, but because little or no food sources were observed during site surveys or are expected to be present due to site conditions, the potential to affect feeding activities is low.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

BIO-01 | Biological Monitoring (California Least Tern). A biological monitor shall be present prior to start of construction on each day to survey the river and continually monitor for the presence of foraging terns. Should one be observed foraging within the adjacent water, work shall be stopped until the tern naturally moves away.

CLT-01 | Clean Work Space (California Least Tern). All oil leaks and fuel spills within the de-watered area shall be cleaned and contaminated soil removed immediately.

CLT-02 | Turbidity Curtain (California Least Tern). When bridge foundation retrofit work is complete and cofferdams are removed, a turbidity curtain shall be used downstream to allow sediment to settle prior to prevent contaminated water from mixing with tidal water. This measure is intended to reduce turbid water from traveling downstream and impacting hunting waters.

BIO-02 | Biological Monitoring (Green Sea Turtle). A biological monitor shall be present prior to start of construction on each day to survey the river and continually monitor for the presence of Green sea turtle. Should one be observed swimming upstream and approaching the site, work shall be stopped until the turtle naturally moves away and toward the mouth of the river to avoid impacts resulting from noise.

2.4.5 THREATENED AND ENDANGERED SPECIES

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

A series of field investigations were performed to survey the existing biological environment and how the proposed project alternatives and undertaking would affect such. The findings of these investigations were incorporated in the Natural Environment Study (NES) for the 405 San Gabriel River Bridge Scour Project, published February 2020, by the Caltrans Division of Environmental Planning, Biology Unit – District 7. The ensuing discussion has been excerpted from this report.

Federal Endangered Species Act (FESA) Consultation. The USFWS authorizes take of listed species and the destruction of critical habitat through Section 7(a)(2) of the FESA (16 USC 1531-1544). During conversation with USFWS and USNMFS representatives, it is expected that the proposed project may affect but is not likely to adversely affect Green sea turtle and California least tern and its designated critical habitat.

Federal Fisheries and Essential Fish Habitat (EFH) Consultation. National Marine Fisheries was consulted and Essential Fish Habitat Surveys were conducted. Because no EFH was noted as occurring within the project impact zone, this project will have no effect to this habitat type or federal-listed species.

California Endangered Species Act (CESA) Consultation Summary. There are no state agency consultation procedures under CESA. For projects that affect both a state and federal listed species, compliance with the Federal Endangered Species Act (FESA) may satisfy CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is “consistent” with CESA under Fish & Game Code § 2080.1. For project that will result in a “take” of a state-only listed species, Caltrans must apply for an incidental take permit under Fish & Game Code § 2080(b). Because no impacts are anticipated to any State-only/CESA Listed Species, no consultation has been initiated.

Federal Endangered Species Act (FESA) Consultation. The USFWS authorizes take of listed species and the destruction of critical habitat through Section 7(a)(2) of the FESA (16 USC 1531-1544). During conversation with USFWS and USNMFS representatives, it is expected that the proposed project may affect but is not likely to adversely affect Green sea turtle and California least tern and its designated critical habitat.

Federal Fisheries and Essential Fish Habitat (EFH) Consultation. National Marine Fisheries was consulted and Essential Fish Habitat Surveys were conducted. Because no EFH was noted as occurring within the project impact zone, this project will have no effect to this habitat type or federal-listed species.

California Endangered Species Act (CESA) Consultation Summary. There are no state agency consultation procedures under CESA. For projects that affect both a state and federal listed species, compliance with the Federal Endangered Species Act (FESA) may satisfy CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is “consistent” with CESA under Fish & Game Code § 2080.1. For project that will result in a “take” of a state-only listed species, Caltrans must apply for an incidental take permit under Fish & Game Code § 2080(b). Because no impacts are anticipated to any State-only/CESA Listed Species, no consultation has been initiated.

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation). Under Section 7 of the Endangered Species Act, Federal agencies, including Caltrans are required to “request the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action.” In compliance with Section 7, Caltrans has requested an official species list from the United State Fish and Wildlife Service (USFWS) as part of the endangered species review process, which contains information (list of species and critical habitat) to assist in evaluation of potential impacts of the proposed project. The USFWS species list is supplemented by a jurisdictional species list from the National Marine Fisheries Service (NMFS) containing listed marine species and critical habitats. The findings of the evaluation are summarized in the following table.

Table 2.4.5-a | FESA Effect Findings for Federal Listed Threatened/Endangered Species in the Project Study Area

Common Name <i>Scientific Name</i>	Status	Responsible Agency	Effect Finding pursuant to FESA	Effect Finding for Critical Habitat (if applicable)	Rationale
Plants					
Salt marsh bird's beak <i>Chordylanthus maritimus ssp. maritimus</i>	Federal Endangered	USFWS	No Effect	Not Applicable	Salt marsh habitat is not present within the project area.
Ventura marsh milk-vetch <i>Astragalus pycnostachyus var. lanosissimus</i>	Federal Endangered	USFWS	No Effect	Not Applicable	Salt marsh habitat is not present within the project area.
Birds					
California least tern <i>Sterna antillarum browni</i>	Federal Threatened	USFWS	May Affect, but is Not Likely to Adversely Affect	Not Applicable	Suitable hunting habitat for this species occurs within the BSA and individuals were noted within the river during site visits, although downstream.
Coastal California gnatcatcher <i>Poliophtila californica</i>	Federal Threatened	USFWS	No Effect	Not Applicable	There is no coastal sage scrub habitat within the project area.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	Federal Threatened	USFWS	No Effect	Not Applicable	Suitable habitat is not present within the project area.
Amphibians and Reptiles					
Green sea turtle <i>Chelonia mydas</i>	Federal Threatened	NMFS	May Affect, but is Not Likely to Adversely Affect	Not Applicable	This area lacks seagrass beds and sandy beaches for breeding, however some individuals may investigate the area but are not expected to stay long. Protocol surveys were conducted.
East Pacific Green Sea Turtle <i>Chelonia mydas</i>	Federal Threatened	NMFS	No Effect	Not Applicable	Rare sightings in off-shore waters along the California coast. The project is expected to have no effect on off-shore habitat.
Leatherback Sea Turtle <i>Dermochelys coriacea</i>	Federal Endangered	NMFS	No Effect	Not Applicable	Generally found over the continental slope and more rarely in continental shelf waters. The project is expected to have no effect on off-shore habitat.
North Pacific Loggerhead Sea Turtle <i>Caretta caretta</i>	Federal endangered	NMFS	No Effect	Not Applicable	Rarely found in off-shore habitat along southern California. The project is expected to have no effect on off-shore habitat.
Olive Ridley Turtle <i>Lepidochelys olivacea</i>	Federal Threatened/ Endangered	NMFS	No Effect	Not Applicable	Rarely found in off-shore habitat along southern California. The project is expected to have no effect on off-shore habitat.
Mammals					
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	Federal Endangered	USFWS	No Effect	Not Applicable	Chaparral, arid grassland, desert, and coastal scrub habitats are not present within the project site.
Pinnipeds	Not Applicable	NMFS	No Effect	Not Applicable	Degraded habitat is present at the project site, but pinnipeds are not expected this far up the river.

Table 2.4.5-a (continued) | FESA Effect Findings for Federal Listed Threatened/Endangered Species in the Project Study Area

Common Name <i>Scientific Name</i>	Status	Responsible Agency	Effect Finding pursuant to FESA	Effect Finding for Critical Habitat (if applicable)	Rationale
Fish					
Southern California steelhead DPS <i>Oncorhynchus mykiss</i>	Federal Endangered	NMFS	No Effect	Not Applicable	Water quality is poor in the San Gabriel River and none are currently known to occur.
Essential Fish Habitat (EFH)					
Groundfish EFH	Not Applicable	NMFS	No Effect	No Effect	Not present within project area.
Coastal Pelagics EFH	Not Applicable	NMFS	No Effect	No Effect	Not present within project area.

Discussion of Effect findings for California Least Tern. The California least tern is a migratory bird spending breeding season, March through July, in southern California. Winter months are spent in Central and South America. This species is a ground nesting bird on open sandy beaches. It feeds on small fish along the coastal area and calm back bay areas, including the tidal areas of the San Gabriel River. Suitable hunting habitat for this species occurs within the BSA and individuals were noted within the river during site visits, although down-stream. Also, occurrences of this species are in the resource agencies public databases. Terns are known to forage within one mile of harbors, bays, and shore. Because the proposed project site is several miles upstream, no terns are expected to forage within project limits and therefore no foraging terns would be impacted. With the inclusion of avoidance measures it is expected that no affect to this species would occur because none would be present during the work period.

The proposed project site within the San Gabriel River will require de-watering during the dry season (April-September) for bridge foundation retrofit work, which would temporarily eliminate potential hunting habitat for the California least tern. The California least tern is known to occur within the region, with a breeding season of approximately late-March to summer, when they return to their wintering areas to the south. Although this species is known to hunt for fishes in open water, near-shore, and within harbors and bays within close proximity to the coast, it is possible for the species to hunt within the reach of the San Gabriel River within the project study area. Because this reach of the river is located approximately 3.5 miles inland, and because of the paucity of fishes present at the upper end of the tidal area, this reach of the river is not likely an important hunting ground for the California least tern. As such, the removal of this potential hunting water is not likely to substantially impact the terns' ability to find food.

There is potential for the California least tern to hunt for fishes downstream of the project site within the mouth of the river and harbor. Because there is potential for contaminants such as sediment, hydrocarbons for equipment, etc. to leave the site and travel downstream, potential exists to impact hunting waters downstream.

Discussion of Effect Findings for Green Sea Turtle. The range of the Green sea turtle is throughout tropical and sub-tropical waters worldwide, including Southern California. These turtles move across three habitat types throughout their life, depending on stages. Mature turtles spend most time in shallow, coastal waters grazing on seagrass. Adults lay eggs on sandy beaches and young individuals spend several years in open waters. The Green sea turtle has been observed within the San Gabriel River and it is noted that one of the species was observed during site investigations performed for the proposed project. This is supported by a tracking study of 22 individuals by the Aquarium of the Pacific in Long Beach, California with observance of the species within the San Gabriel River. The number of individuals that use the river and to what extent is unknown; however, due to Caltrans observations and those noted in public databases it is thought that although the river is used from time to time, it is not likely to be an important source for this species as no seagrass beds were observed and no sandy beaches for breeding are located within the immediate vicinity of the project. Therefore, it is thought that individuals could investigate this reach of the river but not likely stay long as no resources appear present. This project is not expected to impact individuals of this species since no foraging habitat is present. Work would be stopped should any individuals approach the project site.

As previously mentioned, the proposed project site within the San Gabriel River will require de-watering during the dry season (April-September) for bridge foundation retrofit work. The Green sea turtle is known to exist within the vicinity of the project study area and has been observed within this reach of the river, and construction activities have the potential to affect feeding activities for this species within the de-watered area, but because little or no food sources were observed during site surveys or are expected to be present due to site conditions, the potential to affect feeding activities is low.

California Endangered Species Act (CESA) Consultation Summary. As previously mentioned, there are no state agency consultation procedures under CESA. For projects that affect both a state and federal listed species, compliance with the Federal Endangered Species Act (FESA) may satisfy CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is “consistent” with CESA under Fish & Game Code § 2080.1. For project that will result in a “take” of a state-only listed species, Caltrans must apply for an incidental take permit under Fish & Game Code § 2080(b). No impacts are anticipated to any State-only/CESA Listed Species, and no consultation has been initiated – the following table summarizes analyses performed to make these determinations under CESA, nevertheless.

Table 2.4.5-b | CESA Effect Findings for State Listed Threatened/Endangered Species in the Project Study Area

Common Name <i>Scientific Name</i>	Status	Responsible Agency	Proposed Take Finding pursuant to CESA	Rationale
Plants				
Salt marsh bird’s-beak <i>Cordylanthus maritimus ssp. Maritimus</i>	State Endangered	CDFW	The proposed project is not anticipated to result in Take of this Species.	Coastal dune/salt marsh habitat is not present within the project areas.
Ventura marsh milk-vetch <i>Stragalus pycnostachyus var. lanosissimus</i>	State Endangered	CDFW	The proposed project is not anticipated to result in Take of this Species.	Salt marsh habitat is not present within the project areas.
Birds				
Tricolored blackbird <i>Agelaius tricolor</i>	State Endangered	CDFW	The proposed project is not anticipated to result in Take of this Species.	Marsh and swamp habitat is not present within the project areas.
California least tern <i>Sterna antillarum browni</i>	State endangered	CDFW	The proposed project is not anticipated to result in Take of this Species.	Required cliff/bank habitat with fine textured soils is not present within or near the project areas.
Mammals				
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	Federal Endangered	USFWS	No Effect	Not Applicable

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

BIO-01 | Biological Monitoring (California Least Tern). A biological monitor shall be present prior to start of construction on each day to survey the river and continually monitor for the presence of foraging terns. Should one be observed foraging within the adjacent water, work shall be stopped until the tern naturally moves away. It should be noted that terns are not expected to forage this far up-stream as they are known to forage within one mile of harbors, bays and shore.

BIO-02 | Biological Monitoring (Green Sea Turtle). A biological monitor shall be present prior to start of construction on each day to survey the river and continually monitor for the presence of green sea turtle. Should one be observed swimming upstream and approaching the site, work shall be stopped until the turtle naturally moves away and toward the mouth of the river to avoid impacts resulting from noise.

2.4.6 INVASIVE SPECIES

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

Affected Environment

Under the National Environmental Policy Act (NEPA), the no-build alternative can be used as a baseline for comparing environmental impacts; under the California Environmental Policy Act (CEQA), the baseline for environmental impact analysis is the existing conditions at the time of the Notice of Preparation (NOP) or at the time at which environmental studies commenced. The following discussion is a summary of the existing conditions (or no-build scenario) at the time at which environmental studies commenced for the proposed undertaking.

A series of field investigations were performed to survey the existing biological environment and how the proposed project alternatives and undertaking would affect such. The findings of these investigations were incorporated in the Natural Environment Study (NES) for the 405 San Gabriel River Bridge Scour Project, published February 2020, by the Caltrans Division of Environmental Planning, Biology Unit – District 7. The ensuing discussion has been excerpted from this report.

Four exotic plants occurring on the California Exotic Plant Council’s (Cal-IPC) Invasive Plant Inventory were identified in the BSA. The invasive species identified in the BSA are: giant reed (*Arundo donax*), Bermuda grass (*Cynodon dactylon*), tamarisk (*Tamarix ramosissima*), and bigleaf periwinkle (*Vinca major*).

Environmental Consequences

Alternative 1 (Retrofit Bridge Foundation). The project has the potential to spread invasive species to adjacent native habitats in the BSA by the entering and exiting of construction equipment contaminated by invasive species,

the inclusion of invasive species in seed mixtures and mulch, and by the improper removal and disposal of invasive species so that seed is spread along the highway.

Alternative 2 (No-Build Alternative). If the proposed project were not built, none of the proposed improvements would be implemented and continued scour around Piers 3 and Piers 4 within the San Gabriel River at all three bridges (Bridges No. 53-1185/53-1737H/55-0413) would compromise structural integrity and require more extensive mitigation and/or measures in the future.

Avoidance, Minimization, and/or Mitigation Measures

INV-01 | Equipment Cleaning. During construction, the construction contractor shall inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another.

INV-02 | Vegetation/Soil Disturbance. During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible.

INV-03 | Fugitive Dust Control. During construction, the contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.

INV-04 | Stockpile Dust Control. During construction, the contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.

INV-05 | Materials Sourcing. During construction, soil/gravel/rock will be obtained from weed-free sources. Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.

INV-06 | Revegetation Efforts. After construction, affected areas adjacent to native vegetation will be revegetated with plant species approved by the District Biologist that are native to the vicinity. All revegetated areas will avoid the use of species listed on Cal-IPC's California Invasive Plant Inventory.

INV-07 | Post Project Monitoring

Erosion control and revegetation sites will be monitored for 2 to 3 years after construction to detect and control the introduction/invasion of nonnative species.

INV-08 | Eradication Procedures. Eradication procedures (e.g., spraying and/or hand weeding) will be outlined should an infestation occur; the use of herbicides will be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by the District Biologist and Landscape Architect.

2.5 CONSTRUCTION IMPACTS

The proposed project would be constructed in phases due to constraints related to work during the dry season only, which is typically mid-April to mid-October. The Caltrans Office of Design anticipates that the proposed improvements will require at least two dry seasons to complete. The estimated construction schedule for the proposed project is:

Phase 1: May 2022 – October 2022

Phase 2: May 2023 – October 2023

Phase 3: May 2024 – October 2024

Temporary and Intermittent Closures of the Adjacent San Gabriel River Trail and the Connecting Coyote Creek Bikeway During Construction. The proposed Caltrans undertaking includes a substructure retrofit of three bridge structures that cross the San Gabriel River – the I-405 mainline bridge, and the northbound and southbound connector bridges to the 605 freeway (total of three bridges). While all work will be performed within the San Gabriel River, staging and access will be required from areas adjacent, and to both the north and south of the project site. The Caltrans Office of Design is proposing temporary and intermittent closures of an adjacent portion of the San Gabriel River Trail and connecting Coyote Creek Bikeway during construction to ensure the safety of facility users and construction personnel. The facilities would be closed only during the times as previously listed (6 months/year) for a total of three (3) years.

Temporary and intermittent closures of the adjacent San Gabriel River Trail and the connecting Coyote Creek Bikeway would not restrict recreational activities during construction with the implementation of detours to surface streets within the vicinity of the project site. Access to the facilities would be restored at the end of each construction phase/period.

CON-01 | Trail and Bikeway Coordination, Detouring, and Maintenance of Access to San Gabriel River Trail and Coyote Creek Bikeway During Construction. The Caltrans Office of Design, in tandem with the District Bikeway Coordinator, shall initiate early coordination with the Los Angeles County Department of Public Works/Los Angeles County Flood Control District (jurisdictional agency) and the City of Long Beach Department of Public Works (facilities operation and maintenance) to develop a detouring plan for temporary/intermittent closure of the adjacent San Gabriel River Trail and connecting Coyote Creek Bikeway. At the close of each construction phase, access to facilities shall be restored and maintained, and when complete, facilities will be left in a condition as good, or better than existing conditions.

The following Figure 2.5-a identifies the proposed temporary/intermittent closures of the aforementioned facilities in the project study area.

Figure 2.5-a | Proposed Temporary/Intermittent Closures of San Gabriel River Trail and Coyote Creek Bikeway in the Project Study Area



Construction Roadway Closures, Detours, and Transportation Management Plan (TMP). A Transportation Management Plan (TMP) will be developed during the next project phase in accordance with Caltrans requirements and guidelines for roadway closures and detouring. The TMP shall address potential traffic impacts from construction of the proposed undertaking and provide detailed access and detour strategies that would minimize any effects on the general traveling public, and response times for fire, police, and emergency services. Because no work is proposed on any of the bridge decks and construction is only proposed within the San Gabriel River, only equipment movement to access roads adjacent to highway facilities may require temporary and partial freeway closures.

CON-02 | Transportation Management Plan (TMP). A Transportation Management Plan (TMP) shall be implemented to provide detailed access and detour strategies that would minimize any effects on response times for fire, police, and emergency services. Caltrans shall maintain close coordination with local agencies and jurisdictions, including fire protection services, police, schools, and park agencies via a public outreach campaign during the construction phase of the proposed project.

2.6 CUMULATIVE IMPACTS

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

Identification of Cumulative Impacts by Resource

Identification and definition of project-specific resources to consider in cumulative impact analyses is based on the degree of impact, ranging from none-to-significant. Resource topics where the proposed project has the potential to cause a potentially significant direct or indirect impact are included in the ensuing discussion. Resource topics where the proposed project has little-to-no potential to cause direct or indirect impacts and will not contribute to a cumulative impact on the resource are not evaluated. Caltrans performed a series of environmental studies to identify any potential for cumulative effects as a result of the proposed undertaking and did not identify any resource topics where the potential for substantial or adverse cumulative impacts are anticipated as a result of the proposed undertaking.

CHAPTER 3 | CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) EVALUATION

3.1 DETERMINING SIGNIFICANCE UNDER CEQA (CALIFORNIA ENVIRONMENTAL QUALITY ACT)

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 CEQA ENVIRONMENTAL CHECKLIST

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the

project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Aesthetics

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to affect scenic vistas in the project study area.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to affect or damage scenic vistas in the project study area.

c) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to conflict with applicable zoning and other regulations governing scenic quality in the project study area.

d) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and no potential exists for direct or indirect irreversible conversion of protected farmlands to non-agricultural uses within the project study area.

b) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to conflict with existing zoning for agricultural use, or a Williamson Act Contract.

c) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to conflict with existing zoning for protected forest land or timberland in the project study area.

d) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to result in the loss of forest land or conversion of forest land to non-forest use in the project study area.

e) No Impact. The proposed project is located in an urbanized area and consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential for other changes in the existing environment that could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Air Quality

a, b, c) No Impact. The proposed project is located in the South Coast Air Basin (SCAB) and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). THE SCAQMD is the primary agency responsible for writing the Air Quality Management Plan (AQMP) in cooperation with SCAG, local governments, and the private sector. The AQMP provides the blueprint for meeting state and federal ambient air quality standards. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities and is not capacity-increasing by nature - it will have no impact on traffic volumes and would generate less than a significant amount of pollutants during construction. In consideration of the such and the scope of the proposed work, it is exempt from regional and/or project-level air quality conformity and the respective analyses. Therefore, the proposed project will not conflict with the AQMP, violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations, and no impacts are anticipated within this context.

d) Less Than Significant Impact. Temporary construction activities have the potential to generate fugitive dust from the operation of construction equipment. The proposed project shall comply with construction standards adopted by the South Coast Air Quality Management District (SCAQMD) as well as Caltrans' standardized procedures for minimizing air pollutants during construction. Impacts will be less than significant, and no mitigation is required.

BIOLOGICAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Biological Resources

a) Less Than Significant Impact. While suitable habitat for the Federally listed California least tern and the Green sea turtle exist within the project study area, no significant impact is expected with incorporation of avoidance measures as outlined in Section 2.4.5 Threatened and Endangered Species.

b) Less Than Significant Impact. The proposed undertaking does not present the potential for a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Any potential impacts are considered temporary in nature and related only to construction within project limits when temporary cofferdams are installed, and the area is de-watered. While construction activities have the potential to impact disturbed and ruderal areas, the impacts are considered less than significant with incorporation of minimization measures as listed in Section 2.4.1 Natural Communities.

c) Less Than Significant Impact. The proposed undertaking does not present the potential to have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Potential permanent impacts to jurisdictional resources are estimated at 6 acres, with temporary impacts estimated at 24 acres in consideration of temporary construction activities. All potential impacts are considered less than significant with incorporation of minimization measures as listed in Section 2.4.2 Wetlands and Other Waters.

d) Less Than Significant Impact. The proposed project is not expected to 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. While suitable habitat for the Federally listed California least tern and the green sea turtle exist within the project study area, no significant

impact is expected with incorporation of avoidance measures as outlined in Section 2.4.5 Threatened and Endangered Species.

d) No Impact. The proposed undertaking does not present the potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

e) No Impact. The proposed undertaking does not present the potential to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

CULTURAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Cultural Resources

- a) **Less Than Significant Impact.** While the proposed undertaking has the potential to affect the Los Angeles County Flood Control Historic District (LACFCHD), the proposed project, as designed, does not pose a significant impact to the resource as it will be protected by using Standard Conditions with a Secretary of the Interior's Standards Action Plan (SOIS AP). The addition of footing extensions and rock slope protection around the footing extensions to Piers 3 and 4 of three (3) non-contributing bridges, as well as the temporary cofferdams will not diminish the characteristics that make the contributing San Gabriel River Channel (contributor) or the LACFCHD eligible for listing in the National Register of Historic Places (NRHP). A Finding of No Adverse Effect with Standard Conditions (FNAE-SC) for the LACFCHD is appropriate in consideration of the aforementioned and supports this finding for this resource.
- b) **No Impact.** Based upon the nature of the proposed work within the artificial channel of the San Gabriel River, the results of the records search, and consultation with Native American consulting parties, Caltrans PQS determined that there is no potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- c) **No Impact.** Based upon the nature of the proposed work within the artificial channel of the San Gabriel River, the results of the records search, and consultation with Native American consulting parties, Caltrans PQS determined that there is no potential to disturb any human remains, including those interred outside of dedicated cemeteries.

ENERGY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Energy

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of proposed project construction and operation methods, no potential exists for significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of proposed project construction and operation methods, no potential exists for conflict with, or obstruction of a state or local plan for renewable energy or energy efficiency.

GEOLOGY AND SOILS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Geology and Soils

a, i-iv) Less Than Significant Impact. While the proposed project is located in a seismically active region of Southern California, the proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities. Further geotechnical investigations, laboratory testing, and engineering analyses are required to determine subsurface conditions and shall include localized studies of surface and groundwater, rocks/soils, and geologic hazards to include seismic hazards (strong ground shaking, liquefaction, fault rupture, tsunami, seismically-induced landslides, rock fall, settlement, and subsidence) as it applies to the proposed design and the project study area. The results of these investigations will inform final design of the proposed substructure retrofit during the next design phase of the proposed project, and minimize any impacts related to geology and soils to a level that is less than significant.

b, c, d) Less Than Significant Impact. While the proposed project is located in a seismically active region of Southern California, the proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities. Further geotechnical investigations, laboratory testing, and engineering analyses are required to determine subsurface conditions and shall include localized studies of surface and groundwater, rocks/soils, and geologic hazards to include seismic hazards (strong ground shaking, liquefaction, fault rupture, tsunami, seismically-induced landslides, rock fall, settlement, and subsidence) as it applies to the proposed design and the project study area. The results of these investigations will inform final design of the proposed substructure retrofit during the next design phase of the proposed project, and minimize any impacts related to geology and soils to a level that is less than significant.

e) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities with the San Gabriel River, and in consideration of the scope and nature of the proposed work, no impacts to septic tanks or alternate waste water disposal systems are anticipated.

f) No Impact. No unique paleontological resources or sites, or unique geological features have been identified within the project study area, and the proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities with the San Gabriel River – in consideration of the scope and nature of the proposed work, no impacts are anticipated within this context.

GREENHOUSE GAS EMISSIONS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Greenhouse Gas Emissions

a,b) Less Than Significant Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities with the San Gabriel River and is not capacity-increasing in nature. In consideration of the scope and nature of the proposed work, any generation of greenhouse gas emissions, either directly or indirectly, are considered temporary and do not present the potential for a significant impact within this context.

HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hazards and Hazardous Materials

a, b) Less Than Significant Impact. Construction of the proposed project will require Temporary Construction Easements (TCEs) for staging and access at properties adjacent to the project site, where potential for disturbance of contaminated soils exists. Additionally, construction activities have to potential to generate excess soils with elevated concentrations of lead as a result of this historical use of leaded gasoline, or Aerially Deposited Lead (ADL) on the state highway system right-of-way and within the limits of the project study area. In the next project phase, a parcel-specific Initial Site Assessment (ISA), and potentially a Parcel Site Investigation (PSI) will be required to determine the extent of potential contamination in TCEs, and a project-specific Site Investigation (SI) shall be conducted to evaluate existing soil conditions and the extent and degree of contamination regarding ADL and heavy metals, and construction remediations strategies and estimates will be developed to minimize any potential contamination to a level that is less than significant.

c) No Impact. There is no potential for emitting hazardous emissions, or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of any existing or proposed school as none exist within this distance from the proposed project site.

d) No Impact. The proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, it has no potential to create a significant hazard to the public or the environment within this context.

e) No Impact. The proposed project is not located within an airport land use plan are or, where such a plan has not been adopted, nor is it located within two miles of a public airport or public use airport. Therefore, the proposed project would not result in a safety hazard or generate excessive noise for people residing or working in the project area.

f) Less Than Significant Impact. The proposed project would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. However, in the event an activity is planned that could affect traffic (i.e. equipment delivery necessitating lane closures), Caltrans would consult with local agencies and implement the appropriate traffic management plan. All traffic-related impacts would be reduced to less than significant levels, and no mitigation is required.

g) No Impact. The proposed project is located in a heavily urbanized area and does not present any potential for exposure of people or structures, either directly or indirectly, to a significant rise of loss, injury, or death involving wildland fires.

HYDROLOGY AND WATER QUALITY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hydrology and Water Quality

a) Less Than Significant Impact. All improvements associated with the proposed project are subject to Section 404 of the Clean Water Act (CWA), which was established to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. A Section 404 Nationwide Permit will be obtained from the United State Army Corps of Engineers (ACOE) for full compliance with the CWA for proposed activities in “Waters of the United States,” thus reducing and potential for impacts related to violation of any water quality standards or waste discharge requirements to a less than significant level, and no mitigation is required.

b) Less Than Significant Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the potential for a substantial decrease in groundwater supplies or substantial interference with groundwater recharge such that the project would impede sustainable groundwater management of the basin is low. While a potential to encounter groundwater is anticipated, the proposed work is temporary in nature and will not cause any significant change in groundwater levels. Compliance with Regional Water Quality Control Board (RWQCB)

regulations for the proper discharge/treatment of all groundwater would further reduce and/or eliminate the effects of such. However, additional localized studies of surface, groundwater, and geology shall be performed during the next project phase to develop remedial measures to minimize any effects to a level that is less than significant.

c, i-iv) Less Than Significant Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the potential for impacts within this context are low as the proposed improvements would not alter the course of the river in a manner that would result in substantial erosion or situation on-or-off-site. However, additional localized hydraulic and geotechnical evaluations shall be performed during the next project phase to develop remedial measures to minimize any effects to a level that is less than significant.

d) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to risk release of pollutants due to project inundation.

e) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

LAND USE AND PLANNING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Land Use and Planning

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to physically divide any established communities in the project study area.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to cause significant environmental impact due to a conflict with any land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect in the project study area.

MINERAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Mineral Resources

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan in the project study area.

NOISE

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Noise

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential for generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do

not present any potential for generation of excessive groundborne vibration or groundborne noise levels in the project study area.

c) No Impact. The proposed project is not located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, therefore, the proposed project does not present any potential to expose people residing or working in the project area to excessive noise levels.

POPULATION AND HOUSING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Population and Housing

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to induce substantial unplanned population growth in an area, either directly or indirectly, in the project study area.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Public Services

a) Less Than Significant Impact. The proposed project does not have the potential to result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, nor the need

for new or physically altered governmental facilities. The construction of such is not required, and therefore, would not cause any significant environmental impact in order to maintain acceptable service ratios, response times, or other performance objectives for any public services. Additionally, a Transportation Management Plan (TMP) shall be implemented to provide detailed access and detour strategies that would minimize any effects on response times for fire, police, and emergency services. Caltrans shall maintain close coordination with local agencies and jurisdictions, including fire protection services, police, schools, and park agencies via a public outreach campaign during the construction phase of the proposed project. In consideration of the aforementioned, impacts related to public services are considered to be less than significant, and no mitigation is required.

RECREATION

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Recreation

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities and does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

TRANSPORTATION

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Transportation

a) Less Than Significant Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and any conflicts with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities would be temporary and construction-related only. Caltrans continues to coordinate with local jurisdictions, and a Transportation Management Plan (TMP) shall be implemented accordingly to provide detailed access and detour strategies that would minimize any effects related to the proposed undertaking. In consideration of the aforementioned, impacts related to such are considered to be less than significant, and no mitigation is required.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to be in conflict with CEQA Guidelines Section 15064.3, Subdivision (b).

c) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to substantially increase hazards due to a geometric design feature or incompatible uses.

d) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present any potential to result in inadequate emergency access in the project study area.

TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Tribal Cultural Resources

a, b) No Impact. Based upon the nature of the proposed work within the artificial channel of the San Gabriel River, the results of the records search, and consultation with Native American consulting parties, Caltrans PQS determined that there is no potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. This includes listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), and any resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

UTILITIES AND SERVICE SYSTEMS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Utilities and Service Systems

a) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present a scenario that would require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

b) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present the potential to impact water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

c) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present the potential to result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d) No Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present the potential to generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) No Impact. The proposed project shall comply with all Federal, State, and local statutes and regulations related to solid waste; thus, no impacts are anticipated within this context.

WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Wildfire

a) No Impact. The proposed project is not located in or near state responsibility areas or land classified as very high fire hazards severity zones; thus, no impacts are anticipated within this context.

b) No Impact. The proposed project is not located in or near state responsibility areas or land classified as very high fire hazards severity zones; thus, no impacts are anticipated within this context.

c) No Impact. The proposed project is not located in or near state responsibility areas or land classified as very high fire hazards severity zones; thus, no impacts are anticipated within this context.

d) No Impact. The proposed project is not located in or near state responsibility areas or land classified as very high fire hazards severity zones; thus, no impacts are anticipated within this context.

MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and while minor effects on biological habitats are anticipated during construction, they are not considered significant, and are temporary and construction-related by nature. Collectively, the proposed project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant, nor will it eliminate important examples of the major periods of California history or prehistory.

b) Less Than Significant Impact. The proposed project consists primarily of rehabilitation and restoration of existing bridge structure facilities, and in consideration of the scope and nature of the proposed work, the associated physical changes do not present the potential to present impacts that are individually limited, but cumulatively considerable.

c) Less Than Significant Impact. While construction-related impacts are anticipated in regard to noise and traffic, the effects are temporary and considered to be less than significant.

3.3 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal. To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability” (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy (CAFE) Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

State. California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California’s GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

Assembly Bill (AB) 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (ARB) create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor’s 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e).¹ Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles travelled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB

¹ GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called "carbon dioxide equivalent" (CO₂e). The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.

to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

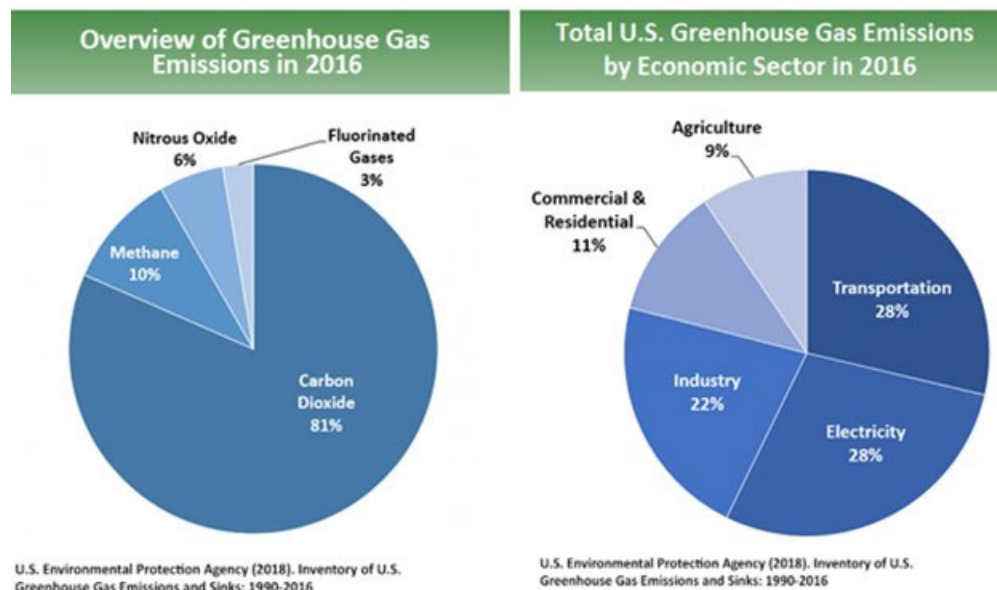
Environmental Setting

The proposed project is located in an urbanized area at the Los Angeles County/Orange County line with a highly-developed road and street network. The three bridge structures traverse the San Gabriel River in an area that is predominantly residential with open space adjacent to the river, and some light industrial and commercial activity on the eastern bank. Traffic congestion during peak hours is not uncommon in the vicinity, and an RTP/SCE by the Southern California Association of Governments (SCAG) guides transportation and housing development in the project study area. The Los Angeles County general Plan Sustainability element addresses GHGs in the project area.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

National GHG Inventory. The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81% consist of CO₂, 10% are CH₄, and 6% are N₂O; the balance consists of fluorinated gases (EPA 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

Figure 3.3-a | 2016 United States Greenhouse Gas Emissions



State GHG Inventory. ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state’s progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO₂e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (ARB 2019a).

Figure 3.3-b | 2017 California Greenhouse Gas Emissions (GHGs)

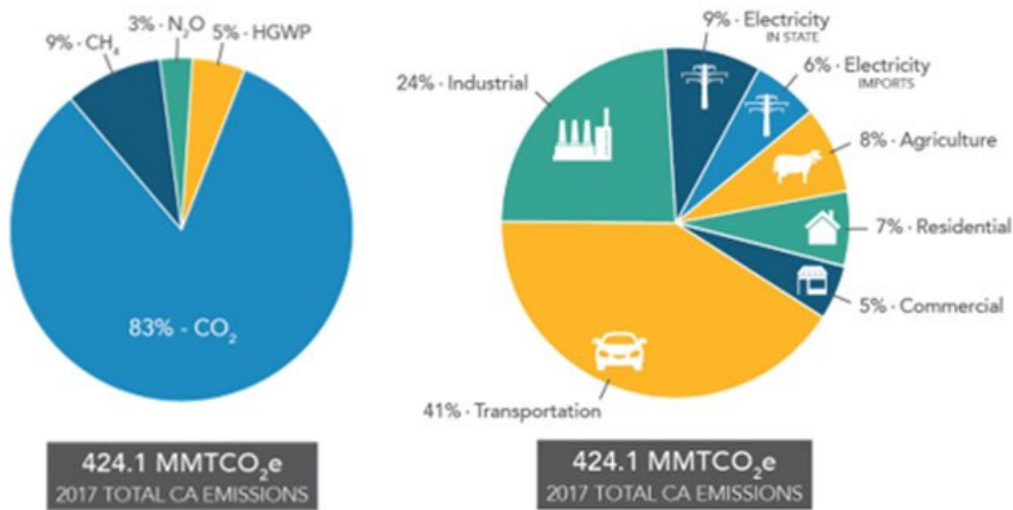
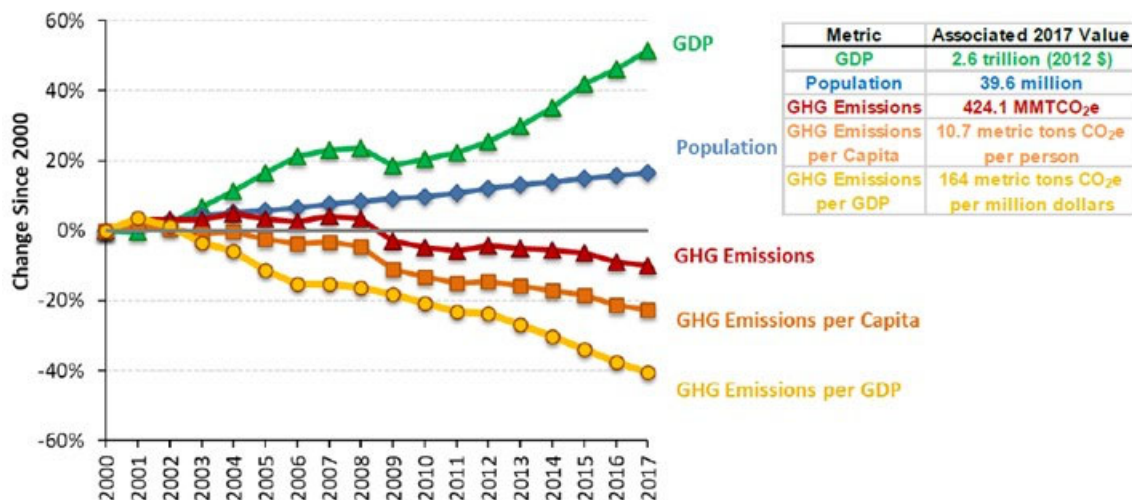


Figure 3.3-c | Change in California GDP, Population, and GHG Emissions since 2000



Source: ARB 2019b

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, California’s 2017 Climate Change Scoping Plan, adopted on December 14,

2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans. ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the current 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS). The regional reduction target for SCAG is -8% for the year 2020, and -19% for the year 2035 (ARB 2019c). The proposed project is within the jurisdiction of the Los Angeles County Metropolitan Transportation Authority (LACTMA or Metro).

PROJECT ANALYSIS

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH₄ and N₂O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions. The purpose of the proposed project is to rehabilitate and restore existing bridge structure facilities and will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the proposed project would not increase the number of travel lanes on Interstate 405, no increase in Vehicle Miles Traveled (VMT) would occur as a result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions. Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Utilizing the Road Construction Emissions Model, 9.0.0, it is estimated that construction of the proposed project would yield an approximate total of 3,780.44 metric tons of carbon dioxide equivalent (CO_{2e}) for a duration of 3 years (intermittent construction of 6 months a year, for a total of 18 months). CO_{2e} is a standard unit for

measuring carbon footprints. The idea is to express the quantity of each different greenhouse gas in terms of the amount of CO₂ that would create the same amount of warming. That way, a carbon footprint consisting of several different greenhouse gases can be expressed as a single number. In this estimate, CO_{2e} consists of CO₂, CH₄, and N₂O, respectively.

All construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7 1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA CONCLUSION

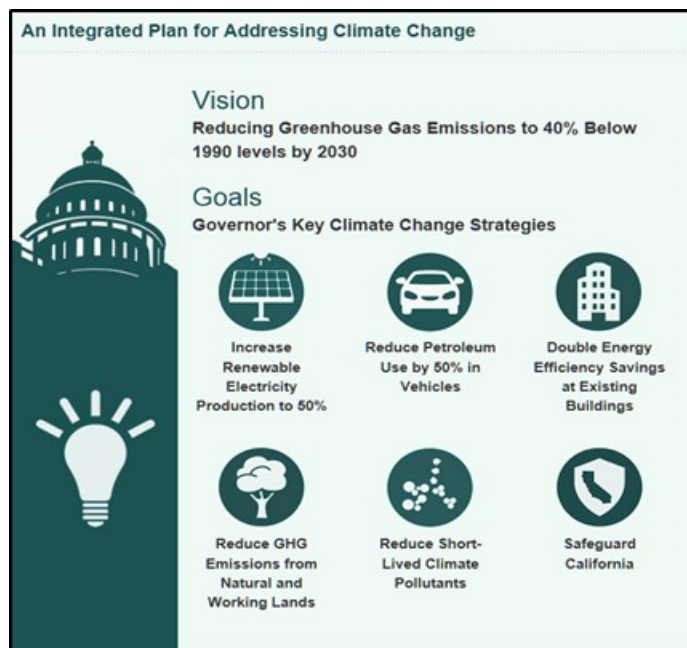
While the proposed project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

GREENHOUSE GAS REDUCTION STRATEGIES

Statewide Efforts. Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, Safeguarding California.

Figure 3.3-d | California Climate Strategy



The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019). In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities. Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040). The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the California Transportation Plan 2040, which establishes a new model for developing ground transportation systems, consistent with CO₂ reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan. The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs. In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., Safeguarding California).

Caltrans Policy Directives and Other Initiatives. Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

ADAPTATION

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts. Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. ch. 56A § 2921 et seq). The Fourth National Climate Assessment, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that

transportation infrastructure, services and operations remain effective in current and future climate conditions” (U.S. DOT 2011).

FHWA order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts. Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. California’s Fourth Climate Change Assessment (2018) is the state’s effort to “translate the state of climate science into useful information for action” in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- Adaptive capacity is the “combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.”
- Exposure is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- Resilience is the “capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience”. Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- Sensitivity is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- Vulnerability is the “susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt.” Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the California Climate Adaptation Strategy (2009), updated in 2014 as Safeguarding California: Reducing Climate Risk (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim State of California Sea-Level Rise Interim Guidance Document (SLR Guidance) in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. Rising Seas in California – An Update on Sea-Level Rise Science was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the State of California Sea-Level Rise Guidance Update in 2018.

EO B 30 15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published Planning and Investing for a Resilient California: A Guidebook for State Agencies in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, Paying it Forward: The Path Toward Climate-Safe Infrastructure in California. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments. Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- Exposure – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- Consequence – Determine what might occur to system assets in terms of loss of use or costs of repair.
- Prioritization – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Sea-Level Rise. The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

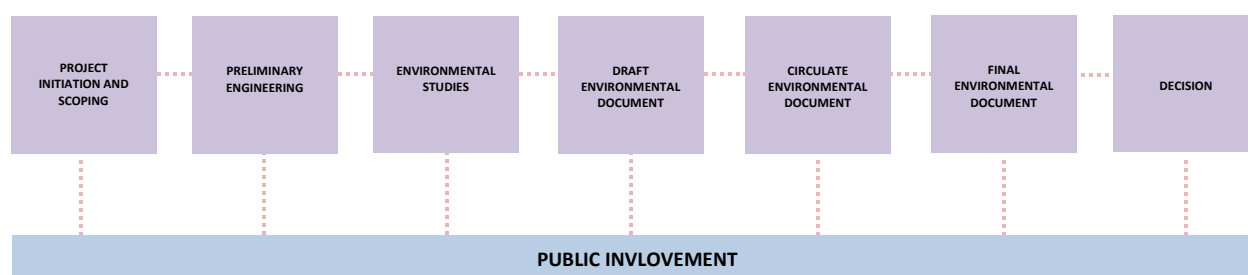
Floodplains. While the proposed project is located outside of the coastal zone, the project site exists within a designated "Zone A" area as designated by the Federal Emergency Management Agency (FEMA), or an area that possesses a 1% annual change of flooding and a 26% chance of flooding over 30 years. While analyses and modeling accounted for tidal fluctuations at the mouth of the San Gabriel River based on extreme tidal events of Mean Lower Low Water (MLLW) tidal elevation and the Mean Higher High Water (MHHW) tidal elevation, it did not account for the risk of climate change. Assessment and accounting for these effects in design decisions such as elevation and materials selection will occur during the next project phase, and during further hydraulic modeling.

CHAPTER 4 | COMMENTS AND COORDINATION

4.1 INTRODUCTION

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, Project Development Team (PDT) meetings, and interagency coordination meetings. This chapter summarizes the results of the Department's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Figure 4.1a | The Environmental Process



4.2 TRANSPORTATION PLANNING, PROJECT INITIATION AND PRELIMINARY DESIGN AND ENVIRONMENTAL STUDIES

The proposed undertaking involves a complex of three (3) bridge structures on Interstate 405 that traverse the San Gabriel River in the City of Long Beach at the Los Angeles County/Orange County line. Two of the three bridges exist within the jurisdiction of Caltrans District 7 – Los Angeles (Bridge No. 53-1185 and Bridge No. 53-1737H from post mile 0.2/0.3), and the third bridge exists within the jurisdiction of Caltrans District 12 – Orange County (Bridge No. 53.413F at post mile 24.11).

In March of 2015, Caltrans District 12 Maintenance Engineering initiated a Project Initiation Package (PIP) to develop and scope a Bridge Scour Mitigation project for jurisdictional Bridge No. 55-0413F (southbound I-405 to northbound I-605 connector) to retrofit the substructure foundation around pier walls number 3 and 4 based on bridge inspection reports that listed this bridge structure as “scour critical.”

In February of 2017, the Caltrans District 7 Division of Environmental Planning completed a Preliminary Environmental Analysis Report (PEAR) based on an alternate PIP for a similar bridge scour mitigation project within District 7 jurisdiction that included Bridge No. 53-1185 (I-405 mainline bridge) and Bridge No. 53-1737H (southbound I-605 to northbound I-405 connector). At the time, the Caltrans District 7 Division of Environmental Planning recommended combining all three bridges into one project in the interests of cost-effectiveness and efficiencies in study, design, and review, and to provide a coordinated and consistent scour mitigation strategy for the complex of structures.

Senate Bill 1 (SB-1), the Road Repair and Accountability Act of 2017, was signed into California law on April 28, 2017. This legislative package invests \$54 billion over ten years to fix roads, freeways and bridge in communities

across California and puts more dollars toward transit and safety. The newly combined project, as currently proposed, qualified for accelerated funding/programming under SB-1, and was also eligible for support through Federal-aid funding.

In 2018, Caltrans District 7, in coordination with Caltrans District 12, initiated a Supplemental Project Initiation Report (PIR) to accelerate the programming of this SB-1 qualifying project into the 2018 State Highway Operation and Protection Program (SHOPP). Caltrans submitted the proposed project into the 2018 SHOPP cycle under Bridge Scour Mitigation Program Code 20.20.201.111.

4.3 CONTINUED DEVELOPEMNT OF DESIGN AND ENVIRONMENTAL STUDIES

In September 2019, the Caltrans Division of Environmental Planning initiated environmental studies to assess any potential environmental impacts as a result of the proposed project through an internal project development team consisting of technical specialists from the following disciplines – urban and environmental planning, hydraulics and water quality, geology, hazardous waste and materials, biology, and right-of-way/acquisitions. The results of these studies are presented in this Initial Study/Environmental Assessment (IS/EA).

Currently, additional geotechnical investigations are still pending in which the data derived from the investigations will inform the final design of the proposed undertaking (finite pile cap extension size, number of additional CIDH piles, and the amount of rock rip-rap reinforcement), which will be finalized during the next phase of the proposed project. These investigations will include localized studies of surface and groundwater, rocks/soils, and geologic hazards to include seismic hazards (strong ground shaking, liquefaction, fault rupture, tsunami, seismically-induced landslides, rock fall, settlement, and subsidence) as it applies to the proposed design and the project study area.

4.4 SECTION 4(F) CONSULTATION/COORDINATION

Caltrans considered the proposed project alternatives within the context of Section 4(f), and because it was found that there is no potential for effects on waterfowl and wildlife refuges, analyses were focused on 1) publicly owned parks and recreation areas within the project study area, and 2) historic sites considered to have national, state, or local significance.

In December 2019, Caltrans screened all Section 4(f) properties in the project study area and found that the proposed undertaking would only have the potential to affect two (2) publicly owned properties/facilities in the project study area. Section 4(f) protections also extend to historic sites within the project study area, and one (1) property was identified where the proposed undertaking has the potential to affect that resource. Analyses showed that the proposed undertaking will result in a “Temporary Occupancy” of the San Gabriel River Trail and the Coyote Creek Bikeway, and a *de minimis* finding is appropriate within the context of Section 4(f) as the proposed actions would not significantly affect the activities, features, and attributes of the resources. The table also shows a “Direct Use” of the Los Angeles County Flood Control Historic District (LACFCHD), and a *de minimis* finding is appropriate within the context of Section 4(f) as the addition of footing extensions and rock slope protection around Piers 3 and 4 of three (3) non-contributing bridges, as well as the temporary cofferdams will not diminish the characteristics that make the contributing San Gabriel River Channel (contributor) or the LACFCHD eligible for listing in the National Register of Historic Places (NRHP). Reference the appendices of this environmental document for more details on these Section 4(f) resources and findings.

In February 2020, Caltrans District 7 Division of Environmental Planning, Cultural Resources unit submitted an Assumption of Eligibility for the Los Angeles County Flood Control Historic District (LACFCHD) to David Price, the Section 106 Coordination Branch Chief with the Cultural Studies Office (CSO) at Caltrans Headquarters Division of Environmental Analysis. On February 19, 2020, Caltrans District 7 received an approval from CSO regarding the

assumption of eligibility for the LACFCHD under Criterion A for the purposes of this project only due to large resource size and limited potential to effect, pursuant to Stipulation VII.C.4 of the Section 106 Programmatic Agreement, and no concurrence from the State Historic Preservation Officer (SHPO) is required. This approval supports the Finding of No Adverse Effect with Standard Conditions (FNAE-SC), and Section 4(f) *de minimis* Determination for the resource.

In March 2020, Caltrans established contact with Mateusz Suska, Bikeway Coordinator with the Los Angeles County Department of Public Works – the agency with jurisdiction over the San Gabriel River Trail and the Coyote Creek Bikeway within the project study area. He provided contact information for the Jose Suarez in the Land Development Division (LDD for the Los Angeles County Department of Public Works, who will be responsible for review and comment on the IS/EA as prepared for this proposed project, and all matters pertaining to Section 4(f) and any impacts and mitigation related to the temporary closure of the San Gabriel River Trail and Coyote Creek Bikeway. He also noted that the both the San Gabriel River Trail and the Coyote Creek Bikeway within the project study area are operated and maintained by the City of Long Beach under permit with Los Angeles County Public Works/Los Angeles County Flood Control District, and that Caltrans’ contacts at the City of Long Beach Department of Public Works for coordination during the next phase of the project would be Michelle Mowery (Mobility & Healthy Living Programs Office, Public Works) and Rachel Junken (Transportation Programs Planner, Public Works). Caltrans’ committed to future coordination regarding these matters and added all new contacts to the project distribution list and database.

4.5 SUMMARY OF TRIBAL CONSULTATION UNDER AB52

Assembly Bill 52 (AB52) amended the California Environmental Quality Act (CEQA) to address California Native American tribal concerns regarding how cultural resources of importance to tribes are treated under CEQA. CEQA now specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource [as defined in PRC 21074(a)] is a project that may have a significant effect on the environment. Caltrans, as the CEQA lead agency, must begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation.

Native American Heritage Commission. An initial request for a search of the Native American Heritage Commission Sacred Lands File was sent by Caltrans on September 25, 2018. No response was received and follow up requests were sent on October 31, 2018 and February 10, 2020. A copy of the Sacred Lands File negative search results and list of Native American contacts was received on February 10, 2020.

Native American Tribes, Groups, and Individuals. Initial consultation notification letters were mailed by Caltrans on September 17, 2018 to:

- Chairperson, Soboba Band of Luiseno Indians. Follow up notification
- Anthony Morales, Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Andrew Salas, Gabrieleno Band of Mission Indians - Kizh Nation

A response was received from Andrew Salas, Gabrieleno Band of Mission Indians – Kizh Nation, stating that the project was located within the ancestral territory of the Gabrieleno Band of Mission Indians-Kizh Nation and may have potential for discoveries of cultural resources. A request was made for Native American monitoring of ground disturbance. A follow up meeting for AB52 and Section 106 consultation (October 26, 2018) and phone conference (December 12, 2018) with Mr. Salas relayed further information on the project scope within the river channel, as well as the nature of the built environment of the San Gabriel River. Meetings concluded that the party’s concerns were addressed and had no further comments.

Upon receiving the Sacred Lands File search results and Native American contact list, additional and follow up Section 106 consultation notification letters were sent by mail (February 20, 2020) and email (February 19, 2020) to the following contacts:

- Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians
- Sandonne Goad, Chairperson, Gabrielino/Tongva Nation
- Robert F. Dorame, Gabrielino Tongva Indians of California Tribal Council
- Charles Alvarez, Councilmember, Gabrielino-Tongva Tribe
- Linda Candelaria, Chairperson, Gabrielino-Tongva Tribe

4.6 SUMMARY OF BIOLOGICAL AGENCY COORDINATION

Early coordination phone conferences have occurred between Caltrans and resource agencies such as Army Corp of Engineers, U.S. National Marine Fisheries Service and California Department of Fish and Wildlife. The purpose of this coordination was to provide agency personnel with the latest project design information, proposed surveys and protocol.

In February 2019, Caltrans submitted a Lake and Streambed Alteration Agreement Application to Mr. Matt Chirdon of the California Department of Fish and Wildlife (CDFW) for the preliminary geotech boring aspect of this project as a courtesy notification and advised that this undertaking is separate but related to this larger project to address the bridge scour issues at the I-405 at San Gabriel River bridges. Caltrans also provided its determination that this stretch of the San Gabriel River is outside the jurisdiction of CDFW because it is tidal.

In March 2019, Caltrans further consulted with CDFW regarding jurisdiction within the San Gabriel River. Caltrans District 7, in coordination with Caltrans HQ investigated the potential for the project limits to be within CDFW jurisdiction.

In April 2019, Caltrans spoke with Jess Adams of National Marine Fisheries Service (NMFS) regarding the project, survey needs, and the potential impacts to species within the project limits.

In May 2019, Caltrans consulted CDFW to discuss both projects (geotech drilling and bridge scour maintenance) and provided additional details regarding the undertakings.

In June 2019 Mr. Chirdon of CDFW left his position and was temporarily replaced by Ms. Mary Ngo. Caltrans resubmitted the LSA Application and attachments for Geotech drilling to Ms. Ngo for review. The project to repair bridge scour was discussed but specifically noted that is a separate project and LSA Application would be submitted at a later date.

In August 2019, Caltrans consulted with the United States Army Corps of Engineers (USACE) to discuss project details and the need for permits for both the Geotech drilling and the project to repair the bridge scour.

In October 2019, Caltrans submitted an application for a permit from the State Water Board for the Geotech drilling operation. The project to repair the bridge scour was discussed briefly and it was noted that a separate permit application would be submitted in the future for the project to repair the bridge. In an email from the Water Board they stated that they would be in contact with Caltrans should they have questions about either project.

In November/December of 2019, and January 2020, Caltrans consulted with Ms. Veronica Li, Ms. Stephanie Hall, Ms. Julia Yang, and Mr. Rafiqul Talukder of the USACE regarding both projects (geotech drilling and repair to the bridge scour).

In or about 10/15/19 Mr. Johnson submitted an application for a permit from the State Water Board for the Geotech drilling operation. The project to repair the bridge scour was discussed briefly and it was noted that a separate permit application would be submitted in the future for the project to repair the bridge. In an email from the Water Board they stated that they would be in contact with Mr. Johnson should they have questions about either project.

In February 2020, Caltrans attempted contact with Ms. Sally Brown of the United States Fish and Wildlife Service (USFWS) to discuss project impacts.

CHAPTER 5 | LIST OF PREPARERS

Caltrans District 7, Division of Environmental Planning | Initial Study/Environmental Assessment

Ron Kosinski, Deputy District Director

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Caltrans District 7, Division of Environmental Planning | Project Development Team/Technical Specialists

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Andrew Johnstone, Associate Environmental Planner/District Biologist (Biology)

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Muhammad Luqman – Senior Engineering Geologist, Bridge Scour Critical Program

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Angela Perez, Senior Right-of-Way Agent

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Yvette Ximenez, Outreach Project Coordinator (Sub-Consultant – Public Outreach)

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Jason Jackson, Outreach Project Coordinator (Sub-Consultant – Public Outreach)

Danielle Rodriguez, Outreach Project Coordinator (Sub-Consultant – Public Outreach)

CHAPTER 6 | DISTRIBUTION LIST

LOCATIONS WHERE IS/EA CAN BE VIEWED

Caltrans District 7
100 S. Main Street
Los Angeles, CA 90012

City of Long Beach
Department of Public Works/Engineering
411 West Ocean Blvd. 4th Floor
Long Beach, CA 90803

Long Beach Public Library
Los Altos Neighborhood Library
5614 E. Britton Drive
Long Beach, CA 90815

IS/EA DISTRIBUTION LIST

Elected Officials and Staff

FEDERAL	
Honorable Alan S. Lowenthal	Office of U.S. Congressman Alan S. Lowenthal, District 47
Honorable Harley Rouda	Office of U.S. Congressman Harley Rouda, District 48
Mr. Mark Pulido, Deputy Chief of Staff	Office of U.S. Congressman Alan S. Lowenthal, District 47
Ms. Laura Oatman, District Director	Office of U.S. Congressman Harley Rouda, District 48
STATE	
Honorable Thomas J. Umberg	Office of California State Senator Thomas J. Umberg, District 34
Honorable Patrick O'Donnell	Office of California State Assemblymember Patrick O'Donnell, District 70
Mr. Nick Anas, District Coordinator	Office of California State Senator Thomas J. Umberg, District 34
Ms. Marisol Barajas, District Director	Office of California State Assemblymember Patrick O'Donnell, District 70
REGIONAL	
Honorable Janice Hahn	Office of Los Angeles County Supervisor, District 4
Honorable Michelle Steel	Office of Orange County Supervisor Michelle Steel, District 2
Mr. Francis Hur	Office of Orange County Supervisor Michelle Steel, District 2
LOCAL	
Mayor Robert Garcia	City of Long Beach
Mayor Richard D. Murphy	City of Los Alamitos
Mayor Thomas Moore	City of Seal Beach
Councilmember Suzie Price	City of Long Beach, District 3
Councilmember Daryl Supernaw	City of Long Beach, District 4
Councilmember Stacy Mungo	City of Long Beach, District 5

Agencies

FEDERAL	
Mr. John Fowler, Executive Director	Advisory Council on Historic Preservation
Mr. Reid Nelson, Director	Advisory Council on Historic Preservation
Mr. Barry Thom, Regional Administrator	National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries)
Ms. Melanie Beck, Outdoor Recreation Planner	National Park Service
Mr. Mark Cohen	U.S. Army Corps of Engineers
Ms. Stephanie Hall, Environmental Protection Specialist	U.S. Army Corps of Engineers
Ms. Veronica Li – Senior Project Manager, Transportation & Special Projects Branch Regulatory Division	U.S. Army Corps of Engineers
Area Conservationist	U.S. Department of Agriculture, Natural Resources Conservation Services
Director	U.S. Department of Energy

Agencies (continued)

FEDERAL (continued)	
Director	U.S. Department of Health and Human Services
Environmental Clearance Officer	U.S. Department of Housing and Urban Development
Ms. Patricia Port, Regional Environmental Officer	U.S. Department of the Interior
Director	U.S. Department of the Interior
Ms. Patricia Neubacher, Regional Director	U.S. Department of the Interior, National Park Service
Mr. Omar Elkassed, Senior Transportation Engineer	U.S. Department of Transportation Federal Highway Administration, California Division
Mr. Jared Blumenfeld	U.S. Environmental Protection Agency
Mr. Clifton Meek	U.S. Environmental Protection Agency
Mr. Connell Dunning, Transportation Team Supervisor	U.S. Environmental Protection Agency
Mr. Alessandro Amaglio, Environmental Officer	U.S. Federal Emergency Management Agency
Mr. Ray Telles, Team Leader	U.S. Federal Transit Agency
Ms. Leslie T. Rodgers, Regional Administrator	U.S. Federal Transit Agency
Mr. Paul Souza, Regional Director	U.S. Fish and Wildlife Service
Ms. Lena Chang, Senior Biologist	U.S. Fish and Wildlife Service
Ms. Karen A. Goebel, Assistant Field Supervisor	U.S. Fish and Wildlife Service
Ms. Sally Brown, Assistant Field Supervisor	U.S. Fish and Wildlife Service
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Ms. Linda Murchison, Chief	California Air Resources Board
Ms. Karen Magliano	California Air Resources Board, Air Quality Science and Planning Division
Mr. Derek Chernov, Acting Director	California Department of Conservation
Mr. Ed Pert, Regional Manager	California Department of Fish and Wildlife
Mr. Baron Barrera, Environmental Scientist	California Department of Fish and Wildlife
Ms. Jamie Jackson	California Department of Fish and Wildlife
Ms. Erinn Wilson, Senior Environmental Scientist	California Department of Fish and Wildlife
Mr. Milford Wayne, State Historic Preservation Officer	California Department of Parks and Recreation
Ms. Suzanne Goode, Natural Resource Program Manager	California Department of Parks and Recreation
	California Department of Resources
Mr. Mark Cowin, Director	California Department of Water Resources
Ms. Pamela Martineau, Information Officer II (Chief Editor)	California Department of Water Resources
Mr. Mike Dayton, Acting Secretary	California Emergency Management Agency
Ms. Chona Sarte	California Environmental Protection Agency
Ms. Linda S. Adams, Secretary	California Environmental Protection Agency
	California Highway Patrol
	California Native American Heritage Commission
Mr. John Laird, Secretary	California Natural Resources Agency
	California Public Infrastructure Advisory Commission
Mr. Michael R. Peevey, President	California Public Utilities Commission
	California State Clearinghouse
Ms. Jennifer Lucchesi, Executive Officer	California State Lands Commission
Ms. Laura, Pennebaker	California Transportation Commission
Commission Chair	California Transportation Commission
Ms. LB Nye, Senior Environmental Scientist	California Water Resources Control Board
Ms. Felicia Marcus, Chair	California Water Resources Control Board
Mr. Ken Alex, Director	Governor's Office of Planning and Research, State Clearinghouse
	Native American Tribal Councils

Agencies (continued)

REGIONAL	
Mr. Mark Pestrella, Director	Los Angeles County Department of Public Works
Mr. Josh Svensson	Los Angeles County Department of Public Works
Mr. Frank Wu	Los Angeles County Department of Public Works
Mr. John Walker, Assistant Deputy Director	Los Angeles County Department of Public Works
Mr. Mateusz Suska, Bikeway Coordinator	Los Angeles County Department of Public Works
Mr. Jose Suarez, Senior Civil Engineer, Land Development Division	Los Angeles County Department of Public Works
Ms. Amy Bodek, Director	Los Angeles County Department of Regional Planning
	Los Angeles County Department of Regional Planning
	Los Angeles County Fire Department
	Los Angeles County Health Services
Mr. Ernesto Chaves – Senior Director, Countywide Planning	Los Angeles County Metropolitan Transportation Authority
Ms. Susan Chapman	Los Angeles County Metropolitan Transportation Authority
	Los Angeles County Office of Emergency Management
	Los Angeles County Sanitation Districts
	Los Angeles County Sheriff's Department
	Metro
	Metropolitan Water District of Southern California
	Orange County Bicycle Coalition
Ms. Stephanie Chhan, Transportation Analyst	Orange County Transportation Authority
	Regional Water Quality Control Board
	Regional Water Quality Control Board
Mr. Barry R. Wallerstein, Executive Officer	South Coast Air Quality Management District
Mr. Jeff Liu – Manager of Communications, Media and Public Affairs	Southern California Association of Governments
Mr. Phillip Law, Corridor Program Manager	Southern California Association of Governments
	Southern California Edison Company
LOCAL	
Mr. Carl Hickman, City Traffic Engineer	City of Long Beach
Ms. Rachel Junken, Transportation Programs Planner	City of Long Beach
Ms. Sharon Weissman, Senior Advisor to the Mayor	City of Long Beach
Mr. Ron Noda, Recreation Manager	City of Los Alamitos
Ms. Emeline Noda, Recreation Manager	City of Los Alamitos
Director	City of Rossmoor
	Go Active Long Beach
	Walk Bike Long Beach
Ms. Evgenia Hartman, Organizer	Bike Rossmoor

Cultural Agencies and Community Groups

Mr. Patrick Tumamait	Barbareno/Ventureno Band of Mission Indians
Ms. Eleanor Arrellanes	Barbareno/Ventureno Band of Mission Indians
Ms. Julie Tumamait-Stennsle, Chairperson	Barbareno/Ventureno Band of Mission Indians
Raudel Banuelos	Barbareno/Ventureno Band of Mission Indians
Mr. Gino Altamirano, Chairperson	Coastal Band of the Chumash Nation
Mr. Rudy Ortega, President	Fernandeno Tataviam Band of Mission Indians
Mr. Jairo Avila, Tribal Historic and Cultural Preservation Officer	Fernandeno Tataviam Band of Mission Indians
Mr. Alan Salazar, Chairman Elders Council	Fernandeno Tataviam Band of Mission Indians
Ms. Beverly Salazar Folkes, Elders Council	Fernandeno Tataviam Band of Mission Indians
Mr. Andrew Salas, Chairperson	Gabrielino Band of Mission Indians - Kizh Nation
Mr. Anthony Morales, Chairperson	Gabrielino/Tongva Nation San Gabriel Band of Mission Indians
Mr. Robert Dorame, Chairperson	Gabrielino Tongva Indians of California Tribal Council
Sandonne Goad, Chairperson	Gabrielino/Tongva Nation
Mr. Charles Alavarez	Gabrielino/Tongva Tribe
Mr. John Valenzuela, Chairperson	San Fernando Band of Mission Indians

Cultural Agencies and Community Groups (continued)

Mr. Kenneth Kahn, Chairperson	Santa Ynez Band of Mission Indians
Mr. Eli Akira Kaufman, Executive Director	Los Angeles County Bicycle Coalition
	Orange County Bicycle Coalition

Environmental and Preservation Service Groups

Mr. Brad Childs, Executive Director and Founder	The Wilderness Institute
Ms. Julie Clark Deblasio	California Native Plant Society
Mr. Bruce Reznik, Executive Director	Los Angeles Water Keeper

APPENDIX A | SECTION 4(F)

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MEMORANDUM

07-LA-405

LA PM 0.02/0.03

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Dist.-Co.-Rte.

P.M. / P.M.

E.A. / Project No.

Interstate 405 at San Gabriel River Bridge Scour Mitigation Project (Bridges No. 53-1185/53-1767H/55-0413F)

Project Title

8 March 2020

To: File

From: Anthony R. Baquiran, AEP – Division of Environmental Planning

213.897.0674 / anthony.baquiran@dot.ca.gov

SUBJECT: PROPOSED SECTION 4(F) DE MINIMIS MEMORANDUM FOR THE INTERSTATE 405 AT SAN GABRIEL RIVER BRIDGE SCOUR MITIGATION PROJECT

1. Introduction

The following proposed Section 4(f) De Minimis Memorandum (Memo) has been prepared to address the Section 4(f) properties within the vicinity of the Interstate 405 at San Gabriel River Bridge Scour Mitigation Project. The Department of Transportation Act (DOT Act) of 1966 included a special provision, Section 4(f), which stipulated that the Federal Highway Administration (FHWA) and other Department of Transportation (DOT) agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife, and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land; and the action includes all possible planning to minimize harm to the property resulting from such use; or
- The FHWA determines that the use of the property will have a *de minimis* impact.

2. Proposed Section 4(f) De Minimis Determination

Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This revision provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete. The Federal Highway Administration's (FHWA) final rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

3. Project Description, Purpose and Need

Proposed Undertaking. The California Department of Transportation (Caltrans) proposes a bridge scour maintenance project at the Interstate 405 (I-405) / Interstate 605 (I-605) interchange – a complex of three (3) bridges that traverse the San Gabriel River at the Los Angeles County/Orange County line. Two of the three bridges exist within the jurisdiction of Caltrans District 7 – Los Angeles (Bridge No. 53-1185 and Bridge No. 53-1737H from post mile 0.2/0.3), and the third bridge exists within the

jurisdiction of Caltrans District 12 – Orange County (Bridge No. 53.413F at post mile 24.11). The scope of work for all three bridges includes:

- Retrofit of bridge substructure foundation by constructing pier footing extensions at Pier 3 and Pier 4 at each bridge
- Reinforcement of new footing extensions through placement of new Cast-In-Drilled-Hole (CIDH) piles
- Armoring of substructure retrofit through placement of rip-rap/rock protection around each pier

Work at the footings within the San Gabriel River will be accomplished through water diversion and the installation of two temporary sheet pile cofferdams, and construction work is anticipated to be performed directly on the bottom and sides of the channel. Construction work will also include continuous pumping and disposal of anticipated groundwater, and removal and disposal of riverbed sediment. Temporary Construction Easements (TCEs) will be required to accommodate contractor access and equipment storage, though no excess soil is expected to be generated from the site as the proposed TCE parcels are currently paved. Temporary and intermittent closure of the San Gabriel River Trail and the Coyote Creek Bikeway in the project study area will be required to mobilize construction equipment and materials, and to ensure the safety of facility users.

Project Purpose. The purpose of the proposed project is to achieve the following objectives:

- Preserve the structural integrity of the bridge structures in a safe, economic, and environmentally friendly manner
- Increase safety of the traveling public by addressing persisting scour issues, mitigating known and potential deficiencies in bridge substructures – ultimately preventing failure of the facilities/bridge structures

Project Need. The need for the proposed project is based on geotechnical and bridge scour evaluations that indicate site conditions with the potential to affect the integrity of the three bridge structures if not addressed, and ultimately, the safety of the traveling public.

I-405 Mainline Bridge at San Gabriel River (Bridge No. 53-1185). This bridge received a seismic retrofit in 1994 at Abutments 1 and 6. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4, where pile caps are exposed and the potential scour at the piers is up to 7.2 feet and 8 feet, respectively. Underwater investigations show about 50 percent of Pier 3 footing and the entire footing of Pier 4 are currently exposed.

Southbound I-605 to Northbound I-405 Bridge Connector at San Gabriel River (Bridge No. 53-1737H). This bridge also received a seismic retrofit in 1994 at Abutments 1 and 6. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4. The potential scour is estimated to expose Piers 3 and 4 up to 9.7 feet and 10.3 feet, respectively. Currently, the pile caps under Piers 3 and 4 are exposed, with evidence of undermining at Pier 3. At Pier 4, the entire footing is currently exposed and undermined – 5 feet at the north nose and 0.80 feet at the south nose.

Southbound I-405 to Northbound I-605 Bridge Connector at San Gabriel River (Bridge No. 55-0413F). This bridge received a seismic retrofit in 1991 at Abutments 1 and 2, Hinges 1 through 4, and columns under bents 6, 8, 9, 10, 12, 13, and 18. Bridge scour evaluations indicate scour vulnerability as “critical” at Piers 3 and 4, where pile caps are exposed and the potential scour at the piers is up to 18 feet and 18.4 feet, respectively. No undermining is detected along the perimeter of the footings at Piers 3 and 4.

4. Section 4(f) Resources

The following is a discussion of the Section 4(f) properties within the project study area.

San Gabriel River Trail (Los Angeles County Department of Public Works). The San Gabriel River Trail is a multi-use trail that runs north-south and stretches from City of Azusa in the foothills of the San Gabriel Mountains on the northern end, to the City of Seal Beach and the Pacific Ocean at its southern terminus. Though the trail travels through a primarily urban environment,

adjacent parks and natural features help diversify the landscape. The San Gabriel Mountains provide a scenic backdrop to the northern portions of the trail, while the Pacific Ocean service as a destination point in the south. Within the project study area, the San Gabriel River Trail is directly adjacent to the three bridges where construction activities will take place and traverses the eastern side/bank of the river, perpendicular to the bridge structures. The San Gabriel River Trail is owned and operated by the Los Angeles County Department of Public Works, but the portion of the trail within the project study area is maintained by the City of Long Beach.

The proposed Caltrans undertaking includes a substructure retrofit of three bridge structures that cross the San Gabriel River – the I-405 mainline bridge, and the northbound and southbound connector bridges to the 605 freeway (total of three bridges). While all work will be performed within the San Gabriel River, staging and access will be required from areas adjacent, and to both the north and south of the project site. Caltrans Design is proposing temporary and intermittent closures of an adjacent portion of the San Gabriel River Trail during construction to ensure the safety of facility users and construction personnel.

In general, construction will span a course of 3 years, but will not require closure of the aforementioned facilities for all four seasons. As a safety precaution, work can only be performed in the river during the “dry season,” which is approximately 6 months a year. The estimated construction schedule would be:

May 2022 – October 2022
May 2023 – October 2023
May 2024 – October 2024

Caltrans design proposes closure of approximately 2.7 miles of the San Gabriel River Trail from roughly 7th Street/SR-22 to the river crossing at roughly E. Stearns Street in the City of Long Beach. **Figure 1** identifies the proposed temporary/intermittent closures of the San Gabriel River Trail in the project study area.

Coyote Creek Bikeway (Los Angeles County Department of Public Works). The Coyote Creek Bikeway is a 9.5-mile, Class 1 bike path in Los Angeles County that runs north-south from its origin at Santa Fe Springs at its northern fork, before passing through industrial areas that consist of warehouses and light manufacturing. The bikeway extends south and cuts through residential neighborhoods in Cerritos and Hawaiian Gardens before it joins the San Gabriel River Trail approximately 1.3 miles north of the proposed project site at Willow Street/Katella Avenue. The potentially affected portion of the Coyote Creek Bikeway within the project study area falls within the jurisdiction of the Los Angeles County Department of Public Works, with the remainder of the bikeway north of this area falling under jurisdiction of the Orange County Department of Public Works.

The proposed Caltrans undertaking includes a substructure retrofit of three bridge structures that cross the San Gabriel River – the I-405 mainline bridge, and the northbound and southbound connector bridges to the 605 freeway (total of three bridges). While all work will be performed within the San Gabriel River, staging and access will be required from areas adjacent, and to both the north and south of the project site. Caltrans Design is proposing temporary and intermittent closures of an adjacent portion of the Coyote Creek Bikeway during construction to ensure the safety of facility users and construction personnel.

In general, construction will span a course of 3 years, but will not require closure of the aforementioned facilities for all four seasons. As a safety precaution, work can only be performed in the river during the “dry season,” which is approximately 6 months a year. The estimated construction schedule would be:

May 2022 – October 2022
May 2023 – October 2023
May 2024 – October 2024

Caltrans design proposes closure of approximately 0.5 miles of the Coyote Creek Bikeway from its southern terminus at E. Stearns Street in Long Beach, to Willow Street/Katella Avenue on the north. **Figure 1** identifies the proposed temporary/intermittent closures of the Coyote Creek Bikeway in the project study area.

Figure 1. Proposed Temporary/Intermittent Closures of San Gabriel River Trail and Coyote Creek Bikeway in the Project Study Area



Los Angeles County Flood Control Historic District (LACFCHD). The Los Angeles County Flood Control District is a historic district made up of the county-wide flood control efforts of the Los Angeles County Flood Control District (LACFCD) and the United State Army Corp of Engineers (USACE); consisting of a collection of dams, concrete lined river and creek channels, bridges, and drainage systems. The district's period of significance is from 1934 to 1966.

The Los Angeles River and its many associated waterways flooded frequently throughout the City and County of Los Angeles' early history of the late 1800s/early 1900s. The state legislature formed the LACFD in 1914 in response to the costliest flood in the area to that date. Planning and construction was slow going until the early 1930s and included effort to obtain funds from the federal government. The district's period of significance starts with the flood of 1934, the most devastating of its time. Afterwards, the LACFD put together a more comprehensive plan, consisting of sixty-four (64) separate projects totaling close to one billion dollars, and sought federal aid. In 1936, the passage of the Flood Control Act by the United State Congress expanded the USACE supervision of flood control projects. The LACFD with the help of the USACE and Works Progress Administration (WPA) funds, began construction of the county wide flood control system consisting of concrete lined channels for waterways, a series of concrete dams, and associated drainage systems to funnel water to the channels and ultimately out to the Pacific Ocean. The period of significance ends in 1966 upon the completion of the majority of the major projects associated with the flood control plan.

The LACFCHD is considered eligible for listing in the NRHP at the local level of significance under Criterion A for its important influence on the region's physical development and its role in controlling floods waters within the county. While certain elements of the district are individually eligible for their engineering role as a design prototype, the district itself is not eligible under Criterion C for this role.

- **Los Angeles County Flood Control Historic District**
 - San Gabriel River Channel – Contributor
 - Coyote Creek Channel – Contributor
 - Bridge No. 53-1185 – Non-Contributor
 - Bridge No. 53.1737H – Non-Contributor
 - Bridge No. 55-0413F – Non-Contributor

5. Proposed De Minimis Impact Finding

A determination of *de minimis* impact on parks, recreation areas, and wildlife and waterfowl refuges, may be made when all three of the following criteria are satisfied:

1. The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
2. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
3. The official(s) with jurisdiction over the property are informed of U.S. DOT's intent to make the *de minimis* impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

San Gabriel River Trail (Los Angeles County Department of Public Works). The proposed undertaking constitutes a Temporary Occupancy of this Section 4(f) protected property, and the impact of temporarily and intermittently closing the San Gabriel River Trail in the project study area would not restrict recreational activities during construction with implementation of detours to surface streets within the vicinity of the project site, and access to the trail would be restored at the end of each construction period. Therefore, the proposed action would not significantly affect the activities, features, and attributes of the resource.

Coyote Creek Bikeway (Los Angeles County Department of Public Works). The proposed undertaking constitutes a Temporary Occupancy of this Section 4(f) protected property, and the impact of temporarily and intermittently closing the Coyote Creek Bikeway in the project study area would not restrict recreational activities during construction with implementation of detours to surface streets within the vicinity of the project site, and access to the trail would be restored at the end of each construction period. Therefore, the proposed action would not significantly affect the activities, features, and attributes of the resource.

Los Angeles County Flood Control Historic District (LACFCHD). The Secretary of the Interior's Standards for the Treatment of Historic Properties (the Standards) provide a general approach to historic preservation practices and the treatment of historic properties. The appropriate approach for the proposed project are the Standards for Rehabilitation:

- The Standards for Rehabilitation allows minimal change to allow for a property's continued use through repair, alterations, and additions while preserving those portions ore features which convey its historical, cultural, or architectural values.

The proposed project, as designed, will not have an Adverse Effect on the Los Angeles County Flood Control Historic District (LACFCHD) because it will be protected by using Standard Conditions with a Secretary of the Interior's Standards Action Plan (SOIS AP). The addition of footing extensions and rock slope protection around the footing extensions to Piers 3 and 4 of three (3) non-contributing bridges, as well as the temporary cofferdams will not diminish the characteristics that make the contributing San Gabriel River Channel (contributor) or the LACFCHD eligible for listing in the National Register of Historic Places (NRHP). A Finding of No Adverse Effect with Standard Conditions (FNAE-SC) for the LACFCHD is appropriate in consideration of the aforementioned, and supports the *de minimis* finding for this Section 4(f) protected resource.

In addition to the Standards, Caltrans will ensure that all proposed project work will be performed as per the Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California (Los Angeles District Corps of Engineers, December 1999). This will also ensure that the project plans are consistent with the Standards to maintain the essential form and integrity of the channel segment is unimpaired.

Records of Public Involvement

Impacts to Section 4(f) protected resources are governed by a federal process and compliance with National Environmental Policy Act (NEPA) requirements. The appropriate NEPA approval for the proposed undertaking is an Environmental Assessment (EA), which requires public circulation (30-day period) to solicit comments/feedback. The proposed undertaking also requires compliance with the California Environmental Quality Act (CEQA), in which an Initial Study (IS) is appropriate for approval. Caltrans has prepared a joint CEQA/NEPA environmental document (IS/EA) to present the results of all studies, including this Section 4(f) *de minimis* Determination, and a Notice of Availability of IS/EA and Opportunity for Public Hearing will be posted in the Long Beach Press-Telegram, Long Beach Grunion-Gazette, and La Opinión newspapers. The Draft IS/EA will be available for public review online, and also at the Los Altos Neighborhood Library (5614 E. Britton Drive, Long Beach, California 90815). Following public circulation of the Draft IS/EA and *de minimis* Determination, the Los Angeles County Department of Public Works and the Orange County Department of Public Works will be contacted and written concurrence request for the proposed temporary occupancies on the San Gabriel River Trail and the Coyote Creek Bikeway. No written concurrence is required for direct use regarding the LACFCHD as the Finding of No Adverse Effect with Standard Conditions (FNAE-SC) supports the *de minimis* Determination for impacts to this resource.

APPENDIX B | TITLE VI POLICY STATEMENT

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Director's Policy

Number: DP-28-R1

Effective Date: 3/19/15

Supersedes: DP-28 (12-2006)

Responsible
Program: Office of Business and
Economic Opportunity

TITLE Title VI of the Civil Rights Act of 1964 and Related Nondiscrimination Statutes

POLICY

The California Department of Transportation (Caltrans), as a recipient of federal financial assistance, incorporates Title VI of the Civil Rights Act of 1964, Section 162 (a) of the Federal-Aid Highway Act of 1973, Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973/Americans With Disabilities Act of 1990 (Title VI) into its programs, policies, activities, and services. This ensures that no person in the state of California is excluded from participation in, denied the benefits of, or otherwise subjected to discrimination in Caltrans programs, policies, activities, and services on the grounds of race, color, national origin, sex, age, or disability.

INTENDED RESULTS

The intent of this policy is to identify, resolve, and include Title VI considerations in the planning and project delivery process, and with Caltrans partners, to ensure the public is not discriminated against, either intentionally or unintentionally, as a result of transportation decisions. This policy is consistent with other Caltrans policies: Equal Employment Opportunity (DP-01-R10); Environmental Policy (DP-04); Caltrans' Workforce (DP-11); Caltrans' Disadvantaged Business Enterprise Program (DP-13-R2); Working with Native American Communities (DP-19); Environmental Justice (DP-21); and Context Sensitive Solutions (DP-22) to ensure nondiscrimination, equal and equitable activities, and access to services.

RESPONSIBILITIES

Director:

- Ensures Caltrans actions and services are consistent with Title VI laws and regulations. (28 Code of Federal Regulations (C.F.R.) § 42.101 (2014).)
- Appoints a Title VI Coordinator pursuant to 23 C.F.R. part 200.9(a)(4) and (b)(1) (2014).
- Delegates daily operations of the Caltrans Title VI Program to the Assistant Director, Office of Business and Economic Opportunity (OBEO).

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to enhance California's economy and livability"*

Assistant Director, OBEO:

- Promotes awareness of Title VI issues.
- Administers the Caltrans Title VI Program in the development and implementation of the Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration Title VI compliance program.
- Serves as the Caltrans Title VI Coordinator.
- Maintains the Title VI Program Plan.
- Provides technical expertise and training on Title VI matters.
- Conducts compliance reviews of divisions and districts to ensure compliance with Title VI requirements.
- Prepares and submits federal mandated reports.

Deputy Directors for Planning and Modal Programs and Project Delivery:

- Promote awareness of Title VI issues.
- Promote Title VI considerations in statewide planning and project delivery by ensuring compliance with Title VI requirements.
- Ensure local partners, as subrecipients, comply with Title VI Program requirements in planning and project delivery and ensure nondiscrimination.

District Directors:

- Promote awareness of Title VI issues.
- Appoint a Title VI Liaison.
- Submit Title VI Program Accomplishments/Goals Report annually, including program updates, as required by the Title VI Program Plan.

Chiefs, Divisions of Engineering Services and Procurement & Contracts:

- Promote awareness of Title VI issues.
- Ensure Caltrans' federally assisted contracts and procurements are consistent with Title VI requirements, including, but not limited, to the inclusion of nondiscrimination clauses.

Division Chiefs:

- Promote awareness of Title VI issues.
- Appoint a Title VI Liaison if required by the Title VI Program Plan.
- Submit Title VI Program Accomplishments/Goals Report annually, including program updates, as required by the Title VI Program Plan.

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Managers and Supervisors:

- Promote awareness of Title VI issues.
- Actively support Title VI and ensure their employees understand and comply with Caltrans policies.
- Ensure employees receive Title VI training every two years.

District and Division Title VI Liaisons:

- Promote awareness of Title VI issues, requirements, policies, and procedures.
- Provide technical assistance to internal and external stakeholders regarding Title VI requirements.
- Collect data and report on Title VI activities, including outreach events and trainings.
- Assist with Title VI monitoring and compliance activities.

Employees:

- Comply with Caltrans policies regarding Title VI in their day-to-day activities.
- Complete Title VI training every two years.

APPLICABILITY

This policy applies to all Caltrans employees and extends to subrecipients, such as contractors, grantees, and local agencies that receive federal financial assistance from Caltrans.


MALCOLM DOUGHERTY
Director

3/19/2015
Date Signed

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

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APPENDIX C | AVOIDANCE, MINIMIZATION, AND/OR MITIGATION SUMMARY

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DRAFT ENVIRONMENTAL COMMITMENTS RECORD

Interstate 405 at San Gabriel River Bridge Scour Mitigation Project

LOS ANGELES COUNTY, CALIFORNIA

DISTRICT 7 | LA-405 [PM 0.02/0.03]

EA 07-32100 / E-FIS 0716000044

UTILITIES AND EMERGENCY SERVICES

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
UTL-01	Early and Continuing Coordination with Utility Providers	Project Engineer, Resident Engineer		Design, Construction		IS/EA	Early communication and planning with affected utility providers before and during construction will ensure that all affected infrastructure will be relocated with consideration, and to minimize any disruption of services and any effects as much as possible.
TMP-01	Transportation Management Plan (TMP)	Design Engineer, Resident Engineer		Design, Construction		IS/EA	A Transportation Management Plan (TMP) shall be implemented to provide detailed access and detour strategies that would minimize any effects on response times for fire, police, and emergency services. Caltrans shall maintain close coordination with local agencies and jurisdictions, including fire protection services, police, schools, and park agencies via a public outreach campaign during the construction phase of the proposed project.
TMP-02	Early and Continuing TMP Coordination with the City of Long Beach	Design Engineer, Resident Engineer		Design, Construction		IS/EA	Caltrans shall initiate early coordination with the City of Long Beach to achieve consensus and obtain concurrence on traffic management strategies during construction, and to ensure public access and availability of emergency and public services during the construction period.

CULTURAL RESOURCES

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
CUL-01	Review of Project PS&E by Architectural Historian	Design Engineer, Architectural Historian, ECL, Generalist		Pre-Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	The Caltrans Architectural Historian will review for approval the Project, Specifications & Estimates Packages at 65%, 95% and 100% stages to ensure that proposed project work conforms to the SOIS Action Plan.
CUL-02	Inclusion of SOIS Action Plan and <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> are included in ECR	Architectural Historian, ECL, Generalist		Pre-Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	The Caltrans Architectural Historian, Generalist, and ECL will ensure the SOIS Action Plan as well as the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> are included in the Environmental Commitments Record (ECR).
CUL-03	Inclusion of SOIS Action Plan and <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> are included in final PS&E	Design Engineer, Architectural Historian, ECL, Generalist		Pre-Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	The Caltrans Design Manager and Design Engineer will ensure the necessary and relevant sections and pages from the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> are included in the final plans. This should, at a minimum, include the Standard Plans and Data Sheets for San Gabriel River Channels within the project area (SGR-A-2, SGR-1-3, and SGR-C-1).

CULTURAL RESOURCES (continued)

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
CUL-04	Invitation of Architectural Historian and Environmental Construction Liaison (ECL) to Pre-Construction Meeting	Resident Engineer, Architectural Historian, ECL, Generalist, Contractor		Pre-Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	<p>The Caltrans Architectural Historian and the ECL will provide information related to the preservation of the LACFCD to the other responsible parties at the pre-construction meeting.</p> <p>This discussion will include describing the LACFCD and how it will be protected during construction by using the SOIS Action Plan and the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i>.</p> <p>Training can be provided to the contractor and their staff should it be deemed necessary by the Caltrans Resident Engineer and the Caltrans Architectural Historian.</p>
CUL-05	Construction Monitoring by Architectural Historian	Architectural Historian, ECL, Resident Engineer		Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	<p>The Caltrans Architectural Historian and Caltrans ECL will periodically monitor the progress of the construction to ensure the work conforms to the SOIS Action Plan.</p> <p>Should any work not conform to the SOIS, the Caltrans Architectural Historian and ECL shall inform the Caltrans Resident Engineer. Construction will stop, and a plan will be developed to correct the work to comply with the SOIS Action Plan. Only then will work resume.</p>
CUL-06	Restrictions on Unforeseen Reconstruction of the Los Angeles County Flood Control Historic District (LACFCHD)	Resident Engineer, Contractor		Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	Should any portion of the LACFD need reconstruction during construction of this project, the contractor will reconstruct the subject portions in accordance to the guidance found in the <i>Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for the Los Angeles County Drainage Area, California</i> . This includes but is not limited to Appendix VI, Project Data Sheets (SGR-A-2, SGR-1-3, and SGR-C-1), and any subsequent or related applicable guidance.

CULTURAL RESOURCES (continued)

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
CUL-07	Confirmation of Tasks Associated with SOIS Action Plan	Architectural Historian, ECL		Post-Construction		IS/EA, Secretary of the Interior's Standards (SOIS) Action Plan for Protection of the Los Angeles County Flood Control Historic District (LACFCHD).	Ensure that all above listed tasks have been completed and logged on the SOIS Action Plan.

HYDROLOGY AND FLOODPLAIN

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
HYR-01	Preparation of Draft Final Hydraulic Report	Structures Hydraulics, Design Engineer		Pre-Construction		IS/EA	Caltrans Structures Hydraulics shall prepare a Draft Final Hydraulic Report (dFHR) during the next project phase to obtain additional survey data, further evaluate hydrology, and consider climate change impacts. The dFHR shall also include other environmental considerations including floodplain requirements and habitat restoration and evaluate hydraulic conditions to determine flow regime effects of objectionable backwater conditions and velocity changes caused by any floodplain encroachment. Lastly, the dFHR shall further assess adequate waterway area and any potential scour as a result of the proposed undertaking.

WATER QUALITY AND STORM WATER RUNOFF

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
WDP-01	Development of Water Diversion Plan with Caltrans Project Biologist, NOAA, CDFW, USFWS, and RWQCB	Design Engineer, Project Biologist		Pre-Construction		IS/EA, Section 404 of CWA	A Water Diversion Plan shall be developed and implemented in consultation with the National Oceanic and Atmospheric Administration (NOAA), California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and the Regional Water Quality Control Board (RWQCB) to divert water through the project site to reduce turbidity and prevent sediments from entering areas downstream of the project site.
SRP-01	Development of Stream Restoration Plan with Qualified Hydraulic Engineer	Design Engineer, Hydraulic Engineer, Project Biologist		Pre-Construction		IS/EA, Section 404 of CWA	A Stream Restoration Plan will be developed by Caltrans in conjunction with a qualified hydraulic engineer and the appropriate resource agencies to address the need to clean dewatered areas to reduce or eliminate potential contaminants from entering the water when temporary sheet-pile cofferdams are removed.
SWP-01	Development of Stormwater Pollution Prevention Plan (SWPPP)	Design Engineer, Hydraulic Engineer, Resident Engineer		Pre-Construction, Construction		IS/EA, Section 404 of CWA	A SWPPP shall be developed and implemented to improve construction site water quality practices and control the impacts of stormwater pollution through Best Management Practices.

GEOLOGY

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
GTS-01	Additional Geotechnical Investigations for Final Design of Bridge Substructure Retrofit	Geotechnical Engineer, Design Engineer		Pre-Construction		IS/EA	Further geotechnical investigations, laboratory testing, and engineering analyses are required to determine subsurface conditions that will inform the final design of the proposed substructure retrofit during the next design phase of the proposed project. These investigations will include localized studies of surface and groundwater, rocks/soils, and geologic hazards to include seismic hazards (strong ground shaking, liquefaction, fault rupture, tsunami, seismically-induced landslides, rock fall, settlement, and subsidence) as it applies to the proposed design and the project study area.
GSE-01	Minimization of Effects of Groundwater and Soil Excavation During Construction	Geotechnical Engineer, Design Engineer, Resident Engineer		Construction		IS/EA	It is recommended that remedial measures be taken to minimize the effect of groundwater and soil excavation during construction. Shoring and a dewatering system may be required during footing construction and the stability of these excavations is dependent on the total time the excavation is exposed, groundwater conditions, granular nature of the soil, and contractor operations.

HAZARDOUS WASTE/MATERIALS

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
HWS-01	Preparation of Parcel-Specific Initial Site Assessment (ISA) for Temporary Construction Easements (TCEs)	Design Engineer, Hazardous Waste Engineer		Pre-Construction		IS/EA	A Parcel-specific Initial Site Assessment (ISA), and potentially a Parcel Site Investigation (PSI) shall be prepared during the next project phase to determine the extent of potential contamination in proposed Temporary Construction Easements (TCEs), and to develop construction remediation estimates.

HAZARDOUS WASTE/MATERIALS (continued)

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
HWS-02	Preparation of Project Specific Site Investigation (SI) for ADL and Heavy Metals	Design Engineer, Hazardous Waste Engineer		Pre-Construction		IS/EA	A Project-specific Site Investigation (SI) shall be prepared during the next project phase to evaluate existing soil conditions and the extent and degree of contamination regarding ADL and heavy metals within the project study area.
HWS-03	Survey for Asbestos Containing Materials (ACM) and Lead Based Paint (LBP)	Design Engineer, Hazardous Waste Engineer		Pre-Construction		IS/EA	In the event that existing bridge railings will be disturbed, removed, and/or replaced during construction, an ACM and LBP survey shall be prepared in compliance with the South Coast Air Quality Management District Air Quality Management Plan (AQMP) and National Emissions Standards for Hazardous Air Pollutants as regulated by the California Air Resources Board (CARB).

NATURAL COMMUNITIES

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
HWS-02	Minimization of Impacts to Natural Communities	Design Engineer, Project Biologist		Pre-Construction		IS/EA	Permanent impacts to natural communities are limited to Tidal, Disturbed Non-Native Trees and Shrubs, and Developed Area land cover types. Bridge foundation retrofit and placement of rock rip-rap reinforcement shall be designed to minimize effects to the aforementioned land cover types and to be as small as necessary, impacting as little an area as possible yet still meet project needs.

WETLANDS AND OTHER WATERS

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
WET-01	Minimization of Impacts Through Strategic Placement of Cofferdams During Construction and Placement of Permanent Rock Rip-Rap Reinforcement	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	The placement of the cofferdams will affect the tidal waters within and upstream of the proposed project site. Diversion of fresh-water flow within the river will affect this jurisdictional area as well. These dams shall be placed as close to the downstream side of the bridge structures as possible to allow equipment to move safely, but no further to minimize the de-watered area. Placement of permanent rock rip-rap is designed to be as small as necessary, impacting as little an area as possible yet still meet project needs.
WET-02	Minimization of Impacts Through Strategic Placement of Temporary Construction Staging Areas	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	Temporary construction staging areas and access roads shall be strategically placed to avoid and/or minimize impacts to USACE, RWQCB, and CDFW jurisdictional waters to the extent feasible and shall be enhanced to pre-project conditions.
WET-03	Construction Work Window Restrictions	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	All work within San Gabriel River shall be conducted outside of the rainy season (November 1st- April 1st).

ANIMAL SPECIES

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
BIO-01	Biological Monitoring (California Least Tern)	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	A biological monitor shall be present prior to start of construction on each day to survey the river and continually monitor for the presence of foraging terns. Should one be observed foraging within the adjacent water, work shall be stopped until the tern naturally moves away.

ANIMAL SPECIES (continued)

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
CLT-01	Clean Work Space (California Least Tern)	Project Biologist, Resident Engineer		Construction		IS/EA	All oil leaks and fuel spills within the de-watered area shall be cleaned and contaminated soil removed immediately.
CLT-02	Turbidity Curtain	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	When bridge foundation retrofit work is complete and cofferdams are removed, a turbidity curtain shall be used downstream to allow sediment to settle prior to prevent contaminated water from mixing with tidal water. This measure is intended to reduce turbid water from traveling downstream and impacting hunting waters.
BIO-02	Biological Monitoring (Green Sea Turtle)	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	All work within San Gabriel River shall be conducted outside of the rainy season (November 1st- April 1st).

THREATENED AND ENDANGERED SPECIES

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
BIO-01	Biological Monitoring (California Least Tern)	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	A biological monitor shall be present prior to start of construction on each day to survey the river and continually monitor for the presence of foraging terns. Should one be observed foraging within the adjacent water, work shall be stopped until the tern naturally moves away.
BIO-02	Biological Monitoring (Green Sea Turtle)	Design Engineer, Project Biologist, Resident Engineer		Pre-Construction, Construction		IS/EA	All work within San Gabriel River shall be conducted outside of the rainy season (November 1st- April 1st).

INVASIVE SPECIES

Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP#/ NSSP#	Env Doc/ Permits/Specs/ Plans/ Estimates REFERENCE	Commitment Measure
INV-01	Equipment Cleaning	Resident Engineer, Contractor		Pre-Construction, Construction		IS/EA	During construction, the construction contractor shall inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another.
INV-02	Vegetation/Soil Disturbance	Resident Engineer, Contractor		Pre-Construction, Construction		IS/EA	During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible.
INV-03	Fugitive Dust Control	Resident Engineer, Contractor		Pre-Construction, Construction		IS/EA	During construction, the contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.
INV-04	Stockpile Dust Control	Resident Engineer, Contractor		Pre-Construction, Construction		IS/EA	During construction, the contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.
INV-05	Materials Sourcing	Resident Engineer, Contractor		Pre-Construction, Construction		IS/EA	During construction, soil/gravel/rock will be obtained from weed-free sources. Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.
INV-06	Revegetation Efforts	Design Engineer, Project Biologist, Contractor		Pre-Construction, Construction, Post-Construction		IS/EA	After construction, affected areas adjacent to native vegetation will be revegetated with plant species approved by the District Biologist that are native to the vicinity. All revegetated areas will avoid the use of species listed on Cal-IPC's California Invasive Plant Inventory.
INV-07	Post Project Monitoring	Project Biologist		Post-Construction		IS/EA	Erosion control and revegetation sites will be monitored for 2 to 3 years after construction to detect and control the introduction/invasion of nonnative species.
INV-08	Eradication Procedures	Resident Engineer, Project Biologist, Contractor		Construction		IS/EA	Eradication procedures (e.g., spraying and/or hand weeding) will be outlined should an infestation occur; the use of herbicides will be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by the District Biologist and Landscape Architect.

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APPENDIX D | USFWS/NMFS SPECIES LISTS

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Carlsbad Fish And Wildlife Office

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Carlsbad, CA 92008-7385

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In Reply Refer To:

March 09, 2020

Consultation Code: 08ECAR00-2020-SLI-0729

Event Code: 08ECAR00-2020-E-01739

Project Name: I-405 San Gabriel River Bridge Scour

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0729

Event Code: 08ECAR00-2020-E-01739

Project Name: I-405 San Gabriel River Bridge Scour

Project Type: TRANSPORTATION

Project Description: I-405 San Gabriel River Bridge Scour

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.78785046573503N118.0930334949054W>



Counties: Los Angeles, CA | Orange, CA

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Pacific Pocket Mouse <i>Perognathus longimembris pacificus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher <i>Poliioptila californica californica</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

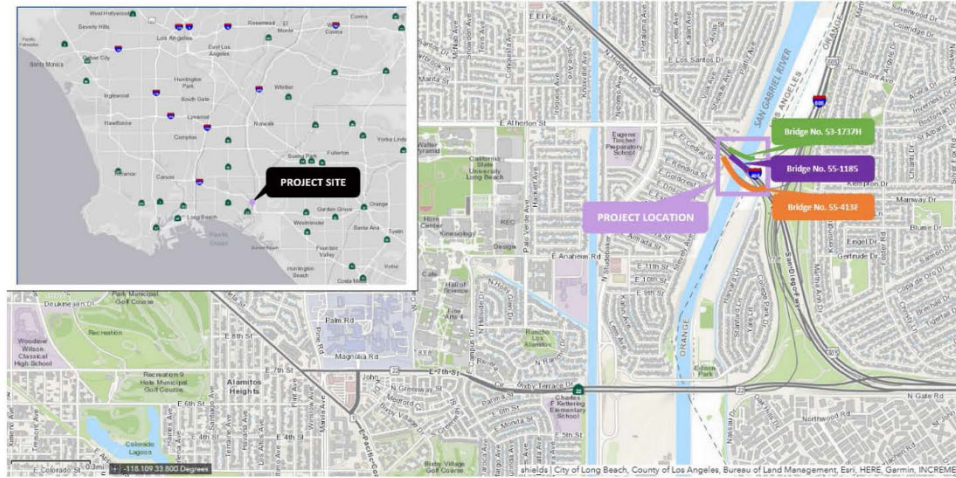
Flowering Plants

NAME	STATUS
Salt Marsh Bird's-beak <i>Cordylanthus maritimus ssp. maritimus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6447	Endangered
Ventura Marsh Milk-vetch <i>Astragalus pycnostachyus var. lanosissimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1160	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

NMFS Species List – EA 32100
Interstate 405 at San Gabriel River Bridge Scour Mitigation Project



Quad Name **Los Alamitos**

Quad Number **33118-G1**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) - **X**

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -
 CCC Steelhead Critical Habitat -
 SCCC Steelhead Critical Habitat -
 SC Steelhead Critical Habitat -
 CCV Steelhead Critical Habitat -
 Eulachon Critical Habitat -
 sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
 Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
 Olive Ridley Sea Turtle (T/E) -
 Leatherback Sea Turtle (E) -
 North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
 Fin Whale (E) -
 Humpback Whale (E) -
 Southern Resident Killer Whale (E) -
 North Pacific Right Whale (E) -
 Sei Whale (E) -
 Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
 Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
 Chinook Salmon EFH -
 Groundfish EFH - X
 Coastal Pelagics EFH - X
 Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -

MMPA Pinnipeds - 

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APPENDIX E | CDFW CNDDDB REPORT

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Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 02226	EO Index: 25697
Key Quad: Los Alamitos (3311871)	Element Code: ABNNM08103
Occurrence Number: 15	Occurrence Last Updated: 1998-11-23

Scientific Name: <i>Sterna antillarum browni</i>	Common Name: California least tern
Listing Status:	Rare Plant Rank:
Federal: Endangered	
State: Endangered	
CNDDDB Element Ranks:	Other Lists: CDFW_FP-Fully Protected NABCI_RWL-Red Watch List
Global: G4T2T3Q	
State: S2	

General Habitat: NESTS ALONG THE COAST FROM SAN FRANCISCO BAY SOUTH TO NORTHERN BAJA CALIFORNIA.	Micro Habitat: COLONIAL BREEDER ON BARE OR SPARSELY VEGETATED, FLAT SUBSTRATES: SAND BEACHES, ALKALI FLATS, LAND FILLS, OR PAVED AREAS.
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Last Date Observed: 1980-XX-XX	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1981-XX-XX	Occurrence Rank: None
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Extirpated	

Location:
EAST OF PACIFIC COAST HWY BETWEEN N BANK OF THE SAN GABRIEL RIVER & "THE MARKETPLACE". FILL AREA.

Detailed Location:

Ecological:
HABITAT IS LANDFILL OF HARD CLAY COVERED WITH SEVERAL INCHES OF FINE DUST.

Threats:

General:
SITE WAS USED CONTINUOUSLY BETWEEN 1971 AND 1980 BY 35-65 PAIRS WITH 0-70 YOUNG FLEDGED. SITE WAS LOST IN 1981 TO EXPANSION OF "THE MARKET PLACE."

PLSS: T05S, R12W, Sec. 11, NW (S)	Accuracy: 1/10 mile	Area (acres): 0
UTM: Zone-11 N3735447 E397579	Latitude/Longitude: 33.75416 / -118.10587	Elevation (feet): 10

County Summary: Los Angeles	Quad Summary: Los Alamitos (3311871)
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Sources:

ATW77R0001	ATWOOD, J.L. ET AL. - CALIFORNIA LEAST TERN CENSUS & NESTING SURVEY, 1977, CALIFORNIA DEPARTMENT OF FISH & GAME, 1977. 1977-XX-XX
KEL89U0001	KELLY, P. - CONVERSATION ABOUT LEAST TERN NESTING SITES, EO #053. 1989-XX-XX
MAS79R0002	MASSEY, B.W. & J.L. ATWOOD - APPLICATION OF ECOLOGICAL INFORMATION TO HABITAT MANAGEMENT FOR THE CALIFORNIA LEAST TERN PROGRAM REPORT NO. 1 PREPARED FOR USFWS, LAGUNA NIGEL. 1979-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 02216 Key Quad: Los Alamitos (3311871) Occurrence Number: 66	EO Index: 25655 Element Code: ABNNM08103 Occurrence Last Updated: 1998-11-23						
Scientific Name: <i>Sterna antillarum browni</i>							
Common Name: California least tern							
Listing Status: <table style="width: 100%;"> <tr> <td style="width: 33%;">Federal: Endangered</td> <td style="width: 33%;">Rare Plant Rank:</td> <td style="width: 33%;"></td> </tr> <tr> <td>State: Endangered</td> <td>Other Lists:</td> <td>CDFW_FP-Fully Protected NABCI_RWL-Red Watch List</td> </tr> </table>		Federal: Endangered	Rare Plant Rank:		State: Endangered	Other Lists:	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List
Federal: Endangered	Rare Plant Rank:						
State: Endangered	Other Lists:	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List					
CNDDDB Element Ranks: <table style="width: 100%;"> <tr> <td style="width: 33%;">Global: G4T2T3Q</td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> <tr> <td>State: S2</td> <td></td> <td></td> </tr> </table>		Global: G4T2T3Q			State: S2		
Global: G4T2T3Q							
State: S2							
General Habitat: NESTS ALONG THE COAST FROM SAN FRANCISCO BAY SOUTH TO NORTHERN BAJA CALIFORNIA.							
Micro Habitat: COLONIAL BREEDER ON BARE OR SPARSELY VEGETATED, FLAT SUBSTRATES: SAND BEACHES, ALKALI FLATS, LAND FILLS, OR PAVED AREAS.							
Last Date Observed: 1986-XX-XX							
Last Survey Date: 1988-XX-XX							
Owner/Manager: PVT							
Presence: Extirpated							
Location: COSTA DEL SOL. CONSTRUCTION SITE EAST SIDE & ADJACENT TO MARINE STADIUM IN LONG BEACH.							
Detailed Location:							
Ecological:							
Threats: 1988, HEAVY CONSTRUCTION UNDERWAY; SITE MAY NO LONGER BE A VIABLE NESTING AREA.							
General: 1982: 23 PR NESTED ON RECTANGULAR, BULKHEADED, GRAVEL-COVERED BAY. 1983: 25 PR, 14 FLEDGED; 1984, 5 PR, 7 FLEDGED; 1985: 33 PR, 3 FLEDGED (HEAVY PREDATION BY KESTREL); 1986: 4 PR, 0 FLEDGED. AREA NOT USED IN 1987 OR 1988.							
PLSS: T05S, R12W, Sec. 10 (S)	Accuracy: 1/10 mile						
UTM: Zone-11 N3736170 E396430	Latitude/Longitude: 33.76057 / -118.11836						
Area (acres): 0	Elevation (feet):						
County Summary:							
Quad Summary:							
Los Angeles	Los Alamitos (3311871)						
Sources:							
COL87R0001 COLLINS, C.T. - END OF SEASON REPORT, CALIFORNIA LEAST TERN FIELD STUDY, 1987 FIELD SEASON. (DRAFT) 1987-XX-XX							
JUR88U0001 JUREK, R. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - TELEPHONE CONVERSATION REGARDING COSTA DEL SOL LEAST TERN NESTING SITE. 1988-XX-XX							
MAS82R0001 MASSEY, B.W. & J.L. ATWOOD - APPLICATION OF ECOLOGICAL INFORMATION TO HABITAT MANAGEMENT FOR THE CALIFORNIA LEAST TERN PROGRAM REPORT NO. 4 PREPARED FOR USFWS, LAGUNA NIGEL. 1982-XX-XX							
MAS83R0001 MASSEY, B.W. & J.L. ATWOOD - APPLICATION OF ECOLOGICAL INFORMATION TO HABITAT MANAGEMENT FOR THE CALIFORNIA LEAST TERN PROGRAM REPORT NO. 5 PREPARED FOR USFWS, LAGUNA NIGEL. 1983-XX-XX							
MAS84R0001 MASSEY, B.W. & J.L. ATWOOD - APPLICATION OF ECOLOGICAL INFORMATION TO HABITAT MANAGEMENT FOR THE CALIFORNIA LEAST TERN PROGRAM REPORT NO. 6 PREPARED FOR USFWS, LAGUNA NIGEL. 1984-XX-XX							
MAS85R0001 MASSEY, B.W. & J.L. ATWOOD - ANALYSIS OF BANDED CALIFORNIA LEAST TERNS NESTING ON NORTH BEACH, CAMP PENDLETON, P.O. #MOO-85-M-7213, US MARINE CORPS. 1985-08-25							
MAS88R0001 MASSEY, B.W. - CALIFORNIA LEAST TERN FIELD STUDY, 1988 BREEDING SEASON. 1988-XX-XX							
MAS89A0001 MASSEY, B. & J. FANCHER - "RENESTING BY CALIFORNIA LEAST TERNS." JOURNAL OF FIELD ORNITHOLOGY. 1989-XX-XX							



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: B0256 Key Quad: Seal Beach (3311861) Occurrence Number: 88	EO Index: 112116 Element Code: ABNNM08103 Occurrence Last Updated: 2018-08-06						
<hr/>							
Scientific Name: <i>Sterna antillarum browni</i> Listing Status: <table style="width: 100%;"><tr><td style="width: 33%;">Federal: Endangered</td><td style="width: 33%;">State: Endangered</td><td style="width: 33%;"></td></tr><tr><td>CNDDDB Element Ranks: Global: G4T2T3Q</td><td>State: S2</td><td></td></tr></table>	Federal: Endangered	State: Endangered		CNDDDB Element Ranks: Global: G4T2T3Q	State: S2		Common Name: California least tern Rare Plant Rank: Other Lists: CDFW_FP-Fully Protected NABCI_RWL-Red Watch List
Federal: Endangered	State: Endangered						
CNDDDB Element Ranks: Global: G4T2T3Q	State: S2						
<hr/>							
General Habitat: NESTS ALONG THE COAST FROM SAN FRANCISCO BAY SOUTH TO NORTHERN BAJA CALIFORNIA.	Micro Habitat: COLONIAL BREEDER ON BARE OR SPARSELY VEGETATED, FLAT SUBSTRATES: SAND BEACHES, ALKALI FLATS, LAND FILLS, OR PAVED AREAS.						
<hr/>							
Last Date Observed: 1904-06-16 Last Survey Date: 1904-06-16 Owner/Manager: UNKNOWN Presence: Extirpated Location: VICINITY OF SEAL BEACH (ANAHEIM LANDING). Detailed Location: A HISTORIC OCCURRENCE BASED ON MUSEUM SPECIMENS FROM LOCALITIES "SEAL BEACH," "ANAHEIM LANDING," OR SIMILAR. Ecological: NO RECORDS OF NESTING IN THIS VICINITY SINCE THE 1904 COLLECTION. PRESUMABLY THIS SITE IS NO LONGER SUITABLE FOR NESTING. HOWEVER, THE NEARBY MITIGATION SITE IN UPPER ANAHEIM BAY (OCC #59) CURRENTLY SUPPORTS NESTING TERNS. Threats: General: COLLECTED IN 1887, 1888, 1890 & 1904.	Occurrence Type: Natural/Native occurrence Occurrence Rank: None Trend: Unknown						
<hr/>							
PLSS: T05S, R12W, Sec. 14 (S) UTM: Zone-11 N3733410 E398081	Accuracy: 1 mile Latitude/Longitude: 33.73584 / -118.10022 Area (acres): 1,987 Elevation (feet): 9						
<hr/>							
County Summary: Los Angeles, Orange	Quad Summary: Seal Beach (3311861), Los Alamitos (3311871)						
<hr/>							
Sources:							
JAY04S0003 JAY, A. - WFFVZ #40182, 40183, 40184, 40184, 40181, 40185, 40186, COLLECTED FROM SEAL BEACH (ANAHEIM LANDING). 1904-06-16							
SCH87S0014 SCHNEIDER, J. - CM #E1124 COLLECTED FROM ANAHEIM LANDING 1887-06-10							
SCH88S0010 SCHNEIDER, J. - UWBW #34737 COLLECTED FROM ANAHEIM LANDING 1888-05-23							
SCH90S0006 SCHNEIDER, J. - UWBW #34738 COLLECTED FROM ANAHEIM LANDING 1890-05-25							



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	02224	EO Index:	24653
Key Quad:	Los Alamitos (3311871)	Element Code:	ABPBX99015
Occurrence Number:	8	Occurrence Last Updated:	2018-08-08

Scientific Name:	<i>Passerculus sandwichensis beldingi</i>	Common Name:	Belding's savannah sparrow
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDDB Element Ranks:	Global: G5T3 State: S3	Other Lists:	

General Habitat:	Micro Habitat:
INHABITS COASTAL SALT MARSHES, FROM SANTA BARBARA SOUTH THROUGH SAN DIEGO COUNTY.	NESTS IN SALICORNIA ON AND ABOUT MARGINS OF TIDAL FLATS.

Last Date Observed:	2008-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2008-XX-XX	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Increasing
Presence:	Presumed Extant		

Location:
LOS CERRITOS MARSH, SOUTH OF CERRITOS CHANNEL & WEST OF STUDEBAKER ROAD, LONG BEACH.

Detailed Location:
BELDINGS CLUSTERED IN THE HIGHER ELEVATION AREA IN THE CENTER OF THE TIDALLY INFLUENCED AREA.

Ecological:
REMNANT OF ONCE EXTENSIVE ALAMITOS BAY MARSHES. TIDAL INFLUENCE IN 25-30 ACRES. RESTORATION OF ~70 ACRES IS PLANNED (1991) IN CONJUNCTION WITH PROPOSED HOUSING DEVELOPMENT. RESTORATION & MANAGEMENT RESULTED IN HIGH COUNT OF BIRDS IN 2001.

Threats:
TRASH DUMPING & PET USE COMMON. RED FOX OBSERVED IN 1991. OIL RECOVERY OPERATIONS ADJACENT TO SITE.

General:
NOT SURVEYED IN 1973. 5 PAIRS ESTIMATED IN 1977. 2 PAIRS ESTIMATED IN 1986. 9 PAIRS ESTIMATED IN 1991. 4 PAIRS EST IN 1996. 19 PRS EST IN 2001. PRESENT DURING 2006-2008 PEDESTRIAN DISTURBANCE TOLERANCE STUDIES.

PLSS:	T05S, R12W, Sec. 11 (S)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-11 N3736627 E397384	Latitude/Longitude:	33.76478 / -118.10811	Elevation (feet):	5

County Summary:	Quad Summary:
Los Angeles	Los Alamitos (3311871)

Sources:

FER08A0001	FERNANDEZ-JURICIC, E. ET AL. - CALIFORNIA'S ENDANGERED BELDING'S SAVANNAH SPARROW (PASSERULUS SANDWICHENSIS BELDINGI): TOLERANCE OF PEDESTRIAN DISTURBANCE 2008-11-XX
FWS87R0003	U.S. FISH & WILDLIFE SERVICE - A SURVEY OF BELDING'S SAVANNAH SPARROWS IN CALIFORNIA, 1986. 1987-01-XX
JAM91R0001	JAMES, R. & D. STADTLANDER (U.S. FISH AND WILDLIFE SERVICE) - A SURVEY OF THE BELDING'S SAVANNAH SPARROW (PASSERULUS SANDWICHENSIS BELDINGI) IN CALIFORNIA, 1991. 1991-11-XX
MAS77R0001	MASSEY, B.W. - A CENSUS OF THE BREEDING POPULATION OF THE BELDING'S SAVANNAH SPARROW IN CALIFORNIA. DEPT. OF FISH & GAME. 1977-XX-XX
ZEM02R0001	ZEMBAL, R. & S. HOFFMAN - A SURVEY OF THE BELDING'S SAVANNAH SPARROW (PASSERULUS SANDWICHENSIS BELDINGI) IN CALIFORNIA, 2001. 2002-06-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 79625 Key Quad: Los Alamitos (3311871) Occurrence Number: 2	EO Index: 80615 Element Code: ARAAA02010 Occurrence Last Updated: 2016-11-29
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Scientific Name: <i>Chelonia mydas</i> Listing Status: Federal: Threatened State: None CNDDDB Element Ranks: Global: G3 State: S1	Common Name: green turtle Rare Plant Rank: Other Lists: IUCN_EN-Endangered
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General Habitat: MARINE.	Micro Habitat: COMPLETELY HERBIVOROUS; NEEDS ADQUATE SUPPLY OF SEAGRASSES AND ALGAE.
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Last Date Observed: 2014-XX-XX Last Survey Date: 2014-XX-XX Owner/Manager: UNKNOWN, USFWS Presence: Presumed Extant Location: SAN GABRIEL RIVER FROM I-405 SOUTH TO PACIFIC OCEAN, INCLUDING ALAMITOS & ANAHEIM BAYS, & 7TH ST BASIN (SEAL BEACH NWR). Detailed Location: SEEN FROM SAN GABRIEL RIVER BIKE TRAIL NEAR WARM WATER DISCHARGING CULVERTS OF LA DEPT OF WATER & POWER'S HAYNES GENERATING STATION ALONG ROCK RIPRAP LINED RIVER CHANNEL. TELEMTRY DETECTIONS FROM AND BETWEEN RIVER AND REFUGE, AND BAYS. Ecological: LA TIMES DESCRIBED HABITAT AS "...ONE OF S. CALIFORNIA'S MOST ECOLOGICALLY DEGRADED RIVERS" (2008). TELEMTRY RESEARCH FROM 2012-2014 SHOWED THAT JUV GSTS SEEKED THERMAL REFUGIA IN THE RIVER & 7TH STREET BASIN AT SEAL BEACH NWR (+ FORAGING) Threats: TRAPPING IN WHIRLPOOLS OF WATER INTAKE CHANNEL, HOOKING FROM ANGLERS. POSSIBLY BOAT COLLISIONS, URBAN RUNOFF, & GARBAGE. General: INCIDENTAL DETECTIONS FROM THE 1980S. SEVERAL INCIDENTAL DETECTIONS IN 2008, 2009, 2010, AND 2014, & NOW REGULAR VOLUNTEER TURTLE WATCH PROGRAM BY AQUARIUM OF THE PACIFIC. CREAR TRACKED MOVEMENTS OF 22 (96% JUV) BETWEEN 2012 - 2014.	Occurrence Type: Natural/Native occurrence Occurrence Rank: Fair Trend: Unknown
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PLSS: T05S, R12W, Sec. 1 (S) UTM: Zone-11 N3736910 E398353	Accuracy: nonspecific area Latitude/Longitude: 33.76742 / -118.09769	Area (acres): 1,480 Elevation (feet): 0
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County Summary: Los Angeles, Orange	Quad Summary: Seal Beach (3311861), Los Alamitos (3311871)
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Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Sources:

BAT08F0007	BATTEY, T. (AECOM) - FIELD SURVEY FORM FOR CHELONIA MYDAS 2008-12-31
CRE15U0001	CREAR, D. (CALIFORNIA STATE UNIVERSITY, LONG BEACH) - THE EFFECTS OF TEMPERATURE AND HABITAT ON THE MOVEMENT PATTERNS OF GREEN SEA TURTLES (CHELONIA MYDAS) WITHIN AN URBANIZED RIVER AND LOCAL ESTUARY. MS THESIS, CSU LONG BEACH. 90PP. 2015-08-XX
CRE16A0001	CREAR, D. ET AL. - SEASONAL SHIFTS IN THE MOVEMENT AND DISTRIBUTION OF GREEN SEA TURTLES, CHELONIA MYDAS, IN RESPONSE TO ANTHROPOGENICALLY ALTERED WATER TEMPERATURES. MAR ECOL PROG SER 548: 219-232. 2016-04-21
DAE10D0001	DAEHNKE, J. - SPREADSHEET AND PICTURES OF RELEVANT TURTLE SIGHTINGS 2010-04-24
FLA09U0001	FLAXINGTON, W. - SCIENTIFIC COLLECTING REPORT OF SPECIMENS CAPTURED OR SALVAGED [SC-007985] 2009-06-05
HER16D0001	HERP, INC. - HERPETOLOGICAL EDUCATION AND RESEARCH PROJECT (HERP) DATABASE. FORMERLY A PROJECT OF THE NORTH AMERICAN FIELD HERPING ASSOCIATION 2016-10-11
LAW14U0001	LAWSON, D. ET AL. (NOAA-NATIONAL MARINE FISHERIES SERVICE) - RECORD OF CONVERSATION BETWEEN CALIFORNIA ENERGY COMMISSION AND DAN LAWSON, FISHERIES BIOLOGIST, NOAA REGARDING GREEN SEA TURTLES IN SAN GABRIEL RIVER 2014-06-17
NAF10D0001	NAFIS, G. - VIDEO OF CHELONIA MYDAS IN SAN GABRIEL RIVER, LOS ANGELES COUNTY (CALIFORNIAHERPS.COM). 2010-04-24
RYO08U0001	RYONO, H. - IMPROBABLE RESIDENTS: THE SEA TURTLES OF THE SAN GABRIEL RIVER. AQUARIUM OF THE PACIFIC BLOG. 2008-08-03
RYO08U0002	RYONO, H. - ENDANGERED SEA TURTLE RELEASED BACK INTO THE WLD. AQUARIUM OF THE PACIFIC BLOG. 2008-11-06
RYO08U0003	RYONO, H. - FROM SEA TO CEMENT: A WALK ALONG THE SAN GABRIEL RIVER. AQUARIUM OF THE PACIFIC BLOG. 2008-09-25
RYO08U0004	RYONO, H. - NOTES FROM THE RIVER. AQUARIUM OF THE PACIFIC BLOG. 2008-09-11
RYO09U0001	RYONO, H. - SAN GABRIEL RIVER SEA TURTLE OBSERVATIONS UPDATE. AQUARIUM OF THE PACIFIC BLOG. 2009-10-22
SAH08U0001	SAHAGUN, L. (LOS ANGELES TIMES) - TURTLES AT NEW FRONTIER. LOS ANGELES TIMES, 2008. 2008-08-30



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	02267	EO Index:	655
Key Quad:	Los Alamitos (3311871)	Element Code:	ARAAD02030
Occurrence Number:	829	Occurrence Last Updated:	1996-03-04

Scientific Name:	<i>Emys marmorata</i>	Common Name:	western pond turtle
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive
CNDDDB Element Ranks:	Global: G3G4		
	State: S3		

General Habitat:	Micro Habitat:
A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.	NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	XXXX-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1987-XX-XX	Occurrence Rank:	None
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Possibly Extirpated		

Location:
VICINITY OF THE CONFLUENCE OF THE SAN GABRIEL RIVER AND COYOTE CREEK, EAST OF CITY LIMITS OF LONG BEACH.

Detailed Location:
ONE OBSERVATION FROM THE SAN GABRIEL RIVER AND ONE FROM LOWER COYOTE CREEK NEAR ALAMITOS.

Ecological:

Threats:

General:
MUSEUM COLLECTIONS: MVZ #6711-20 AND LACM #105309. DATES UNKNOWN. BRATTSTROM (1990) CONSIDERS THIS POPULATION EXTIRPATED.

PLSS:	T04S, R12W, Sec. 25 (S)	Accuracy:	nonspecific area	Area (acres):	117
UTM:	Zone-11 N3741006 E399717	Latitude/Longitude:	33.80449 / -118.08342	Elevation (feet):	20

County Summary:	Quad Summary:
Los Angeles, Orange	Los Alamitos (3311871)

Sources:

BRA90U0002	BRATTSTROM, B.H. - LETTER TO DARLENE MCGRUFF (DFG-CNDDDB) REGARDING CLEMMYS MARMORATA PALLIDA 1990-02-27
BRO80U0001	BRODE, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - GEOGRAPHIC REFERENCE CARD CATALOG OF SPECIMENS AND FIELD NOTE RECORDS COMPILED BY JOHN BRODE (DFG) 1980-XX-XX
HOL88U0002	HOLLAND, D.C. (UNIVERSITY OF SOUTHWESTERN LOUISIANA) - MUSEUM RECORDS COLLECTED AND COMPILED BY HOLLAND. 1988-03-23



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	02248	EO Index:	27988
Key Quad:	Los Alamitos (3311871)	Element Code:	ARACF12100
Occurrence Number:	253	Occurrence Last Updated:	2012-02-23

Scientific Name:	<i>Phrynosoma blainvillii</i>	Common Name:	coast horned lizard
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern
CNDDDB Element Ranks:	Global: G3G4		
	State: S3S4		

General Habitat:	Micro Habitat:
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, AND ABUNDANT SUPPLY OF ANTS AND OTHER INSECTS.

Last Date Observed:	1961-05-11	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1961-05-11	Occurrence Rank:	None
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Extirpated		

Location:
E SIDE OF SAN GABRIEL RIVER, ABOUT 1 MI E OF CALIFORNIA STATE UNIVERSITY, LONG BEACH.

Detailed Location:
MAPPED TO BEST ESTIMATE OF "SAN GABRIEL RIV BY 7TH ST, ORANGE COUNTY" AND "SAN GABRIEL RIV, 1 MI E LBSC CAMPUS."

Ecological:

Threats:
HABITAT ELIMINATED WHEN SAN GABRIEL RIVER WAS "CONCRETE-LINED."

General:
1 COLLECTED BY U. AOKI ON 21 APR 1951 (LACM #101374). 1 IN SAND COLLECTED BY M.G. O'CONNELL ON 11 MAY 1961 (LACM #101375).

PLSS:	T05S, R12W, Sec. 01 (S)	Accuracy:	3/5 mile	Area (acres):	0
UTM:	Zone-11 N3737838 E398909	Latitude/Longitude:	33.77585 / -118.09178	Elevation (feet):	10

County Summary:	Quad Summary:
Los Angeles, Orange	Los Alamitos (3311871)

Sources:

AOK51S0001	AOKI, U. - LACM #101374 1951-04-21
OCO61S0001	O'CONNELL, M. - LACM #101375 1961-05-11



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	02237	EO Index:	27967
Key Quad:	Seal Beach (3311861)	Element Code:	ARACF12100
Occurrence Number:	278	Occurrence Last Updated:	2012-02-23

Scientific Name:	<i>Phrynosoma blainvillii</i>	Common Name:	coast horned lizard
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern
CNDDDB Element Ranks:	Global: G3G4		
	State: S3S4		

General Habitat:	Micro Habitat:
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, AND ABUNDANT SUPPLY OF ANTS AND OTHER INSECTS.

Last Date Observed:	1952-05-28	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1952-05-28	Occurrence Rank:	None
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Possibly Extirpated		

Location:
SEAL BEACH AND WEST SEAL BEACH.

Detailed Location:
MAPPED TO PROVIDED LOCALITIES OF "SEAL BEACH" AND "W SEAL BEACH."

Ecological:

Threats:
HEAVILY DEVELOPED AREA.

General:
1 COLLECTED BY J.D. MILNE ON 23 FEB 1952 (LACM #101371). 1 COLLECTED BY R. SHILLING ON 23 FEB 1952 (LACM #101372). 1 COLLECTED BY A. DAVENPORT ON 28 MAY 1952 (LACM #101373).

PLSS:	T05S, R12W, Sec. 14 (S)	Accuracy:	3/5 mile	Area (acres):	0
UTM:	Zone-11 N3734344 E397722	Latitude/Longitude:	33.74423 / -118.10420	Elevation (feet):	10

County Summary:	Quad Summary:
Los Angeles, Orange, Pacific Ocean	Seal Beach (3311861), Los Alamitos (3311871)

Sources:

DAV52S0001	DAVENPORT, A. - LACM #101373 1952-05-28
MIL52S0001	MILNE, J. - LACM #101371 1952-02-23
SHI52S0001	SHILLING, R. - LACM #101372 1952-02-23



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 02224 Key Quad: Los Alamitos (3311871) Occurrence Number: 15	EO Index: 26125 Element Code: CTT52120CA Occurrence Last Updated: 1998-07-20								
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Scientific Name: <i>Southern Coastal Salt Marsh</i> Listing Status: <table style="width: 100%;"><tr><td style="width: 50%;">Federal: None</td><td style="width: 50%;">Rare Plant Rank:</td></tr><tr><td>State: None</td><td>Other Lists:</td></tr></table> CNDDDB Element Ranks: <table style="width: 100%;"><tr><td style="width: 50%;">Global: G2</td><td style="width: 50%;"></td></tr><tr><td>State: S2.1</td><td></td></tr></table>	Federal: None	Rare Plant Rank:	State: None	Other Lists:	Global: G2		State: S2.1		Common Name: Southern Coastal Salt Marsh Micro Habitat: <input type="checkbox"/>
Federal: None	Rare Plant Rank:								
State: None	Other Lists:								
Global: G2									
State: S2.1									
<hr/>									
General Habitat: <input type="checkbox"/>	Occurrence Type: Natural/Native occurrence Occurrence Rank: Unknown Trend: Unknown								
<hr/>									
Last Date Observed: 1976-XX-XX Last Survey Date: 1976-XX-XX Owner/Manager: UNKNOWN Presence: Presumed Extant Location: NEAR ALAMITOS BAY IN CITY OF LONG BEACH. Detailed Location: SMALL MARSH (REMNANT OF 2400 HISTORIC MARSH AC, SPETH, 1976). Ecological: Threats: SLATED FOR DEVEL ACC TO HENDRICKSON, 1976; NEAR POWERPLANT, OIL FIELD, URBANIZATION. General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.									
PLSS: T05S, R12W, Sec. 11, SW (S) UTM: Zone-11 N3736627 E397384	Accuracy: 1/5 mile Latitude/Longitude: 33.76478 / -118.10811 Area (acres): 0 Elevation (feet):								
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County Summary: Los Angeles	Quad Summary: Los Alamitos (3311871)								
<hr/>									
Sources:									
HEN76A0001 HENDRICKSON, J. - ECOLOGY OF SOUTHERN CALIFORNIA COASTAL SALT MARSHES IN: PLANT COMMUNITIES OF SOUTHERN CALIFORNIA, LATTING, EDITOR. CNPS SPECIAL PUBLICATION #2, PP. 49-64. 1976-XX-XX									
SEE82U0001 SEED, J. - PERSONAL COMMUNICATION VIA CONVERSATION WITH C.L. ROYE IN OFFICE ABOUT LOCATION OF MARSH IN ALAMITOS BAY. 1982-12-20									
SPE76R0001 SPETH, J. ET AL. - THE NATURAL RESOURCES OF ANAHEIM BAY HUNTINGTON HARBOR. CALIFORNIA DEPT. OF FISH & GAME COASTAL WETLANDS SERIES REPORT #18. 1976-XX-XX									



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	60935	EO Index:	87727
Key Quad:	Long Beach (3311872)	Element Code:	IICOL02080
Occurrence Number:	8	Occurrence Last Updated:	2012-09-19

Scientific Name:	<i>Cicindela gabbii</i>	Common Name:	western tidal-flat tiger beetle
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	
CNDDDB Element Ranks:	Global: G2G4		
	State: S1		

General Habitat:	Micro Habitat:
INHABITS ESTUARIES AND MUDFLATS ALONG THE COAST OF SOUTHERN CALIFORNIA.	GENERALLY FOUND ON DARK-COLORED MUD IN THE LOWER ZONE; OCCASIONALLY FOUND ON DRY SALINE FLATS OF ESTUARIES.

Last Date Observed:	XXXX-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	XXXX-XX-XX	Occurrence Rank:	None
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Possibly Extirpated		
Location:			
LONG BEACH.			
Detailed Location:			
LOCALITY STATED AS "NAPLES" AND "LONG BEACH." MAPPED GENERALLY TO LONG BEACH. EXACT LOCATION UNKNOWN.			
Ecological:			
AIR PHOTOS SUGGEST NAPLES IS FULLY DEVELOPED AND SUITABLE HABITAT SUCH AS ESTUARIES AND MUDFLATS DO NOT EXIST ALONG LONG BEACH (2012).			
Threats:			
General:			
NAGANO (1980) APPEARS TO CITE FALL (1901) FOR "FORMER LOCALITIES." IN 1901, FALL WROTE "...GABBII...LONG BEACH, AUGUST (DAGGETT)."			

PLSS:	T05S, R12W, Sec. 08 (S)	Accuracy:	nonspecific area	Area (acres):	328
UTM:	Zone-11 N3736360 E392475	Latitude/Longitude:	33.76188 / -118.16108	Elevation (feet):	20

County Summary:	Quad Summary:
Los Angeles, Pacific Ocean	Seal Beach (3311861), Los Alamitos (3311871), Long Beach (3311872)

Sources:

FAL01A0001	FALL, H. (CALIFORNIA ACADEMY OF SCIENCES) - LIST OF THE COLEOPTERA OF SOUTHERN CALIFORNIA WITH NOTES ON HABITS AND DISTRIBUTION AND DESCRIPTIONS OF NEW SPECIES. OCCASIONAL PAPERS OF THE CALIF. ACADEMY OF SCIENCES. 306PP. 1901-11-11
NAG80A0001	NAGANO, C.D. (LOS ANGELES COUNTY MUSEUM) - POPULATION STATUS OF THE TIGER BEETLES OF THE GENUS CICINDELA (COLEOPTERA: CICINDELIDAE) INHABITING THE MARINE SHORELINE OF SOUTHERN CALIFORNIA. ATALA 1980(82) 8(2):33-42. 1980-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 02201	EO Index: 22672	
Key Quad: Los Alamitos (3311871)	Element Code: IICOL02101	
Occurrence Number: 15	Occurrence Last Updated: 2012-09-14	

Scientific Name: <i>Cicindela hirticollis gravida</i>	Common Name: sandy beach tiger beetle
Listing Status: Federal: None State: None	Rare Plant Rank:
CNDDDB Element Ranks: Global: G5T2 State: S2	Other Lists:

General Habitat: INHABITS AREAS ADJACENT TO NON-BRACKISH WATER ALONG THE COAST OF CALIFORNIA FROM SAN FRANCISCO BAY TO NORTHERN MEXICO.	Micro Habitat: CLEAN, DRY, LIGHT-COLORED SAND IN THE UPPER ZONE. SUBTERRANEAN LARVAE PREFER MOIST SAND NOT AFFECTED BY WAVE ACTION.
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Last Date Observed: XXXX-XX-XX Last Survey Date: 1979-XX-XX Owner/Manager: UNKNOWN Presence: Extirpated Location: NAPLES. Detailed Location: Ecological: INHABITED CLEAN, DRY, LIGHT-COLORED SAND IN THE UPPER ZONE. Threats: SENSITIVE TO CONTACT WITH HUMANS. General: HISTORICAL LOCATION.	Occurrence Type: Natural/Native occurrence Occurrence Rank: None Trend: Unknown
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PLSS: T05S, R12W, Sec. 10 (S)	Accuracy: nonspecific area	Area (acres): 212
UTM: Zone-11 N3735643 E396045	Latitude/Longitude: 33.75578 / -118.12246	Elevation (feet): 10

County Summary: Los Angeles	Quad Summary: Los Alamitos (3311871), Long Beach (3311872)
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Sources:
NAG80A0001 NAGANO, C.D. (LOS ANGELES COUNTY MUSEUM) - POPULATION STATUS OF THE TIGER BEETLES OF THE GENUS CICINDELA (COLEOPTERA: CICINDELIDAE) INHABITING THE MARINE SHORELINE OF SOUTHERN CALIFORNIA. ATALA 1980(82) 8(2):33-42. 1980-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 60073	EO Index: 60109
Key Quad: Los Alamitos (3311871)	Element Code: IICOL02101
Occurrence Number: 33	Occurrence Last Updated: 2005-02-17

Scientific Name: <i>Cicindela hirticollis gravida</i>	Common Name: sandy beach tiger beetle
Listing Status:	Rare Plant Rank:
Federal: None	
State: None	Other Lists:
CNDDDB Element Ranks:	
Global: G5T2	
State: S2	

General Habitat: INHABITS AREAS ADJACENT TO NON-BRACKISH WATER ALONG THE COAST OF CALIFORNIA FROM SAN FRANCISCO BAY TO NORTHERN MEXICO.	Micro Habitat: CLEAN, DRY, LIGHT-COLORED SAND IN THE UPPER ZONE. SUBTERRANEAN LARVAE PREFER MOIST SAND NOT AFFECTED BY WAVE ACTION.
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Last Date Observed: 1945-08-15	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1945-08-15	Occurrence Rank: None
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Extirpated	
Location: ALAMITOS BAY.	
Detailed Location:	
Ecological:	
Threats:	
General:	
HISTORICAL RECORD.	

PLSS: T05S, R12W, Sec. 10 (S)	Accuracy: 3/5 mile	Area (acres): 0
UTM: Zone-11 N3735480 E396101	Latitude/Longitude: 33.75431 / -118.12182	Elevation (feet): 10

County Summary: Los Angeles, Pacific Ocean	Quad Summary: Seal Beach (3311861), Los Alamitos (3311871), Long Beach (3311872)
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Sources:	
KN103R0001	KNISLEY, C.B. (RANDOLPH-MACON COLLEGE) - A STATUS REVIEW OF THE SACRAMENTO VALLEY TIGER BEETLE, CICINDELA HIRTICOLLIS ABRUPTA. REPORT TO THE USFWS SACRAMENTO FIELD OFFICE. 2003-02-05
KN104R0002	KNISLEY, C.B. (RANDOLPH-MACON COLLEGE) - BIOLOGY AND CONSERVATION OF THE SACRAMENTO VALLEY TIGER BEETLE, CICINDELA HIRTICOLLIS ABRUPTA. REPORT TO USFWS SACRAMENTO FIELD OFFICE. 2004-11-10



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 60935	EO Index: 60971
Key Quad: Long Beach (3311872)	Element Code: IICOL02113
Occurrence Number: 5	Occurrence Last Updated: 2012-09-14

Scientific Name: <i>Cicindela latesignata latesignata</i>	Common Name: western beach tiger beetle
Listing Status:	Rare Plant Rank:
Federal: None	
State: None	Other Lists:
CNDDDB Element Ranks:	
Global: G2G4T1T2	
State: S1	

General Habitat: MUDFLATS AND BEACHES IN COASTAL SOUTHERN CALIFORNIA.	Micro Habitat: <input type="checkbox"/>
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Last Date Observed: XXXX-XX-XX	Occurrence Type: Natural/Native occurrence
Last Survey Date: XXXX-XX-XX	Occurrence Rank: None
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Extirpated	
Location: LONG BEACH.	
Detailed Location: MAPPED ALONG BEACH AS THIS BEETLE PREFERS SANDY AREAS.	
Ecological:	
Threats:	
General: HISTORICAL LOCALITY.	

PLSS: T05S, R12W, Sec. 08 (S)	Accuracy: nonspecific area	Area (acres): 328
UTM: Zone-11 N3736360 E392475	Latitude/Longitude: 33.76188 / -118.16108	Elevation (feet): 20

County Summary: Los Angeles, Pacific Ocean	Quad Summary: Seal Beach (3311861), Los Alamitos (3311871), Long Beach (3311872)
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Sources:

NAG80A0001 NAGANO, C.D. (LOS ANGELES COUNTY MUSEUM) - POPULATION STATUS OF THE TIGER BEETLES OF THE GENUS CICINDELA (COLEOPTERA: CICINDELIDAE) INHABITING THE MARINE SHORELINE OF SOUTHERN CALIFORNIA. ATALA 1980(82) 8(2):33-42. 1980-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 02237 Key Quad: Seal Beach (3311861) Occurrence Number: 10	EO Index: 60950 Element Code: IICOL02113 Occurrence Last Updated: 2012-09-14
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Scientific Name: <i>Cicindela latesignata latesignata</i> Listing Status: Federal: None State: None CNDDDB Element Ranks: Global: G2G4T1T2 State: S1	Common Name: western beach tiger beetle Rare Plant Rank: Other Lists:
<hr/>	
General Habitat: MUDFLATS AND BEACHES IN COASTAL SOUTHERN CALIFORNIA.	Micro Habitat: <input type="checkbox"/>
<hr/>	
Last Date Observed: XXXX-XX-XX Last Survey Date: XXXX-XX-XX Owner/Manager: UNKNOWN Presence: Extirpated Location: SEAL BEACH. Detailed Location: Ecological: Threats: General: HISTORICAL LOCALITY.	Occurrence Type: Natural/Native occurrence Occurrence Rank: None Trend: Unknown
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PLSS: T05S, R12W, Sec. 14 (S) UTM: Zone-11 N3734344 E397722	Accuracy: 3/5 mile Latitude/Longitude: 33.74423 / -118.10420
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County Summary: Los Angeles, Orange, Pacific Ocean	Quad Summary: Seal Beach (3311861), Los Alamitos (3311871)
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Sources: NAG80A0001 NAGANO, C.D. (LOS ANGELES COUNTY MUSEUM) - POPULATION STATUS OF THE TIGER BEETLES OF THE GENUS CICINDELA (COLEOPTERA: CICINDELIDAE) INHABITING THE MARINE SHORELINE OF SOUTHERN CALIFORNIA. ATALA 1980(82) 8(2):33-42. 1980-XX-XX	



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 02237	EO Index: 22659	
Key Quad: Seal Beach (3311861)	Element Code: IICOL02121	
Occurrence Number: 5	Occurrence Last Updated: 2012-09-14	

Scientific Name: <i>Cicindela senilis frosti</i>	Common Name: senile tiger beetle
Listing Status: Federal: None State: None	Rare Plant Rank:
CNDDDB Element Ranks: Global: G2G3T1T3 State: S1	Other Lists:

General Habitat: INHABITS MARINE SHORELINE, FROM CENTRAL CALIFORNIA COAST SOUTH TO SALT MARSHES OF SAN DIEGO. ALSO FOUND AT LAKE ELSINORE	Micro Habitat: INHABITS DARK-COLORED MUD IN THE LOWER ZONE AND DRIED SALT PANS IN THE UPPER ZONE.
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Last Date Observed: XXXX-XX-XX Last Survey Date: 1979-XX-XX Owner/Manager: UNKNOWN Presence: Extirpated Location: SEAL BEACH. Detailed Location: THE BEETLE WAS RESTRICTED TO SPECIFIC, HARD-TO-LOCATE AREAS WITHIN THE MARINE SALT MARSH. Ecological: THE BEETLE'S FLIGHT PERIOD IS BIMODAL - IN EARLY SPRING AND LATE FALL. Threats: General: UNCOMMONLY COLLECTED BECAUSE POPULATIONS NATURALLY EXIST AT VERY LOW LEVELS. HISTORICAL LOCATION.	Occurrence Type: Natural/Native occurrence Occurrence Rank: None Trend: Unknown
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PLSS: T05S, R12W, Sec. 14 (S)	Accuracy: 3/5 mile	Area (acres): 0
UTM: Zone-11 N3734344 E397722	Latitude/Longitude: 33.74423 / -118.10420	Elevation (feet): 10

County Summary: Los Angeles, Orange, Pacific Ocean	Quad Summary: Seal Beach (3311861), Los Alamitos (3311871)
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Sources:
NAG80A0001 NAGANO, C.D. (LOS ANGELES COUNTY MUSEUM) - POPULATION STATUS OF THE TIGER BEETLES OF THE GENUS CICINDELA (COLEOPTERA: CICINDELIDAE) INHABITING THE MARINE SHORELINE OF SOUTHERN CALIFORNIA. ATALA 1980(82) 8(2):33-42. 1980-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	39586	EO Index:	34588
Key Quad:	Los Alamitos (3311871)	Element Code:	PDAST4R0P4
Occurrence Number:	44	Occurrence Last Updated:	2015-08-10
Scientific Name:	<i>Centromadia parryi ssp. australis</i>		
Common Name:	southern tarplant		
Listing Status:	Federal: None	Rare Plant Rank:	1B.1
	State: None	Other Lists:	SB_RSABG-Rancho Santa Ana Botanic Garden
CNDDDB Element Ranks:	Global: G3T2		
	State: S2		
General Habitat:	MARSHES AND SWAMPS (MARGINS), VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.		
Micro Habitat:	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.		
Last Date Observed:	1997-10-10	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1997-10-10	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		
Location:	LOYNES DRIVE AND STUDEBAKER AVENUE, WEST OF BRIDGE THAT CROSSES LOS CERRITOS CHANNEL.		
Detailed Location:	MAPPED BY CNDDDB AS BEST GUESS NON-SPECIFICALLY AROUND THE OPEN FIELD JUST WEST OF THE BRIDGE CROSSING THE LOS CERRITOS CHANNEL, SOUTH OF LOYNES DRIVE.		
Ecological:			
Threats:			
General:	UNKNOWN NUMBER OF PLANTS SEEN IN 1997.		
PLSS:	T05S, R12W, Sec. 02, SW (S)	Accuracy:	nonspecific area
UTM:	Zone-11 N3736892 E397443	Latitude/Longitude:	33.76717 / -118.10750
Area (acres):			10
Elevation (feet):			15
County Summary:	Quad Summary:		
Los Angeles	Los Alamitos (3311871)		
Sources:			
GAR97R0001	GARDINER, G. - THESIS: HEMIZONIA PARRYI SSP. AUSTRALIS 1997-12-17		



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	39587	EO Index:	34589
Key Quad:	Los Alamitos (3311871)	Element Code:	PDAST4R0P4
Occurrence Number:	45	Occurrence Last Updated:	2015-08-05

Scientific Name:	<i>Centromadia parryi ssp. australis</i>	Common Name:	southern tarplant
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.1
CNDDDB Element Ranks:	Global: G3T2 State: S2	Other Lists:	SB_RSABG-Rancho Santa Ana Botanic Garden

General Habitat:	MARSHES AND SWAMPS (MARGINS), VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	Micro Habitat:	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.
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Last Date Observed:	2014-10-01	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2014-10-01	Occurrence Rank:	Fair
Owner/Manager:	PVT, CITY OF SAN DIEGO	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ALONG BOTH SIDES OF THE SAN GABRIEL RIVER CHANNEL AND THE LOS ANGELES/ORANGE COUNTY LINE, JUST EAST OF HIGHWAY 1.

Detailed Location:
"LOS CERRITOS WETLANDS." SMALL PORTION OF AT THE SOUTH END OF OCCURRENCE IS WITHIN GUM GROVE PARK. MAPPED BY CNDDDB AS 18 POLYGONS; MOSTLY ACCORDING TO A MAP FROM A 2012 TIDAL INFLUENCE REPORT.

Ecological:
DISTURBED ALKALI MEADOW AND RUDERAL GRASSLAND WITH BASSIA HYSSOPIFOLIA, DISTICHLIS SPICATA, POLYPOGON MONSPELIENSIS, ASTER SUBULATUS, HELIOTROPUM CURASSAVICUM, CRESSA TRUXILLENSIS, PICRIS ECHIOIDES, SALICORNIA VIRGINICA, FRANKENIA SALINA.

Threats:
OIL FIELD IS PROPOSED FOR DEACTIVATION, CLEANUP, AND DEVELOPMENT.

General:
POPULATION NUMBERS ARE FOR PORTIONS OF OCCURRENCE: ~4000 PLANTS IN 1996, 100 PLANTS IN 1997, 100 PLANTS IN 2004, "RELATIVELY ABUNDANT" IN 2011, 200-300 PLANTS IN 2014. INCLUDES FORMER OCCURRENCES #46 & 51.

PLSS:	T05S, R12W, Sec. 11 (S)	Accuracy:	specific area	Area (acres):	87
UTM:	Zone-11 N3735495 E398032	Latitude/Longitude:	33.75463 / -118.10098	Elevation (feet):	10

County Summary:	Quad Summary:
Los Angeles, Orange	Seal Beach (3311861), Los Alamitos (3311871)

Sources:	
BRA96F0002	BRAMLET, D. - FIELD SURVEY FORM FOR CENTROMADIA PARRYI SSP. AUSTRALIS 1996-10-22
BRA96S0002	BRAMLET, D. - BRAMLET #2480 UCR #99407, RSA #597722, SD #215391 1996-10-22
GAR97R0001	GARDINER, G. - THESIS: HEMIZONIA PARRYI SSP. AUSTRALIS 1997-12-17
GAR97S0001	GARDINER, G. - GARDINER SN MACF (CITED IN GAR97R0001) 1997-10-10
GAR97S0002	GARDINER, G. - GARDINER SN MACF (CITED IN GAR97R0001) 1997-10-10
GRE97S0001	GREENE, J. - GREENE SN RSA #678919, UCR #204270, SD #232186, SBBG #132503 1997-09-12
HAM14U0001	HAMILTON, R. - OBSERVATION RECORD FOR CENTROMADIA PARRYI SSP. AUSTRALIS, CALFLORA ID: PO242 2014-10-01
JON96S0001	JONES, C. & W. LOEFFLER - JONES #13 UCR #98777, RSA #596143 1996-09-16
SPR04F0002	SPRANZA, J. - FIELD SURVEY FORM FOR CENTROMADIA PARRYI SSP. AUSTRALIS 2004-07-13
TID12R0001	TIDAL INFLUENCE - LOS CERRITOS WETLANDS HABITAT ASSESSMENT REPORT: HABITAT TYPES & SPECIAL STATUS SPECIES 2012-08-31



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	78716	EO Index:	79627
Key Quad:	Los Alamitos (3311871)	Element Code:	PDASTE80C0
Occurrence Number:	75	Occurrence Last Updated:	2010-04-28

Scientific Name:	<i>Symphyotrichum defoliatum</i>	Common Name:	San Bernardino aster
Listing Status:	Federal: None	Rare Plant Rank:	1B.2
	State: None	Other Lists:	BLM_S-Sensitive USFS_S-Sensitive
CNDDDB Element Ranks:	Global: G2		
	State: S2		

General Habitat:	Micro Habitat:
MEADOWS AND SEEPS, CISMONTANE WOODLAND, COASTAL SCRUB, LOWER MONTANE CONIFEROUS FOREST, MARSHES AND SWAMPS, VALLEY AND FOOTHILL GRASSLAND.	VERNALLY MESIC GRASSLAND OR NEAR DITCHES, STREAMS AND SPRINGS; DISTURBED AREAS. 3-2045 M.

Last Date Observed:	1932-09-16	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1932-09-16	Occurrence Rank:	None
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Extirpated		

Location:
BRYANT RANCH; W SIDE OF SAN GABRIEL RIVER FLOOD CONTROL, LONG BEACH.

Detailed Location:
COLLECTION LABEL SAYS "1645 FT EAST AND 200 FT NORTH OF CENTER 8, SECTION 2". MAPPED BY CNDDDB AS BEST GUESS ~1645 FT E AND 200 FT NORTH OF THE CENTER OF SECTION 2.

Ecological:

Threats:
SITE PRESUMED EXTIRPATED; MUCH DEVELOPMENT HAS OCCURRED IN AREA SINCE 1932.

General:
SITE BASED ON A 1932 WOLF COLLECTION. ANOTHER 1932 COLLECTION FROM "SAN GABRIEL RIVER, LONG BEACH" IS ALSO ATTRIBUTED HERE.

PLSS:	T05S, R12W, Sec. 02, E (S)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-11 N3737450 E398061	Latitude/Longitude:	33.77226 / -118.10090	Elevation (feet):	10

County Summary:	Quad Summary:
Los Angeles	Los Alamitos (3311871)

Sources:

ANO32S0002	ANONYMOUS - ANONYMOUS SN RSA (AS CITED IN SAN03U0002) 1932-XX-XX
SAN03U0002	SANDERS, A. - EMAIL TO DAVE TIBOR REGARDING SYMPHYOTRICHUM DEFOLIATUM 2003-02-12
WOL32S0048	WOLF, C. - WOLF #4123 RSA #5872, CAS-BOT-BC #97621, DS #282922 1932-09-16



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	A2542	EO Index:	104129
Key Quad:	Los Alamitos (3311871)	Element Code:	PDCH0P0D0
Occurrence Number:	39	Occurrence Last Updated:	2016-11-09

Scientific Name:	<i>Suaeda esteroa</i>	Common Name:	estuary seablite
Listing Status:	Federal: None	Rare Plant Rank:	1B.2
	State: None	Other Lists:	
CNDDDB Element Ranks:	Global: G3		
	State: S2		

General Habitat:	Micro Habitat:
MARSHES AND SWAMPS.	COASTAL SALT MARSHES IN CLAY, SILT, AND SAND SUBSTRATES. 0-80 M.

Last Date Observed:	2014-02-06	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2014-02-06	Occurrence Rank:	Good
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
LOS CERRITOS WETLANDS COMPLEX AND ALONG LOS CERRITOS CHANNEL, LONG BEACH.

Detailed Location:
MAPPED AS 4 POLYGONS ACCORDING TO 2009 CRAIN COORDINATES, A MAP IN A 2012 TIDAL INFLUENCE REPORT, AND 2014 BIELFELT COORDINATES.

Ecological:
COASTAL SALT MARSH AND ALONG CHANNEL EMBANKMENTS. ASSOCIATED WITH SALICORNIA PACIFICA, ARTHROCNEMUM SUBTERMINALE, ATRIPLEX WATSONII, BATIS MARITIMA, FRANKENIA SALINA, CARPOBROTUS EDULIS, ATRIPLEX SEMIBACCATA, ETC.

Threats:
NON-NATIVE PLANTS, MARINA MAINTENANCE.

General:
SOUTHERN POLYGON: EXTENSIVE POPULATION NOTED SOMETIME BETWEEN 2006 AND 2011, 100+ PLANTS OBSERVED IN 2014. 1 PLANT OBSERVED IN NW POLYGON IN 2009. 20+ PLANTS OBSERVED IN TWO EASTERN POLYGONS IN 2014.

PLSS:	T05S, R12W, Sec. 11, N (S)	Accuracy:	specific area	Area (acres):	55
UTM:	Zone-11 N3736583 E397375	Latitude/Longitude:	33.76438 / -118.10821	Elevation (feet):	0

County Summary:	Quad Summary:
Los Angeles	Los Alamitos (3311871)

Sources:

BIE14F0022	BIELFELT, B. (SAPPPOS ENVIRONMENTAL, INC.) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2014-02-06
BIE14F0023	BIELFELT, B. (SAPPPOS ENVIRONMENTAL, INC.) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2014-02-06
BIE14F0024	BIELFELT, B. (SAPPPOS ENVIRONMENTAL, INC.) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2014-02-06
BIE14F0025	BIELFELT, B. (SAPPPOS ENVIRONMENTAL, INC.) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2014-02-06
BIE14F0026	BIELFELT, B. (SAPPPOS ENVIRONMENTAL, INC.) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2014-02-06
BIE14F0027	BIELFELT, B. (SAPPPOS ENVIRONMENTAL, INC.) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2014-02-06
CRA09F0004	CRAIN, J. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR SUAEDA ESTEROA 2009-07-28
TID12R0001	TIDAL INFLUENCE - LOS CERRITOS WETLANDS HABITAT ASSESSMENT REPORT: HABITAT TYPES & SPECIAL STATUS SPECIES 2012-08-31



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: B4592	EO Index: 117528	
Key Quad: Los Alamitos (3311871)	Element Code: PDFAB0F421	
Occurrence Number: 28	Occurrence Last Updated: 2019-12-19	

Scientific Name: <i>Astragalus hornii</i> var. <i>hornii</i>	Common Name: Horn's milk-vetch
Listing Status: Federal: None State: None	Rare Plant Rank: 1B.1
CNDDDB Element Ranks: Global: GUT1 State: S1	Other Lists: BLM_S-Sensitive

General Habitat: MEADOWS AND SEEPS, PLAYAS.	Micro Habitat: LAKE MARGINS, ALKALINE SITES. 75-350 M.
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Last Date Observed: 1896-07-XX	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1896-07-XX	Occurrence Rank: None
Owner/Manager: UNKNOWN	Trend: Unknown

Presence: Extirpated

Location:
ALAMITOS RANCH.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS AROUND THE AREA OF HISTORIC RANCHO LOS ALAMITOS AND LOS ALAMITOS. THE JEPSON MANUAL GIVES ELEVATION RANGE FOR THIS SPECIES AS 60-300 M BUT MAPPED AREA IS MUCH LOWER IN ELEVATION.

Ecological:
ALKALI FLAT.

Threats:
MUCH DEVELOPMENT IN THIS AREA SINCE COLLECTION WAS MADE; SITE PRESUMED EXTIRPATED.

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN 1896 MCCLATCHIE COLLECTION.

PLSS: T04S, R11W, Sec. 31 (S)	Accuracy: 5 miles	Area (acres): 49,683
UTM: Zone-11 N3738609 E401211	Latitude/Longitude: 33.78301 / -118.06702	Elevation (feet):

County Summary: Los Angeles, Orange	Quad Summary: Newport Beach (3311768), Anaheim (3311778), Seal Beach (3311861), Los Alamitos (3311871), Long Beach (3311872)
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Sources:
MCC96S0008 MCCLATCHIE, A. - MCCLATCHIE SN DS #113825, CAS-BOT-BC #186874 1896-07-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 35236	EO Index: 21131	
Key Quad: Los Alamitos (3311871)	Element Code: PDMAL110J0	
Occurrence Number: 3	Occurrence Last Updated: 2017-02-07	

Scientific Name: <i>Sidalcea neomexicana</i>	Common Name: salt spring checkerbloom
Listing Status: Federal: None State: None	Rare Plant Rank: 2B.2
CNDDDB Element Ranks: Global: G4 State: S2	Other Lists: USFS_S-Sensitive

General Habitat: PLAYAS, CHAPARRAL, COASTAL SCRUB, LOWER MONTANE CONIFEROUS FOREST, MOJAVEAN DESERT SCRUB.	Micro Habitat: ALKALI SPRINGS AND MARSHES. 3-2380 M.
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Last Date Observed: 1934-04-11	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1934-04-11	Occurrence Rank: None
Owner/Manager: UNKNOWN	Trend: Unknown

Presence: Possibly Extirpated

Location:
BRYANT RANCH, EAST OF LONG BEACH, SOUTH OF 7TH STREET ON W SIDE OF SAN GABRIEL FLOOD CONTROL.

Detailed Location:
1400 FEET SOUTH OF 7TH STREET ON THE WEST SIDE OF THE FLOOD CONTROL CHANNEL. MAPPED BY CNDDDB AS A BEST GUESS.

Ecological:
UPPER SONORAN GRASSLAND WITH FINE, ALKALINE SOILS.

Threats:
AREA HAS BEEN DEVELOPED; POSSIBLY EXTIRPATED.

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1934 WOLF COLLECTION. NEEDS FIELDWORK.

PLSS: T05S, R12W, Sec. 02, SE (S)	Accuracy: 1/5 mile	Area (acres): 0
UTM: Zone-11 N3737254 E398202	Latitude/Longitude: 33.77051 / -118.09936	Elevation (feet): 10

County Summary: Los Angeles	Quad Summary: Los Alamitos (3311871)
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Sources:

ROS93U0001	ROSS, T. - LETTER TO CNPS REGARDING CALOCHORTUS WEEDII INTERMEDIUS, EUPHORBIA MISERA, LOMATIUM INSULARE, NAMA STENOCARPUM, SIDALCEA NEOMEXICANA, DUDLEYA VIRENS, ERIASTRUM VIRGATUM, ET AL. 1993-10-17
WOL34S0008	WOLF, C. - WOLF #5650 RSA #12275, GH #420865 1934-04-11

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