Interstate 680 Alameda Creek Bridge Scour Repair Project

ALAMEDA COUNTY, CALIFORNIA
04 – ALA – 680 (PM R10.15-R10.16)
EA 04-0P910/ Project ID 0418000025

Initial Study with Mitigated Negative Declaration

Prepared by the
State of California, Department of Transportation

Caltrans

January 2023

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General Information about this Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration (IS/MND) which examines the potential environmental impacts of the proposed Interstate 680 Alameda Creek Bridge Scour Repair Project (project) located near the town of Sunol in Alameda County. This document explains why the project is being proposed, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and the proposed avoidance and minimization measures, and/or mitigation measures.

The IS/MND was circulated to the public for 30 days beginning on October 5, 2022 and ending on November 4, 2022. Five comments were received during the public comment period and responses to these comments are included in Appendix H. Throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. This document may be downloaded at the following website:

https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs

Alternate formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, or digital audio. To obtain a copy in one of these alternate formats, please call or write to the California Department of Transportation, District 4, Attn: Juliane Smith, Environmental Scientist, P.O. Box 23660, Oakland, CA 94623-0660; (510) 506-0372 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

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Initial Study with Mitigated Negative Declaration

04-ALA-680	10.15-10.16	04-0P910
Dist. – Co. – Rte.	PM	E.A.

Project title:	Interstate 680 Alameda Creek Bridge Scour Repair Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Juliane Smith, Environmental Scientist (510) 926-0426
Project location:	Alameda County, California
General plan description:	Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements)	• California Transportation Commission • U.S. Fish and Wildlife Service • National Marine Fisheries Service • U.S. Army Corps of Engineers • California Department of Fish and Wildlife • San Francisco Regional Water Quality Control Board

The document, maps and project information are available for review and download at the Caltrans environmental document website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Maxwell Lammert

Maxwell Lammert
Acting Chief, Office of Environmental Analysis
District 4, California Department of Transportation

01/26/2023
Date

To obtain a copy of Braille, in large print, on computer disk, or an audiocassette, please contact: Department of Transportation, Attn: Juliane Smith, Environmental Scientist, Office of Environmental Analysis, 111 Grand Avenue, MS 8-B, Oakland, CA 94612: (510) 926-0426 (Voice) or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

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Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes scour repair at the Alameda Creek Bridge (Br. No. 33-0047) on Interstate (I-) 680 in Alameda County, near the town of Sunol, from Post Mile (PM) 10.15 to 10.16. The project also proposes to reconstruct the median barrier on the approach slab, rehabilitate the bridge deck with polyester concrete in both directions, and reconstruct bridge joint seals.

Determination

Caltrans has prepared an Initial Study (IS) for this project and, following public review, has determined 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, agricultural lands and forest resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire.

The proposed project would have a less than significant effect on hydrology/water quality, greenhouse gas emissions, and transportation and traffic, and a less than significant effect with mitigation incorporated, to biological resources including, the California tiger salamander (*Ambysoma californiense;* CTS), California red-legged frog (*Rana draytonii;* CRLF), and central California coast steelhead (*Oncorhynchus mykiss*; CCC steelhead).

With the implementation of the following mitigation measures, the project would have a less than significant impact on biological resources:

> **MM BIO-1:** Caltrans will compensate for impacts to CRLF habitat through on-site restoration of temporarily affected areas at a 1:1 ratio.
>
> **MM BIO-2:** To partially mitigate for the elimination of potential CRLF and other amphibian species breeding habitat within the filled scour hole, a low-elevation depression will be created in the new creek alignment between piers 8 and 9. The location and depth of the pool will be determined during the design phase. To fully mitigate, Caltrans will also purchase mitigation credits at a ratio of 3:1.
>
> **MM BIO-3:** Caltrans will compensate for impacts to CTS habitat through on-site restoration of temporarily affected areas at a 1:1 ratio. To meet the fully mitigated requirements of the CESA, Caltrans will purchase mitigation credits at a 1:1 ratio

for temporary impacts to CTS. Multi-species credits may be purchased at an agency-approved conservation bank.

_____ _____

Melanie Brent
Deputy District Director
Environmental Planning and Engineering
District 4, California Department of Transportation

Date of Approval

01/27/2023

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to address structural deficiencies in the Alameda Creek Bridge (Br. No. 33-0047) through scour repair, bridge deck rehabilitation, joint seals replacement, and approach slabs replacement. The project is located on Interstate (I-) 680 from post mile (PM) 10.15 to 10.16, in unincorporated Alameda County, near the town of Sunol. The project vicinity map is shown below in Figure 1.

Figure 1. Project Vicinity Map

1.2 Location and Background

I-680 extends from the I-280/United States Highway (US-) 101 interchange in the south to the I-80/State Route (SR-) 12 interchange in the north. I-680 is a major north-south transportation corridor connecting Contra Costa, Alameda, and Santa Clara Counties. It

serves as a major commute route, as well as an interstate route connecting the South and East Bay Areas with the rest of the Bay Area and beyond.

In the project area, I-680 contains three general-purpose lanes and an Express Lane in each direction. General-purpose lanes have no vehicle type or occupancy restrictions. The Express Lanes are open to high-occupancy vehicles (HOV) only (carpools with 2 or more persons; motorcycles, transit vehicles, and eligible clean air vehicles) during operating hours (Monday through Friday, 5 a.m. – 8 p.m.). Outside of operating hours, the Express Lanes are open to all traffic. The posted speed limit is 65 miles per hour (mph).

1.3 Purpose and Need

1.3.1 Purpose

The purpose of this project is to maintain connectivity and provide an improved highway facility for the traveling public along I-680 by addressing structural deficiencies in the Alameda Creek Bridge (Br. No. 33-0047) and scour in the creek.

1.3.2 Need

The *Bridge Needs/Bridge Inspection Report* dated May 7, 2020 recorded the need for deck rehabilitation, joint seals replacement, and scour repair. Due to the gravel mining operation adjacent to the project site, concentrated flows have created scouring in the creek channel. Under the scour conditions, the steel piles of the bridge would have inadequate bearing capacity.

1.4 Project Description

The project proposes to address the scour and structural deficiencies of the Alameda Creek Bridge on I-680 by installing Rock Slope Protection (RSP) in the scoured area at pier 8, realigning the creek in the center of piers 8 and 9, rehabilitating the bridge deck, and replacing joint seals. Scour occurs when concentrated flows of water erode the creek bed adjacent to a bridge foundation. Deep scour holes expose the bridge foundation, potentially decreasing the structure's ability to support weight as it was designed. The scour hole this project addresses is located at pier 8 of the bridge and is approximately 40 feet wide, up to 20 feet deep, and 27 feet long.

Temporary Creek Diversion/Dewatering

A temporary creek diversion is proposed to dewater the work area within the creek bed during one annual construction window (generally June 1 to October 15), creating a dry work environment for construction access and the placement of RSP thereby preventing increased turbidity in Alameda Creek. The temporary creek diversion involves the installation of two cofferdams, one approximately 50 feet upstream of the work area to prevent inflow, and one approximately 50 feet downstream.

The means and methods of the installation may include installation of temporary berms (plastic-wrapped gravel bags, aquadams, Super Sacks, or cofferdams) to create a dewatered work area. A cutoff wall may be necessary to reduce the flow of water through the substrate under the upstream dams.

The cutoff wall would consist of a two-foot-deep by two-foot-wide trench spanning the width of the creek with impenetrable material placed below grade to reduce seepage under the dam into the work area.

The temporary dams would be constructed approximately 30 feet wide at the base and approximately six feet tall. Prior to placement of the dam, sharp objects, boulders, and cobbles would be removed from the dam area to create a smooth surface which would prevent channels through which water could pass beneath the dam. Alameda Creek would flow by gravity around the active construction site in an appropriately-sized pipe. Following implementation of the creek diversion, any ponded water remaining in the work area would be pumped out to ensure a dry work environment.

The project's in-water work will encompass the area to be dewatered, as well as an additional 7 feet upstream and downstream of the proposed temporary dam for access to construct the dam. The approximate total area to be temporarily impacted by the project's in-water work is 0.14 acre.

All construction materials would be removed from the creek by the end of the construction season. The construction areas would be restored and, as appropriate, hydroseeded at the end of each construction season. Willow cuttings would be planted along the banks to encourage regrowth comparable to the existing conditions.

Scour Repair

The eroded area, around and between piers 8 and 9, is approximately 40 feet wide, up to 20 feet deep, and 27 feet long. The project would repair the scour at piers 8 and 9 to restore structural stability. After the creek channel is diverted, the scour area will be excavated by no more than 5.25 feet; excavated materials will be saved and protected for reuse. A gravel filter system would be installed before placing approximately 3 feet of granular filter material and backfilling with 2.25 feet of RSP. The Alameda Creek channel would be regraded and shaped to resemble upstream channel conditions. A slight centerline depression in the channel would allow for a low-flow channel to form.

Bridge Structure

The project would cold plane the bridge deck by removing 1.5-inch asphalt and repaving with 0.75-inch polymer concrete in both directions. The approach slabs at the north and south end of the bridge will be reconstructed. Construction would not extend beyond the limits of the existing paved roadway. To construct the approach slabs, the existing

approach slabs will be demolished and removed. As part of the roadway reconstruction, the existing median barrier would be replaced.

Creek Realignment

To encourage the longevity of the scour repair, Caltrans is proposing to realign Alameda Creek to the center of bridge piers 8 and 9. The creek bed between piers 8 and 9 will be excavated to a depth of approximately 5.25 feet. A one-to-two-foot layer of clean river cobble would be placed in the excavation to create a new low-flow channel. The new low-flow channel would be approximately 950 square feet and would be designed specifically to improve fish spawning habitat, including deeper pools where feasible. All work in the creek will be completed in one construction season.

Staging Area and Access Road

The staging area would be under the bridge deck, between Bent 5 and Bent 7. The bridge deck or mainline shoulder would not be used for storing equipment or materials for work in the creek. Preparation of the area would include clearing and grubbing. Gravel would then be placed on top of a filter fabric on the unpaved portions of the construction staging area. Heavy equipment, such as excavators or bobcats, could enter the staging area. Staging areas would be considered a temporary impact since they would be restored within one year. The staging area would be restored to existing conditions upon completion of the Project. Impacts due to staging would occur to grassland/ruderal land cover types.

A temporary access road has been proposed for project construction on established roads in the Lehigh Hanson Aggregates. The access route would begin on an existing dirt path and extend approximately 100 feet over grassland/ruderal habitat to the staging area. Clean gravel fill may be required to even out the ground in sections of the access road. Gravel and any additional fill would be removed from the staging areas prior to October 15. After project construction, appropriate erosion control measures would be implemented. No fill would be left in place outside of the creek work window. Heavy equipment, trucks, and other construction equipment would use the access road while working in the creek area.

Revegetation and Channel Restoration

Within the project area, tree and vegetation removal would be minimized to the extent feasible. Trees and vegetation outside of clearing and grubbing limits would be protected from the contractor's operations, equipment, and materials storage.

In areas of temporary construction impact, appropriate replacement native vegetation would be planted within Caltrans right-of-way (ROW). Where feasible, portions within the project area would be replanted with native vegetation and trees. Specifications

regarding vegetation and tree replacement will be provided during the design phase of the Project. The temporarily impacted creek channel profile would be restored to match existing and adjacent conditions prior to removal of the creek diversion. The draft vegetation restoration plan will be submitted to U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for review and approval prior to the start of construction.

Temporary Construction Easements

A Temporary Construction Easement (TCE) from the San Francisco Public Utilities Commission (SFPUC) may be needed to conduct the scour repair work under the bridge. A TCE from Lehigh Hanson Aggregates will also be needed to access the project site. Access to the project site is through the quarry from Athenour Way adjacent to I-680.

Construction Impacts

The estimated duration of construction is 369 working days. While work in Alameda Creek would occur over one season, the overall duration of construction would occur over two seasons. Work in the creek channel will take place during daylight hours and will be subject to seasonal restrictions. Some work on the bridge deck will be conducted during nighttime construction windows. The Traffic Management Plan (TMP) and details of the construction staging for the project will be developed and refined during the next phase of design. TMP development will be supported by detailed traffic studies to evaluate traffic operations. The need for lane closures during off-peak hours or at night, or short-term detour routes, will be identified, as required. The TMP will include press releases to notify and inform motorists, businesses, community groups, local entities, and emergency services of upcoming closures or detours. Various TMP elements such as portable Changeable Message Signs and Construction Zone Enhanced Enforcement Program may be utilized to minimize delay to the traveling public.

1.5 Project Features

As part of the project, Caltrans would implement standard conservation measures, avoidance and minimization measures (AMMs), and standard best management practices (BMPs) as outlined in the Caltrans' 2018 Standard Specifications and the Caltrans Construction Site Best Management Practices Manual. Measures include minimizing the area of impact, conducting preconstruction surveys for biological resources, and implementing water quality BMPs and other construction-site BMPs.

1.6 Permits and Approvals Needed

Table 1-1, below, provides a summary of the environmental permits, authorizations, or agreements required for project construction.

Table 1-1. Required Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service (USFWS)	Endangered Species Act Section 7 consultation for threatened and endangered species (terrestrial)	Caltrans would initiate Section 7 consultation with submittal of a biological assessment to USFWS after project approval. USFWS would issue either a letter of concurrence with the findings of effect in the biological assessment, or a biological opinion which may authorize take of federally listed species to Caltrans.
United States Army Corps of Engineers (USACE)	Section 404 Water Quality Certification under Clean Water Act (CWA)	Caltrans will submit a Section 404 application following project approval.
National Marine Fisheries Service (NMFS)	Endangered Species Act Section 7 consultation for threatened and endangered species (fish)	Caltrans would initiate consultation with submittal of a biological assessment to NMFS after project approval. NMFS would issue either a letter of concurrence with the findings of effect in the biological assessment, or a biological opinion authorizing take of federally listed species to Caltrans.
California Department of Fish and Wildlife (CDFW)	California Fish and Game Code 1602 Lake and Streambed Alteration Agreement and Incidental Take Permit (ITP) for California red-legged frog, California tiger salamander, and central California coast steelhead	Caltrans will submit 1602 Agreement and Incidental Take Permit applications following project approval.

San Francisco Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification under CWA	Caltrans will submit a Section 401 application following project approval.

Chapter 2 Affected Environment; Environmental Consequences; and AMMs and/or Mitigation Measures

The following discussions evaluate potential environmental impacts of the proposed Project as described in Chapter 1 as they relate to the California Environmental Quality Act (CEQA) checklist to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091).

2.1 Environmental Factors Potentially Affected

As part of the scoping and environmental analysis carried out for the proposed Project, the following environmental issues were considered, but no adverse impacts were identified. As a result, there is limited discussion in this document on the following resources: aesthetics, agriculture and forestry, air quality, cultural resources, energy, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire.

The environmental factors checked in Table 2-1 would be potentially affected by the proposed project. Further analyses of these environmental factors are included in the following sections.

Table 2-1. Environmental Factors Potentially Affected

	Aesthetics		Agriculture and Forestry		Air Quality
X	Biological Resources		Cultural Resources		Energy
	Geology/Soils	X	Greenhouse Gas Emissions		Hazards and Hazardous Materials
X	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
	Noise		Population and Housing		Public Services
	Recreation	X	Transportation/Traffic		Tribal Cultural Resources
	Utilities/Service Systems		Wildfire	X	Mandatory Findings of Significance

2.2 Determination

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect on this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGETIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, included revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: Maxwell Lammert **Date:** 01/26/2023

Printed Name: Maxwell Lammert

2.3 CEQA Environmental Checklist

This checklist (presented at the beginning of each resource section in the form of a table listing the pertinent questions applicable to the resource and a single column where the degree of impact is indicated) identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, technical studies performed in connection with the project 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 checklist are related to CEQA impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features (PFs), which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects, such as 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; a full list of the proposed project’s project features, AMMs, and mitigation measures (MMs) can be reviewed in Appendix B.

Section 2.1.1 through Section 2.1.21 of this chapter presents the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the Project. The level of significance determinations is defined as follows:

- No Impact: Indicates no physical environmental change from existing conditions.
- Less than Significant Impact: Indicates the potential for an environmental impact that is not significant with or without the implementation of AMMs.
- Less than Significant Impact with Mitigation Incorporated: Indicates the potential for a significant impact that would be mitigated with the implementation of a MM to a level of less than significant.
- Potentially Significant Impact: Indicates the potential for significant and unavoidable environmental impact.

2.1.1 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?	-	-	-	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	-	-	-	X
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 or other regulations governing scenic quality?	-	-	-	X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	-	-	-	X

CEQA Significance Determinations for Aesthetics

This section is summarized from the *Visual Impact Analysis* for the proposed project, which was completed in September 2021.

The portion of I-680 within the project limits is an Officially Designated State Scenic Highway. Land use within the project area is mostly semi-rural in character, being surrounded by mostly rolling hills with clusters of mature trees and shrubs and ruderal grass groundcover on each side of the freeway.

a) <u>No Impact</u>

No scenic vistas were identified within the project area. The project would not impact scenic vistas.

b) No Impact

All project work is expected to occur within Caltrans ROW or in TCEs. It is not anticipated that the project would adversely affect any designated scenic resource, such as a rock outcropping, tree grouping, or historic property, etc., as defined by CEQA statutes or guidelines, or by Caltrans' policy.

c) No Impact

The proposed project would not conflict with any applicable zoning or regulations governing scenic quality. Views of the roadway would remain similar to existing conditions and there are no residential views of the proposed project, as it is located between grassy rolling hills and lacks development within the project limits.

The primary visual concerns associated with the proposed project involve the preservation and maintenance of the current level of visual quality within the corridor of this Officially Designated State Scenic Highway. As trees and shrubs within the project area help to beautify and screen the freeway, they should be protected to the maximum extent possible in order to maintain the overall visual quality. Impacts to existing trees, large shrubs and associated root zones should be kept to a minimum to avoid harm. Mature trees and shrubs within the project area act as a screen for both highway users and neighbors, as well as improve aesthetics.

d) No Impact

The project will not install any new permanent lighting. Lighting for possible night work shall be directional and/or use shielding to reduce light spillage affecting motorists and highway neighbors. The proposed project will not result in any permanent new light or glare that would adversely affect day or nighttime views of the area.

Project Features:

Caltrans would incorporate the following PFs into the project to reduce potential impacts to visual resources:

> **PF AES-1:** Protect mature vegetation to the maximum extent feasible in order to preserve the scenic quality of the existing landscape.
>
> **PF AES-2:** Plan contractor staging and operations to protect and preserve naturalized annual grassland and sporadic shrubs to the maximum extent feasible.
>
> **PF AES-3:** After construction, treat areas cleared for contractor access and trenching operations with appropriate erosion control measures where required.
>
> **PF AES-4:** Provide replacement highway planting, if warranted, in all areas of highway planting removal where ROW allows. Where replacement planting is not

possible at the removal location, provide replacement in adjacent planting areas along the project corridor.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.2 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 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?	-	-	-	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	-	-	-	X
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))?	-	-	-	X
d) Result in the loss of forest land or conversion of forest land to non-forest use?	-	-	-	X
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?	-	-	-	X

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact

There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project area. All work is expected to occur within Caltrans ROW or within TCEs. The land adjacent to the project area is predominantly low density rural and classified as “Grazing Land” and “Other Land” by the Department of Conservation. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. There are no changes anticipated to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) No Impact

There are no parcels under a Williamson Act contract within the project area.

c, d) No Impact

There are no forest or timberlands within the project limits. No conflicts are anticipated with areas zoned as forest land or timberland

e) No Impact

There are no parcels under a Williamson Act contract and no forest or timberlands within the project area. No conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use is anticipated as a result of this project.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.3 Air Quality

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?	-	-	-	X
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?	-	-	-	X
c) Expose sensitive receptors to substantial pollution concentrations?	-	-	-	X
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	-	-	-	X

CEQA Significance Determinations for Air Quality

a, b, c, and d) <u>No Impact</u>

The proposed project is exempt from the requirement to determine conformity per 40 Code of Federal Regulation (CFR) 93.126: Table 2 – Exempt Projects: Widening narrow pavements or reconstructing bridges (no additional travel lanes). The project would not conflict with or obstruct implementation of the air quality plan in the area. The project will not add travel lanes to I-680. The project would not substantially increase any criteria pollutant that the area is in non-attainment for.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.4 Biological Resources

Would the project:	Significant and Unavoidable	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?	-	X	-	-
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?	-	X	-	-
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?	-	X	-	-
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?	-	-	X	-
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	-	-	-	X

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?	-	-	-	X

Caltrans Office of Biological Sciences and Permits prepared a *Natural Environment Study* (NES) for the proposed project in June 2022. The NES documented the potential effects of the proposed project on nearby biological resources. This section is summarized from the NES, which is incorporated into this IS/MND by reference.

Caltrans established a biological study area (BSA) to evaluate the effects of the proposed project on natural communities and other biological resources. The BSA encompasses the project footprint along with a buffer to include areas that project construction activities may directly or indirectly impact (Figure 2).

For the proposed project, the BSA consists of approximately 4.77 acres. The Project Construction Area (PCA) is the area that includes the permanent and temporary impact areas associated with construction (the entire crosshatched section in Figure 2). This does not include the use of existing roads but includes all areas with expected ground disturbance due to staging, construction activities, and on-site restoration activities. For this project, the BSA was expanded beyond the PCA approximately 300 feet upstream and downstream of the existing bridge and the adjacent surrounding riparian areas. Additionally, access to the PCA requires driving across grassland between Martin Marietta – Sunol Aggregates and the staging area at piers 5-7; the BSA includes the area of the driving pathway needed for access.

Caltrans conducted a bat habitat assessment, wildlife habitat assessment, fish habitat survey, and bat roosting habitat survey in December 2021 and January 2022. Based on literature and database searches, past wildlife studies, and familiarity with the region, a total of 31 wildlife species were initially considered to have potential to occur within the BSA. Following the wildlife studies, desktop review, and literature studies, fifteen of these species were dropped from consideration based on a lack of suitable habitat. The following special-status species were determined to have a low to high potential to occur within the BSA:

- California tiger salamander (*Ambystoma californiense*), federally threatened, state threatened
- California red-legged frog (*Rana draytonii*), federally threatened, state species of special concern
- Steelhead (Central California Coast DPS) (*Oncorhynchus mykiss irideus*), federally threatened, state special animal

- Alameda whipsnake (*Masticophis lateralis euryxanthus*), federally threatened, state threatened
- Foothill yellow-legged frog (*Rana boylii*) (West / Central Coast clade), state endangered
- American Peregrine Falcon (*Falco peregrinus*)
- Cooper's Hawk (*Accipiter cooperii*)
- Golden Eagle (*Aquila chrysaetos*)
- Great Blue Heron Rookery (*Ardea Herodias*)
- Pallid bat (*Antrozous pallidus*), state species of special concern
- Prairie falcon (*Falco mexicanus*)
- San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), state species of special concern
- Townsend's big-eared bat (*Corynorhinus townsendii*), state species of special concern
- Tricolored blackbird (*Agelaius tricolor*), state threatened
- Western pond turtle (*Emys marmorata*), state species of special concern
- Yuma myotis (*Myotis yumanensis*), state special animal

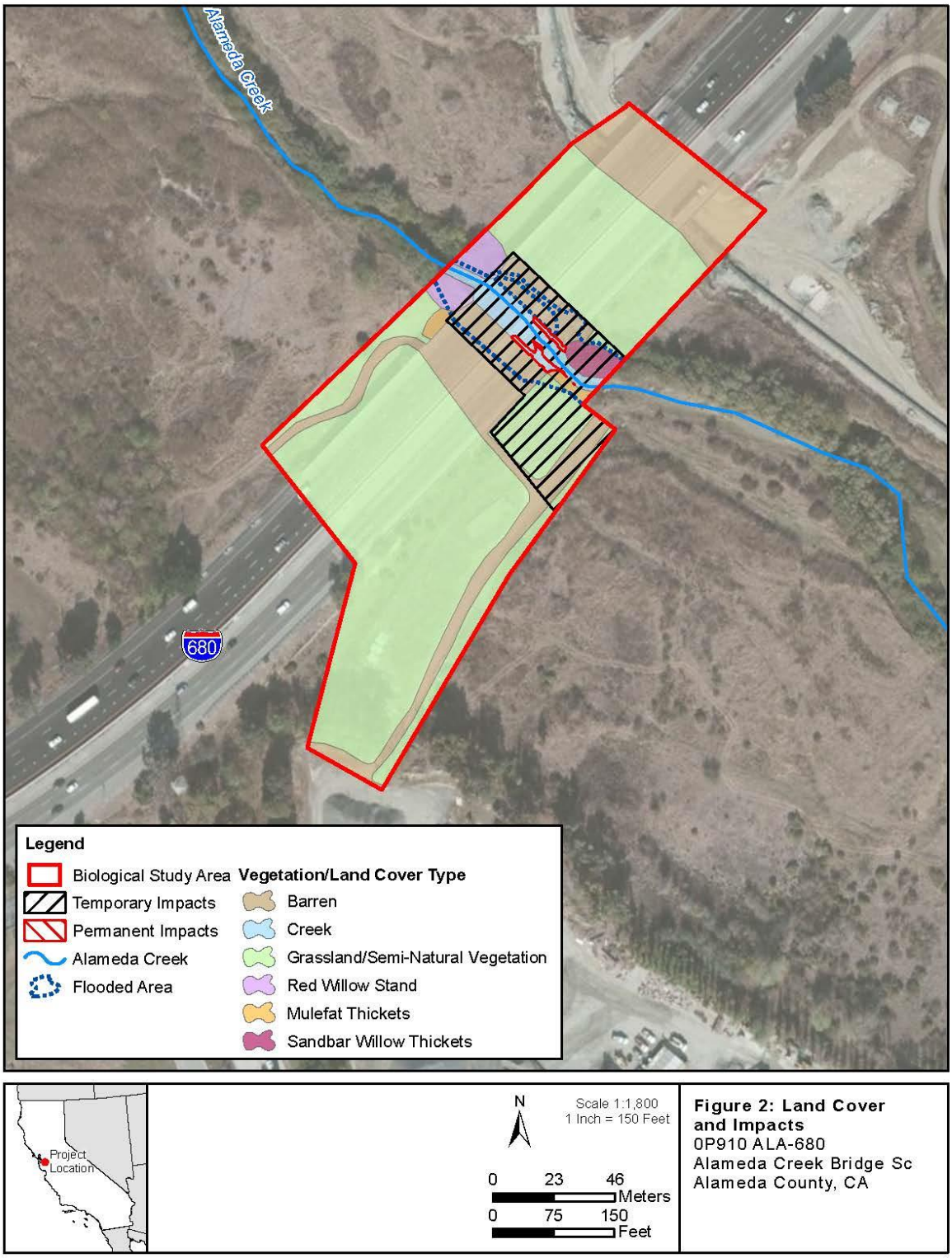

Figure 2. Land Cover and Impacts

CEQA Significance Determinations for Biological Resources

a) Less than Significant with Mitigation Incorporated

Special-Status Plant Species

A total of 16 plant species were initially evaluated for potential presence in the BSA; four species were determined to have a low potential to occur. A survey was conducted on December 30, 2021, to assess the habitat within the BSA and locate any special-status plant populations that were identifiable. No special-status plant species were observed, and the survey concluded there is a low potential for rare plants within the BSA. If protected species are discovered during construction, appropriate agency coordination and protective measures would be established.

Special-Status Animal Species

Caltrans conducted a bat habitat assessment, wildlife habitat assessment, fish survey, and bat roosting habitat survey in December 2021 and January 2022. Based on literature and database searches, past wildlife studies, and familiarity with the region, a total of 31 wildlife species were initially considered to have potential to occur within the BSA. Following the wildlife studies, fifteen of these species were dropped from consideration based on a lack of suitable habitat. Sixteen federal and/or state-listed species and state species of special concern were considered to have at least some potential to occur in the BSA and are summarized below.

California Species of Special Concern & CDFW Special Animals List
Eleven state species of special concern and/or species listed on CDFW's Special Animals List were considered to have a moderate to high potential to occur in the project area.

Three bat species have suitable foraging and/or roosting habitat in the project area. Project related construction work within riparian woodland habitats would likely have temporary effects on roosting bats. Ground disturbing activities and the operation of equipment near known roost sites have the potential to harass individual bats. Harassment of these individuals may result in the temporary avoidance of roost sites during project activities. Additionally, cleaning and resealing the bridge expansion joints may displace roosting bats. Caltrans does not anticipate long-term impacts to bat species.

Riparian habitats within the BSA provide habitat for woodrats. Middens located in permanent impact areas will have to be removed and/or relocated. If any middens are located in the temporary impact zone, they may not need to be removed depending on the type of project activities that will occur, but construction could disturb the woodrats enough to cause midden abandonment.

The proposed project could result in temporary loss or disturbance of habitats that are used by nesting migratory birds. During construction, common migratory birds may be

temporarily displaced by habitat alteration or noise from construction equipment. However, implementation of the proposed AMMs is anticipated to prevent direct mortality of migratory birds. The proposed project may potentially disturb a small amount of unoccupied habitat used by nesting or foraging migratory birds. This impact would be temporary in nature and limited to a relatively small area.

Direct effects to western pond turtle (WPT) may result from relocation efforts and earth-moving activities in potential habitat. Indirect effects may result from habitat exclusion, water quality degradation from erosion or sediment loading due to construction activities, and temporary removal of potential cover or basking habitat. The water quality impacts are unlikely, given the proposed AMMs and Caltrans BMPs.

PFs BIO-1 through BIO-23, and AMMs BIO-1 through BIO-7 would minimize the potential impacts to state species of special concern and species listed on CDFW's Special Animals List.

Federally and/or State Listed Species

Five species with moderate to high likelihood of presence in the project area are federally and/or state listed: California red-legged frog (CRLF), Alameda whipsnake (AWS), California tiger salamander (CTS), foothill yellow-legged frog (FYLF), WPT, and central California coast distinct population segment (DPS) steelhead. Natural history and occurrence information for each is detailed below.

California Red-Legged Frog
Direct effects to individual CRLF may occur throughout the PCA as a result of construction activities, including site preparation, use of heavy equipment, and the placement of temporary and permanent fills within dispersal and foraging habitat. Activities during construction could result in injury or death to individual frogs in the construction area. All efforts to minimize direct effects would be made with the implementation of AMMs. Due to the cryptic nature of the species, detection of individuals may not always occur. While there is potential for direct mortality due to excavation and grading activities, the potential is low as this species is not expected to occur in high densities in the PCA.

Indirect impacts may result from habitat exclusion, and construction activities could result in water quality degradation from erosion or sediment loading. The water quality impacts are unlikely, given the proposed AMMs and Caltrans BMPs. AMMs would be implemented to schedule work outside of typical breeding and dispersal times and to prevent individuals from entering the BSA. Filling the scour hole with RSP will permanently eliminate the potentially low-quality breeding habitat and/or plunge pool.

The impacts to CRLF habitat include 0.430 acre of temporary impacts to grassland, riverine, riparian habitats, and no permanent impacts to habitat. The project would not create permanent barriers to wildlife movement or cause increased roadside mortality.

Construction activities would be conducted during the dry season, when adult frogs are not expected to be dispersing through the project area. Caltrans has determined that the project may affect and is likely to adversely affect CRLF.

To reduce impacts to CRLF, Caltrans would restore impacted habitat on-site and provide compensation for temporary and permanent impacts to the species through off-site compensatory mitigation (MM BIO-1). To mitigate for the elimination of potential breeding habitat within the filled scour hole, a low-elevation depression will be created in the new creek alignment between piers 8 and 9. The location and depth of the pool will be determined during the design phase.

Alameda Whipsnake
Project impacts to AWS are unlikely given their low potential to occur within the BSA. Alameda Creek is a perennial creek that could support AWS dispersal. However, there are no California Natural Diversity Database (CNDDB) occurrences within four miles of the BSA. Therefore, there is a low potential for this section of Alameda Creek to be used by AWS for dispersal and/or foraging activities. No suitable breeding habitat is present in or near the BSA. The project would not create any new barriers to dispersal for the species. As a result, this project may affect but is not likely to adversely affect AWS.

California Tiger Salamander
The BSA is located within an incorporated part of Alameda County near the town of Sunol and is mostly surrounded by quarries. The hillsides surrounding Sunol include stock ponds and seasonal depressions that support populations of CTS. There are known CNDDB occurrences within the surrounding hillsides, and CTS are known to use localities within 1.3 miles of suitable breeding habitat. Given that Alameda Creek, within the BSA, appears to be the main corridor between upland and wetland habitats, the BSA has a high potential to be used by CTS for dispersal and/or foraging activities. The project would not create any new or permanent barriers to dispersal for the species. AMMs would be implemented to schedule work outside of typical breeding and dispersal times and to prevent individuals from entering the BSA.

The impacts to CTS habitat include 0.310 acre of temporary impacts to grassland and riparian habitats, and no permanent impacts. Caltrans has determined that this project may affect and is likely to adversely affect CTS.

Foothill Yellow-Legged Frog
The BSA is mostly surrounded by quarries. There is a low potential for this section of Alameda Creek to be used by FYLF for dispersal and/or foraging activities. However, due to the dense vegetation and deep shade under the center span of the bridge, there is no open, sunlit breeding habitat present in or near the BSA. Additionally, FYLF are an easily disturbed species that are not likely to breed near the activity of the gravel mine (Meckler-Pacheco et al. 2021). The project would not create any new barriers to

dispersal for the species. As a result, this project is expected to have no measurable impact on FYLF.

Steelhead – Central California Coast DPS
Direct effects to protected steelhead in the form of fish handling may occur during the dewatering process. Indirect effects may include habitat exclusion and construction activities could result in water quality degradation from erosion or sediment loading. The water quality impacts are unlikely, given the proposed AMMs and Caltrans BMPs.

Permanent effects to 0.021 acre of steelhead habitat in the PCA may result from the installation of RSP, however, these impacts are considered temporary as the area will remain creek channel and can be used by wildlife following construction. Additionally, habitat restoration will improve fish passage within the creek, creating an overall positive effect for steelhead. Temporary impacts to 0.120 acre of steelhead habitat will result from habitat exclusion during the water diversion. Based on the temporary habitat exclusion, Caltrans has determined that steelhead will be affected, and may be adversely affected by the project.

b) Less than Significant with Mitigation Incorporated

Habitats and Natural Communities of Special Concern

Red Willow Riparian Forest
Riparian canopy height is approximately 100 feet in a mature riparian forest, with a canopy cover of 20 to 80 percent. Most trees are winter deciduous. There is generally a subcanopy tree layer and an understory shrub layer. Dominant over-story species include California sycamore (*Platanus racemose*), Fremont's cottonwood (*Populus fremontii*), big leaf maple (*Acer macrophyllum*), and white alder (*Alnus rhombifolia*). Sub-canopy species include arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and sandbar willow (*Salix exigua*). Understory species include poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), Himalayan blackberry (*Rubus armeniacus*), and mugwort (*Artemisia californica*).

Riparian forest is the dominant natural habitat along the banks of Alameda Creek throughout the BSA. West of the bridge is a stand of red willow, or riparian forest, along with related riparian vegetation.

Sandbar Willow and Mulefat Thicket Riparian Scrub-Shrub
Scrub-shrub were identified on the south side of Alameda Creek. The riparian scrub-shrub habitats are relatively small and adjacent to the edge of the creek. The dominant vegetation for the scrub-shrub was mulefat thickets. Mulefat (*Baccharis salicoifolia*) is an evergreen shrub that occurs in both seasonally or intermittently flooded habitats, and stands are inherently variable depending on the amount of inundation and scouring. Sandbar willow and its related shrub alliance grows along the banks of Alameda Creek east of the bridge.

Alameda Creek Riverine

The riverine community (0.220 acre total) is typically characterized by intermittent or continually running water. The riverine community within the BSA is the active floodplain of Alameda Creek, including the cobble and boulder margins and islands within the creek. Riverine habitat contains vegetation such as torrent sedge (*Carex nudata*) shadowed by over-story trees, including white alder, black walnut, Fremont cottonwood, and western sycamore. Tules (*Schoenoplectus* spp.), rushes (*Juncus* spp.), and a variety of strictly hydrophytic vegetation may also occur within this habitat.

The proposed project would have direct impacts to the vegetation communities, including removal of trees and vegetation, ground disturbance, and pruning. Indirect impacts include disturbance cause by heavy equipment and construction. The acreages of the sensitive natural communities that would be impacted by the project are summarized in Table 2-2. Upon project completion, all temporarily disturbed vegetated areas will be contoured to preconstruction grades, where appropriate, and replanted with appropriate native vegetation.

Table 2-2. Landcover Types and Impacts within the PCA

Land Cover Type	Total Present within the BSA (Acres)	Temporary Impacts (Acres)	*Permanent Impacts (Acres)	Total Impacts (Acres)
Creek	0.158	0.120	0.021	**0.241**
Red Willow	0.097	0.000	0.000	**0.000**
Mulefat Thicket	0.035	0.018	0.000	**0.018**
Sandbar Willow	0.051	0.051	0.000	**0.051**

*Permanent impacts are associated with the placement of rock to fill the scour holes. Although classified as permanent, the area will continue to be part of the “creek” post construction. There is no net loss of creek associated with the project.

Implementation of AMMs would mitigate any potential impacts to habitat and natural communities of special concern to less than significant.

Trees

A tree survey was conducted on April 4, 2022. Approximately 45 trees were identified within the BSA. The area immediately surrounding Alameda Creek contains a mixture of native and non-native trees that are mostly riparian. Dense thickets of sandbar willows (*Salix exigua*) dominate the wetland and floodplain areas both upstream and downstream. A stand of red willow exists on the bank of the creek immediately north of I-680. Other native riparian trees include Fremont cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemose*). Coast live oak (*Quercus agrifolia*), and bay laurel (*Umbellularia californica*) are present in upland areas. Non-native trees within the BSA include olive (*Olea europaea*), eucalyptus (*Eucalyptus* spp.) and tree tobacco (*Nicotiana glauca*). Additionally, there are six trees at the southwestern end of the BSA

that are unidentifiable due to death or bareness of foliage. These trees may need to be removed or trimmed for equipment access. It is important to note that the above represents the number of trees within the BSA, and not the number of trees that may be affected.

The estimated number of trees located within temporary or permanent impact areas are presented in Table 2-3. Trees located in permanent impact areas are likely to be removed during project activities. Some trees located in temporary impact areas may be preserved depending on the specific activity occurring near them. To be conservative, Caltrans is accounting for removal of all trees in temporary impact areas. During construction, to the greatest extent possible, Caltrans would reduce impacts to trees in temporary impact areas.

Table 2-3. Trees within Estimated Impact Areas

Species	Number of Trees within Impact Area
CA bay laurel tree	3
Coast live oak	1
Eucalyptus species*	7
Fremont cottonwood	3
Red willow	7
Olive species*	1
Tobacco tree*	4
Western sycamore	1
Total	**27**

*Denotes non-native species

Caltrans would provide tree replacement on-site to the maximum extent possible and an off-site planting strategy would be developed in coordination with CDFW and RWQCB during the permitting process to address the balance of the tree mitigation needed. Trees removed from the riparian zone will be included in the CDFW 1602 Lake and Streambed Alteration Agreement (LSAA) application. Trees in the upland areas would be compensated for under CEQA on-site and off-site at a 1:1 ratio.

c) Less than Significant with Mitigation Incorporated

Alameda Creek is the third largest tributary to the San Francisco Bay. The main stem of Alameda Creek flows for over 40 miles, originating in the hills northeast of Mount Hamilton. Alameda Creek flows north through Niles Canyon to the 12-mile-long Alameda Creek Flood Control Channel before reaching the San Francisco Bay.

Within the BSA, there are approximately 0.22 acre of perennial creek and wetlands. Of this acreage, the project would result in 0.171 acre of temporary impacts and 0.021 acre of permanent impacts. Permanent impacts are associated with the placement of rock to fill the scour holes. Although classified as permanent, the area will continue to be part of the “creek” post construction. There is no net loss of creek associated with the project.

Implementing the project will result in the realignment of the creek channel. The realignment would not prevent the creek from naturally changing topography over time. Careful attention to details of RSP installation may benefit Alameda Creek by improving fish passage and spawning habitat and reducing the maintenance needs of the bridge.

No mitigation is expected because there is no net loss of wetlands and waters. Final mitigation requirements would be established with USACE during the permitting phase of the project.

With the use of Caltrans standard BMPs and AMMs (AMM BIO-3, AMM BIO-4), the project is expected to have a less than significant impact on protected wetlands and waters.

d) Less than Significant Impact

As discussed above, several species of animals, including state and federally listed species, are expected to have a moderate to high chance of occurring in the project area.

Construction of the project would include installation of a creek diversion and dewatering structures and creek realignment that would result in temporary direct and indirect effects to California central coast DPS steelhead, which may use the project area as a migratory corridor.

The implementation of AMMs, including wildlife exclusion fencing and seasonal work restrictions, would minimize project impacts to the movement of fish and wildlife species by allowing for their safe passage outside the proposed construction area and limiting construction to seasons when species are least likely to move through the project area. The project would have a less than significant impact to migratory wildlife corridors.

e) No Impact

Trees within Caltrans ROW are under state control and are not subject to Alameda County Tree Ordinance, Ordinance No. 0-2003-23. Caltrans will coordinate with local agencies in a good faith effort to address tree ordinances.

f) No Impact

This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Project Features:

Caltrans would incorporate the following standard PFs into the project to reduce potential impacts to biological resources:

PF BIO-1: Permits. Caltrans would include a copy of all relevant permits within the construction bid package of the proposed project. The Resident Engineer (RE) or their designee would be responsible for implementing the Conservation Measures and Terms and Conditions of all relevant permits.

PF BIO-2: Biological Monitor Approval. Caltrans would submit the names and qualifications of the biological monitor(s) for agency approval prior to initiating construction activities for the proposed project. Only agency-approved biological monitors will implement the monitoring duties outlines in the USFWS BO and CDFW ITP including delivery of the Worker Environmental Awareness Training Program.

PF BIO-3: Biological Monitoring. The agency-approved biologist(s) would be on-site during initial ground-disturbing activities, the installation and removal of creek diversion, and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) would keep copies of applicable permits in their possession when on-site. Through the RE or their designee, the agency-approved biologist(s) would be given the authority to communicate either verbally, by telephone, email or hard copy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the RE or their designee, the agency-approved biologist(s) would have the authority to stop project activities to minimize take of listed species or if they determine that any permit requirements are not fully implemented. If the agency-approved biologist(s) exercises this authority, the agencies must be notified by telephone and email within 48 hours.

PF BIO-4: Worker Environmental Awareness Training. All construction personnel would attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project. The program will focus on the conservation measures that are relevant to employee's personal responsibility and will include an explanation as how to best avoid take of sensitive species. Disturbed materials will include a pamphlet with distinguishing photographs of sensitive species, species' habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and will be available on request.

PF BIO-5: Preconstruction Surveys. Prior to any ground disturbance, preconstruction surveys would be conducted by an agency-approved biologist for listed species. These surveys would consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The biologist(s) would investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found

in the cover sites within the project limits would be documented and allowed to leave on their own or relocated to an adequate cover site in the vicinity.

PF BIO-6: Prevention of Wildlife Entrapment. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees would be covered at the close of each working day by plywood or similar materials. Alternatively, an additional four-foot-high vertical barrier, independent of exclusionary fences, would be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional four-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will relocate the animal outside the limits of construction in accordance with agency established protocol. Special-status species that do not have formal USFWS, CDFW, or NMFS take covered cannot be relocated. In such cases, CDFW, USFWS, or NMFS would be contacted by telephone for guidance. CDFW, USFWS, or NMFS would be notified of the incident by telephone and electronic mail within 48 hours.

PF BIO-7: Environmentally Sensitive Area Fencing. The limits of construction zones within suitable habitat for listed species would be delineated with high visibility environmentally sensitive areas (ESA) fencing at least four feet in height to prevent wildlife from accessing the construction footprint. The fencing would be removed only when all construction equipment is removed from the site. No project activities would occur outside the delineated PCA. ESA fencing is not required for construction activities occurring outside of suitable habitat for listed species.

PF BIO-8: Special-Status Species On-Site. The RE would immediately contact the agency-approved project biologist(s) if a special-status species is observed within a construction zone. The RE would suspend construction activities within a 50-foot radius of the animal until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.

PF BIO-9: Work Windows for Nesting Birds. To the extent practicable, clearing and grubbing activities should not occur within the bird nesting season (February 1 to September 30). When it is necessary to conduct clearing during the nesting season, preconstruction surveys will be conducted within the BSA prior to clearing and grubbing of vegetation.

PF BIO-10: Preconstruction Surveys for Nesting Birds. Preconstruction surveys for nesting birds would be conducted by a qualified biologist no more

than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to September 30). If preconstruction surveys indicate the presence of nests of any special-status species, USFWS will be consulted to determine the appropriate buffer area to be established around the nesting site for the duration of the breeding season.

PF BIO-11: Non-Disturbance Buffer for Nesting Birds. If work is to occur within 300 feet of active raptor nests or 50 feet of active passerine nests, a non-disturbance buffer would be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance.

PF AMM BIO-12: Preconstruction Surveys for Roosting Bats. Emergence surveys for roosting bats would be conducted by a qualified biologist at least 2 years prior to the start of construction. If bats are discovered to be using the bridge as a day roost, a bat exclusion plan will be developed and implemented in coordination with CDFW.

PF BIO-13: Material Storage. All construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.

PF BIO-14: Water Quality Inspection. Water quality inspector(s) would inspect the site after a rain event to ensure that the stormwater BMPs are adequate.

PF BIO-15: Vehicle Use. Project employees would be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

PF BIO-16: Night Lighting. Artificial lighting of the proposed BSA during nighttime hours would be minimized to the maximum extent practicable and would be shielded and pointed away from sensitive resources.

PF BIO-17: Trash Control. All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a day from the work area.

PF BIO-18: Firearms. No firearms would be allowed in the PCA except for those carried by authorized security personnel, or local, state, or federal law enforcement officials.

PF BIO-19: Pets. To prevent harassment, injury, or mortality of sensitive species, no pets would be permitted on the project site.

PF BIO-20: Caltrans Standard Best Management Practices (BMPs). The potential for adverse effects to water quality would be avoided by implementing

temporary and permanent BMPs outlined in Section 13.2 of the 2019 Caltrans Standard Specifications. Caltrans erosion control BMPs would be used to minimize any wind or water-related erosion. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project, as one is required for all projects that have at least one acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP would reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges, and can be found at the following website: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

Protective measures would be included in the contract, including, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocky temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and re-seeded with a native mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species.

PF BIO-21: Prohibition of Monofilament Erosion Control. Plastic mono-filament netting (erosion control matting) or similar material would not be used for the project because CRLF and CTS may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

PF BIO-22: Concrete Waste and Stockpiles. All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.

PF BIO-23: Revegetation Following Construction. All areas that are temporarily affected during construction would be revegetated with an assemblage of native grass, shrub, and trees as appropriate. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant to Executive Order 13112.

AMMs and/or MMs:

Caltrans would incorporate the following AMMs to avoid or minimize potential impacts to biological resources:

AMM BIO-1: Work Window. All work within suitable aquatic habitat for steelhead, California red-legged frog (CRLF) and California tiger salamander (CTS) would occur between June 1 and October 15, when there is less potential for an individual to enter the work area. During this time, California red-legged frog and California tiger salamander would have a lower potential for movements across upland habitat.

AMM BIO-2: Exclusion of Bats from Existing Bridge. If bats are detected prior to the start of construction, a roosting bat exclusion plan would be developed and implemented. At a minimum, this plan should address how one-way exclusion devices would be used to allow bats to safely exit the current bridge prior to joint cleaning and sealing. Specific night bat roost AMMs would be developed through technical assistance with CDFW and bat specialists. Exclusion of bats would only occur between March 1 to April 15 and August 31 to October 15 to avoid sensitive periods.

AMM BIO-3: Water Diversion Structures. Water diversion would be designed to exclude construction activities from adversely impacting the water quality of Alameda Creek while maintaining flow through the project area. The contractor would be required to submit a Water Diversion Plan to appropriate regulatory agencies for approval prior to construction.

AMM BIO-4: Night Work. To the extent practicable, nighttime work within Alameda Creek would be minimized.

AMM BIO-5: Upland and Riparian Trees. During the design phase of the project, Caltrans Office of Biological Science and Permitting would work with the Caltrans design team to avoid and minimize project impacts to upland and riparian trees. Efforts to preserve trees in place, by designating trees on plan sheets and marking trees with ESA fencing, would be made to avoid or minimize project impacts to trees located in temporary impact areas.

AMM BIO-6: Rock Slope Protection Size and Placement. RSP shall be of an adequate size to create cover and refuge for juvenile salmonids and gravel shall be placed in interstitial areas to create spawning habitat.

AMM BIO-7: Fish Relocation Plan. A fish removal and relocation plan will be prepared and submitted to the regulatory agencies for review and approval at least 60 days prior to the installation of the dewatering system. The plan will include the methodology of capturing and relocating the fish.

Mitigation Measures:

Caltrans would incorporate the following MMs to mitigate potential impacts to biological resources:

MM BIO-1: Caltrans will compensate for impacts to CRLF habitat through on-site restoration of temporarily affected areas at a 1:1 ratio.

MM BIO-2: To partially mitigate for the elimination of potential CRLF and other amphibian species breeding habitat within the filled scour hole, a low-elevation depression will be created in the new creek alignment between piers 8 and 9. The location and depth of the pool will be determined during the design phase. To fully mitigate, Caltrans will also purchase mitigation credits at a ratio of 3:1.

MM BIO-3: Caltrans will compensate for impacts to CTS habitat through on-site restoration of temporarily affected areas at a 1:1 ratio. To meet the fully mitigated requirements of the CESA, Caltrans will purchase mitigation credits at a 1:1 ratio for temporary impacts to CTS. Multi-species credits may be purchased at an agency-approved conservation bank.

2.1.5 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?	-	-	-	X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	-	-	-	X
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	-	-	-	X

CEQA Significance Determinations for Cultural Resources

This section is summarized from the Caltrans District 4 Office of Cultural Resource Studies (OCRS) Completion of Section 106 Compliance memorandum that was prepared for this project, dated August 9, 2021.

No significant historical resources have been identified within the project area.

a) No Impact

Background research and identification efforts did not reveal any recorded historical resources in the area that will be affected by the proposed project.

b) No Impact

Background research and identification efforts did not reveal any recorded archaeological resources in the area that will be affected by the proposed project. A survey for archaeological resources was completed in August 2021.

c) No Impact

There are no known interred human remains within the project vicinity.

Project Features:

Caltrans would incorporate the following standard PFs to reduce potential impacts to cultural resources:

PF CULT-1: If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' OCRS will be called. A Caltrans OCRS qualified archaeologist will assess the remains and, if determined human, will contact the County Coroner as per Public Resources Code (PRC) Sections 5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC) who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.6 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?	-	-	-	X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	-	-	-	X

CEQA Significance Determinations for Energy

a) No Impact

The proposed project would not add travel lanes to I-680 that would increase roadway capacity or build structures that would require substantial direct or indirect energy use. The project would result in direct energy use during construction for the operation of on-site construction equipment. The project would not introduce any new activities that would significantly impact or increase energy use.

b) No Impact

The proposed project will not add travel lanes to I-680 that would increase roadway capacity. The project will result in direct energy use during construction for the operation of on-site construction equipment. The project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency.

Project Features:

Caltrans would incorporate the following standard PF to reduce potential impacts to energy:

> **PF Energy-1: Minimize Energy Consumption from Construction Activities.** The use of construction BMPs would minimize energy consumption from construction activities, including, but not limited to: (1) limit idling of vehicles and equipment; (2) use solar power as a power source, if feasible; (3) ensure regular maintenance of construction vehicles and equipment; and (4) if feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.7 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:	-	-	-	X
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?	-	-	-	X
ii) Strong seismic ground shaking?	-	-	-	X
iii) Seismic-related ground failure, including liquefaction?	-	-	-	X
iv) Landslides?	-	-	-	X
b) Result in substantial soil erosion or the loss of topsoil?	-	-	-	X
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?	-	-	-	X
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?	-	-	-	X
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?	-	-	-	X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	-	-	-	X

CEQA Significance Determinations for Geology and Soils

This section summarizes the *Geologic and Paleontological Environmental Study/Memorandum* prepared for this project, which is dated September 7, 2021.

a) No Impact

The proposed work would not further expose the public to adverse effects from earthquakes, liquefaction, landslides, or other geologic hazards.

b) No Impact

The work activities are not expected to impact soil conditions. There would be no disturbance to the native ground or native subsurface from this project.

c, d) No Impact

The project is not located on a geologic unit or soil that is unstable, nor is it located on an expansive soil.

e) No Impact

There are no nearby residences, and the project does not propose to install sewers or wastewater treatment systems.

f) No Impact

The *Geologic and Paleontological Environmental Study/Memorandum* prepared for this project determined that the excavations for the proposed project would be shallow and superficial. There would be no impacts to sensitive paleontological resources or unique geologic features within the project area.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.8 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?	-	-	X	-
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	-	-	X	-

CEQA Significance Determinations for Greenhouse Gas Emissions

a) Less Than Significant Impact

Section 2.2.3 provides an analysis of construction-related and operational greenhouse gas (GHG) emissions. Construction-related GHG emissions were calculated using the Road Construction Emissions Model (RCEM), version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District. Construction duration would total 18 months, the total amount of Carbon Dioxide (CO_2) produced during construction of the project would be 589.16 tons. While the project would result in GHG emissions during construction, no increase in vehicle miles traveled (VMT) would occur because the project would not increase the number of travel lanes on I-680. Therefore, the project is not anticipated to result in an increase in operational GHG emissions. With implementation of construction emissions reduction measures, construction-related impacts would be less than significant.

b) Less Than Significant Impact

During construction of the proposed project, Caltrans would require compliance with all local climate action plans, and State and federal regulations, ordinances, and statutes that apply to GHG emissions. The project is not anticipated to result in an increase in operational GHG emissions, and construction GHG emissions would be minimized. Accordingly, the project would not conflict with plans, policies, or regulations aimed at reducing GHG emissions.

2.1.9 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?	-	-	-	X
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?	-	-	-	X
c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	-	-	-	X
d) Be located on a site which is include 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?	-	-	-	X
e) For a project located within an airport land use plan or, where such a plan has 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?	-	-	-	X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	-	-	-	X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	-	-	-	X

CEQA Significance Determinations for Hazards and Hazardous Materials

a) No Impact

The scoured-soil removal and RSP placement under the bridge will not involve soils expected to be affected by surface-deposited contaminants, such as aerially deposited lead (ADL). Project construction would not result in hazards to the public or the environment through the transport, use, or disposal of hazardous materials.

b) No Impact

Based on preliminary investigations, there is no potential for release of hazardous materials into the environment.

c) No Impact

Based on preliminary investigations, there is no potential for release of hazardous materials into the environment. The project is not located within 0.25 mile of a school.

d) No Impact

The project is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) No Impact

The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Nor is the project located in the vicinity of a private airstrip.

f) No Impact

The project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) No Impact

The project is primarily surrounded by grazing lands, rural dwellings, and generally undeveloped, grassy areas. Urbanized areas adjacent to the project are commercial and industrial. The project would take place in existing Caltrans ROW and TCEs, and would not change existing land use. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. The project would not increase or contribute to new risks of exposure to fire hazards for the surrounding community.

Project Features:

Caltrans will incorporate the following standard PFs to reduce potential impacts from hazards and hazardous materials:

> **PF HAZ-1:** Caltrans Standards will be followed for the proper handling and disposal of any unanticipated hazardous waste discovered during construction.

PF HAZ-2: The project will implement BMPs according to special provision 12-11.09 “Minimal Disturbance of Regulated Material Containing ADL.”

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.10 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?	-	-	X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede substantial groundwater management of the basin?	-	-	X	-
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:	-	-	X	-
i) Result in substantial erosion or siltation on- or off-site;	-	-	X	-
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	-	-	-	X
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	-	-	-	X
iv) Impede or redirect flood flows?	-	-	-	X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	-	-	-	X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	-	-	-	X

CEQA Significance Determinations for Hydrology and Water Quality

This section summarizes the *Water Quality Study* that was prepared for this project, which is dated September 2021.

This project is under jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB; Region 2). This project would result in more than an acre of disturbed soil area (DSA) and will require a Storm Water Pollution Prevention Plan (SWPPP). The project lies in Hydrological Sub Area 204.30 in the South Bay hydrologic unit. Runoff drains into Alameda Creek.

a) Less Than Significant Impact

Project construction would result in temporary impacts to water quality from installation and removal of the temporary creek diversion system. The project's total DSA is estimated at 1.89 acres. The project would not result in new impervious area. Construction site BMPs for erosion and sediment control and material management, as specified in the required SWPPP, would be used during construction to avoid or reduce impacts. These measures are consistent with the practices required under the Construction General Permit and Caltrans' existing Municipal Separate Storm Sewer System (MS4) permit and are intended to achieve compliance with the requirements of the permits. With implementation of short-term and long-term BMPs, effects to surface and ground water quality would be less than significant.

b) Less Than Significant Impact

The project is located within the Sunol Valley Basin (Sunol Valley Unit). There are limited data with respect to the number of individual wells in the Sunol Valley Basin and the amount of water they yield. The groundwater levels within the project area can be assumed to be at creek level.

The project would require a temporary creek diversion to perform the scour repair work. With the diversion in place, water would not flow over a small portion of the channel, and groundwater levels may be temporarily affected. Groundwater from dewatering of excavations would be stored in Baker tanks during construction and discharged and/or disposed of in accordance with provisions in the project's NPDES permit.

Changes to groundwater occurrence and levels due to project construction, if groundwater levels are affected at all, would not detrimentally affect regional groundwater production or change the existing water quality.

The project is not expected to significantly impact groundwater supplies.

c) Less than Significant Impact

Caltrans is proposing to realign Alameda Creek to the center of bridge piers 8 and 9, however, the project will not alter the existing drainage pattern of the area or add impervious surfaces.

i. Less Than Significant Impact

Construction of the Build Alternative would result in soil erosion from grading and earthmoving activities. With implementation of standard Caltrans BMPs and AMMs in accordance with the Section 401 and 404 permits, potential impacts related to erosion or siltation on- or off-site during and after construction would be less than significant.

ii, iii, iv. No Impact

The scour repair within the creek would not change the 100-year storm event elevations. Related roadway work, which would not impact the creek, would also have no impact to the base floodplain elevation. In addition, the project proposes no changes to existing drainage systems. With implementation of permanent BMPs and AMMs, the project would not substantially increase the amount of runoff on- or off-site or contribute to runoff that would exceed the capacity of existing drainage systems.

The project would not impede or redirect flood flows.

The impacts of the project would be less than significant to the existing drainage pattern of the area.

d) No Impact

The proposed project is not located in an area that would be subject to inundation by seiche, tsunami, or mudflow.

e) No Impact

The proposed project would require a Section 404 permit issued by USACE and a Clean Water Act (CWA) 401 Water Quality Certification from the San Francisco RWQCB. Permits would require project implementation of measures in accordance with applicable water quality control plans. The project is not expected to impact groundwater supplies.

The proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

Project Features:

Caltrans will incorporate the following standard PFs to reduce potential impacts to hydrology and water quality:

> **PF HYDRO-1:** Standard BMPs. The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in

Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind- or water-related erosion. BMPs to be implemented within the project area will include, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning will be allowed into storm drains or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
c. Concrete wastes will be collected in washouts, and water from curing operations will be collected, disposed of, and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
e. Coir rolls will be installed along or at the base of slopes during constructions to capture sediment, and temporary organic hydro-mulching would be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and reseeded with a native seed mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas.

PF HYDRO-2: During construction, a silt fence will be used to intercept and slow the flow of sediment-laden sheet flow runoff. A silt fence is a temporary linear sediment barrier of permeable fabric.

PF HYDRO-3: Prior to commencement of construction activities, a SWPPP will be prepared by the Contractor and approved by Caltrans, in compliance with the requirements of the Regional Water Quality Control Board (RWQCB) as well as the 2018 Caltrans Standard Specifications, Section 13. The SWPPP will provide water pollution control practices to limit storm water and non- storm water discharges; temporary construction BMPs will be used to the maximum extent practicable.

AMMs and/or MMs:

Caltrans would incorporate the following AMMs to avoid or minimize potential impacts to hydrology and water quality resources:

AMM HYDRO-1: A temporary creek diversion system will be implemented, and water quality monitoring will be provided when working in the creek.

2.1.11 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
a) Physically divide an established community?	-	-	-	X
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?	-	-	-	X

CEQA Significance Determinations for Land Use and Planning

a) No Impact

The land immediately adjacent to the project is zoned agriculture. The project is situated in a predominantly rural area of unincorporated Alameda County and features commercial and industrial businesses adjacent to I-680. The project would not physically divide an established community.

b) No Impact

The project area is categorized under water management land use. The project would comply with Alameda County land use, transportation, and circulation goals as stated in the Alameda County General Plan (Alameda County General Plan 2020). The proposed project would not cause a significant environmental impact that would conflict with an applicable land use plan, policy, or regulation. Therefore, there would be no impacts.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.12 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?	-	-	-	X
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?	-	-	-	X

CEQA Significance Determinations for Mineral Resources

a, b) <u>No Impact</u>

The project area is immediately adjacent to the Mission Valley Rock Quarry, a 139-acre permitted gravel pit. However, in accordance with the state mineral land classification system (California Department of Conservation, Division of Mines and Geology 1996), the project area is not mapped by the State Geologist as an area containing economically significant mineral deposits. The project would not involve mining or require the acquisition of land where active mining operations are occurring. The project would not result in the loss of availability of a known mineral resource or mineral recovery site.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.13 Noise

Would the project result in:	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?	-	-	-	X
b) Generation of excessive groundborne vibration or groundborne noise levels?	-	-	-	X
c) For a project located within the vicinity of a private airstrip of 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?	-	-	-	X

CEQA Significance Determinations for Noise

The project was determined not to be a Type I project per 23 CFR 772 because the project would not increase highway capacity or modify the horizontal or vertical alignment of the highway; therefore, a traffic noise study is not required, and noise abatement need not be considered. There are no residences located near the project area. Noise generated by the project would be temporary construction noise, and standard Caltrans noise abatement measures will be applied to reduce noise. Work in the creek channel will be confined to daytime hours to the maximum extent possible. Some work on the bridge deck will be done during a nighttime construction window.

a) <u>No Impact</u>

Anticipated noise impacts from the proposed project would be temporary and periodic, associated with construction. Noise associated with construction is controlled by Caltrans Standard Specifications, Section 14-8.02, Noise Control. The proposed project would not introduce a permanent increase in noise levels.

b) No Impact

The project does not include features or construction activities that would result in excessive groundborne vibration or groundborne noise for nearby receptors.

c) No Impact

The project is not located within the vicinity of a private airstrip, an airport land use plan, or within two miles of a public airport or public use airport. Therefore, the project would not expose people residing or working in the project area to excessive aviation noise.

Project Features:

Caltrans will incorporate the following standard PFs to reduce potential impacts resulting from noise:

> **PF Noise-1:** Ensure construction equipment confirms to Caltrans Standard Specification 14-8.02, Noise Control.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.14 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)?	-	-	-	X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	-	-	-	X

CEQA Significance Determinations for Population and Housing

a) <u>No Impact</u>

The project will not induce growth. No new commercial or residential establishments will be built, and the project will not add travel lanes to I-680; therefore, the project will not increase roadway capacity leading to unplanned population growth.

b) <u>No Impact</u>

The project will not displace any housing units or people. There are no houses within the project construction area and no ROW will be acquired.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.15 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?	-	-	-	X
Police protection?	-	-	-	X
Schools?	-	-	-	X
Parks?	-	-	-	X
Other public facilities?	-	-	-	X

CEQA Significance Determinations for Public Services

a) <u>No Impact</u>

The proposed project would not result in the provision of new or physically altered government facilities. Furthermore, the project would not result in a need for new or physically altered government facilities in order to maintain acceptable service ratios or response times for fire protection, police protection, schools, parks, or other public facilities.

Traffic delays could occur as a result of lane closures during construction. A TMP would be prepared that would provide accommodation for police, fire, emergency, and medical services in the local area during construction (AMM TRANS-1 in the Transportation and Traffic section).

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.16 Recreation

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	-	-	-	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	-	-	-	X

CEQA Significance Determinations for Recreation

a, b) <u>No Impact</u>

There are no neighborhood or regional parks or other recreational facilities within 0.5 mile of the project area. The described project work would not result in the construction of new recreational facilities.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.17 Transportation and Traffic

The Traffic Management Plan (TMP) for the project will be developed in the next stage of project development. The TMP will be supported by detailed traffic studies to evaluate traffic operations. The need for necessary lane closures during off-peak hours or at night, or for short-term detour routes will be identified as required.

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?	-	-	-	X
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	-	-	-	X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	-	-	-	X
d) Result in inadequate emergency access?	-	-	X	-

CEQA Significance Determinations for Transportation/Traffic

a) <u>No Impact</u>

The proposed project is consistent with the California Transportation Plan 2040 and the Alameda Countywide Transportation Plan.

b) <u>No Impact</u>

The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). The project would not result in an increase in VMT as there would be no change to the number of travel lanes on I-680 within the project limits.

c) <u>No Impact</u>

The project will not substantially increase hazards due to a design feature or incompatible uses.

d) Less than Significant Impact

This project does not include changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. Full closures of I-680 will not be necessary. Prior to construction, Caltrans would develop a TMP to minimize delays during both day and nighttime construction. The project would not result in inadequate emergency access.

AMMs and/or MMs:

AMM TRANS-1: Traffic Management Plan. To minimize potential effects from construction activities to motorists, bicyclists, or pedestrians using local streets, a TMP will be developed by Caltrans and implemented throughout construction. The TMP will include public information, motorist information, incident management, construction, and alternate routes. The TMP will also include elements such as detour and haul routes, one-way traffic control, flaggers, and phasing to reduce impacts to local residents as much as feasible and to maintain access to businesses in the local area. The TMP will also provide access for police and emergency service providers.

2.1.18 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	-	-	-	X
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.	-	-	-	X

CEQA Significance Determinations for Tribal Cultural Resources

a) <u>No Impact</u>

To date, Caltrans Office of Cultural Resource Studies (OCRS) has determined that the proposed project is not located within or adjacent to a site listed or eligible for listing in the California Register of Historic Resources, or a local register or historical resources as defined in PRC section 5020.1(k).

b) <u>No Impact</u>

No previously known tribal resources have been identified within the project area and there are no known concerns associated with the proposed project impacting such resources. In accordance with Assembly Bill (AB) 52, Caltrans OCRS sent letters on April 1, 2021 to California Native American tribes identified by the Native American

Heritage Commission (NAHC) as having potential tribal resources within or near the project area. Caltrans received two responses from tribal groups, both of which raised concerns of potential sensitivity for cultural resources. Caltrans Professionally Qualified Staff (PQS) provided design and a thorough review of recorded tribal resources identified as having the potential to occur within the project area. Upon further clarification and coordination efforts, no other comments were received from tribal groups.

Project Features:

> **PF CULT-1:** If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' OCRS will be called. A Caltrans OCRS qualified archaeologist will assess the remains and, if determined human, will contact the County Coroner as per Public Resources Code (PRC) Sections 5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC) who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.19 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 would cause significant environmental effects?	-	-	-	X
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	-	-	-	X
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?	-	-	-	X
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?	-	-	-	X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	-	-	-	X

CEQA Significance Determinations for Utilities and Service Systems

a) <u>No Impact</u>

The project would not require or result in the relocation or construction of new water or wastewater treatment facilities, storm water drainage, electric power, natural gas, or telecommunications facilities. Nor would the project result in the expansion of existing facilities.

The project is not expected to exceed wastewater treatment requirements of the San Francisco Bay RWQCB (Region 2).

b) No Impact

The project does not require water supplies and would not impact current or future water supply.

c) No Impact

The project does not require the services of a wastewater treatment provider.

d) No Impact

The project would not require the services of a solid waste facility. The project would not impact the capacity of local infrastructure or impair the attainment of solid waste reduction goals. The implementation of PF BIO-17 would require the proper disposal of trash.

e) No Impact

The project is anticipated to comply with federal, state, and local statutes and regulations related to solid waste.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.20 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?	-	-	-	X
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?	-	-	-	X
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?	-	-	-	X
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?	-	-	-	X

CEQA Significance Determinations for Wildfire

a) <u>No Impact</u>

All work is expected to occur within Caltrans ROW or within TCEs. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The proposed project would not substantially impair an adopted emergency response or evacuation plan. A TMP (AMM TRANS-1) will be developed that would identify traffic diversion, staging, and alternate routes. Emergency response times are not anticipated to change during construction because the TMP would provide measures to ensure priority for emergency vehicles during traffic control. The TMP would provide instructions for response and evacuation in an emergency.

b) No Impact

The project area traverses low Fire Hazard Severity Zones in a State Responsibility Area (SRA), as designated by the California Department of Forestry and Fire Protection. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. The proposed project would not exacerbate wildfire risks.

c, d) No Impact

All project work is expected to occur within Caltrans ROW or within TCEs. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The proposed project would not exacerbate fire risk.

Existing drainage patterns will not be substantially altered and would not result in substantial erosion or siltation on- or off-site. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. After construction, areas cleared for contractor access and trenching operations will be treated with appropriate erosion control measures. The proposed project would not expose people or structures to significant risks.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.21 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project 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 prehistory?	-	X	-	-
b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considered when viewed in connection with the effects of other current projects, and the effects of probable future projects)?	-	-	-	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	-	-	-	X

CEQA Significance Determinations for Mandatory Findings of Significance

a) <u>Less Than Significant Impact with Mitigation Incorporated</u>

The project is anticipated to have significant impacts to biological resources and natural communities. However, impacts would be reduced to less than significant with incorporation of AMMs BIO-1 through BIO-7 and MMs BIO-1 through BIO-3.

Direct effects to CRLF, CTS, and central California coast DPS steelhead are anticipated from construction of the project. Construction activities would result in placement of temporary and permanent fills in dispersal and foraging habitat for the Federally and/or State listed species. A total of approximately 0.310 acre of CTS habitat (temporary only), 0.451 acre of CRLF habitat (0.430 acre temporary and 0.021 acre permanent),

and 0.141 acre of central California coast DPS Steelhead habitat (0.120 acre temporary and 0.021 permanent) would be affected by construction activities.

The project also has the potential to impact 27 trees through trimming or removal. The conservative estimate assumes all trees within temporary and permanent impact areas would be removed.

With implementation of AMMs and MMs for these resources, which include on- and off-site compensation for impacted species habitat (MMs BIO-1 through BIO-3), and tree replacement ratios in accordance with the project permitting (PF BIO-23), project impacts would be reduced to less than significant.

b) No Impact

All past, present, and future projects have gone through or are required to undergo an environmental review to identify, account for, and mitigate for potential significant impacts. All projects have or will incorporate standard conservation measures, including standard Caltrans BMPs, which will protect surrounding habitat and water quality. Therefore, Caltrans does not anticipate any cumulative effects as a result of the proposed project.

c) No Impact

The project does not have environmental effects which would cause substantial adverse effects on human beings.

2.4 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. The Intergovernmental Panel on Climate Change (IPCC), established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the IPCC and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and sever fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce GHG emissions. In the context of climate change (as distinct from CEQA and NEPA), "mitigation" involves actions to reduce GHG emissions or to enhance the "sinks" that store them (such as forests and soils) to lessen adverse impacts. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

2.4.1 Regulatory Setting

This section outlines 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 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 FHWA recognizes the threats that extreme weather, sea level change, and other changes in environmental conditions post 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 2022). 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.

The federal government has taken steps 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) as amended by the Energy Independence and Security Act (EISA) of 2007; and Corporate Average Fuel Economy (CAFE) Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The U.S. EPA calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014).

U.S. EPA published a final rulemaking on December 30, 2021, that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. The updated GHG emissions standards will avoid more than 3 billion tons of GHG emissions through 2050. In April 2022, NHTSA announced corresponding new fuel economy standards for model years 2024 through 2026, which will reduce fuel use by more than 200 billion gallons through 2050 compared to the old standards and reduce fuel costs for drivers (U.S. EPA 2022a; NHTSA 2022).

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.

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.

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): This EO 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): This EO 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 ($MMTCO_2e$)[1]. The "carbon dioxide equivalent" (CO_2e) is a metric used to express amounts of other gases relative to CO_2, which is the most important GHG. Since GHGs differ in how much heat they each trap in the atmosphere (known as global warming potential, or GWP), CO_2 is used as a base for measurement. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2. Finally, the EO 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: This bill 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: This bill 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."

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 GHG emissions and traffic-related air pollution 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 GHG emission reduction targets.

EO B-55-18 (September 2018): This EO 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

[1] GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

ARB 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.

2.4.2 Environmental Setting

The proposed project is in a rural area, with a primarily natural-resources based agricultural and industrial economy. I-680 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest route that connects to this stretch of roadway is SR-84, 3 miles to the north. Traffic counters are moderate to high and this segment of I-680 is intermittently congested. The Metropolitan Transportation Commission (MTC) is the regional transportation agency that guides transportation development in the project area. The Alameda County General Plan: Community Climate Action Plan 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.

GHG Inventories

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 document GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total GHG emissions from all sectors in 2020 were 5,222 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. Of these, 79 percent were CO_2, 11 percent were CH_4, and 7 percent were N_2O; the balance consisted of fluorinated gases. Total GHGs in 2020 decreased by 21% from 2005 levels and 11% from 2019. The change from 2019 resulted primarily from less demand in the transportation sector during the COVID-19 pandemic. The transportation sector was responsible for 27 percent of total U.S. GHG emissions from 2020, more than any other sector (Figure 3), and for 36% of all CO_2 emissions from fossil fuel combustion. Transportation CO_2 emissions for 2020 decreased 13 percent from 2019 to 2020, but

were 7 percent higher than transportation CO_2 emissions in 1990 (Figure 3) (U.S. EPA 2022b).

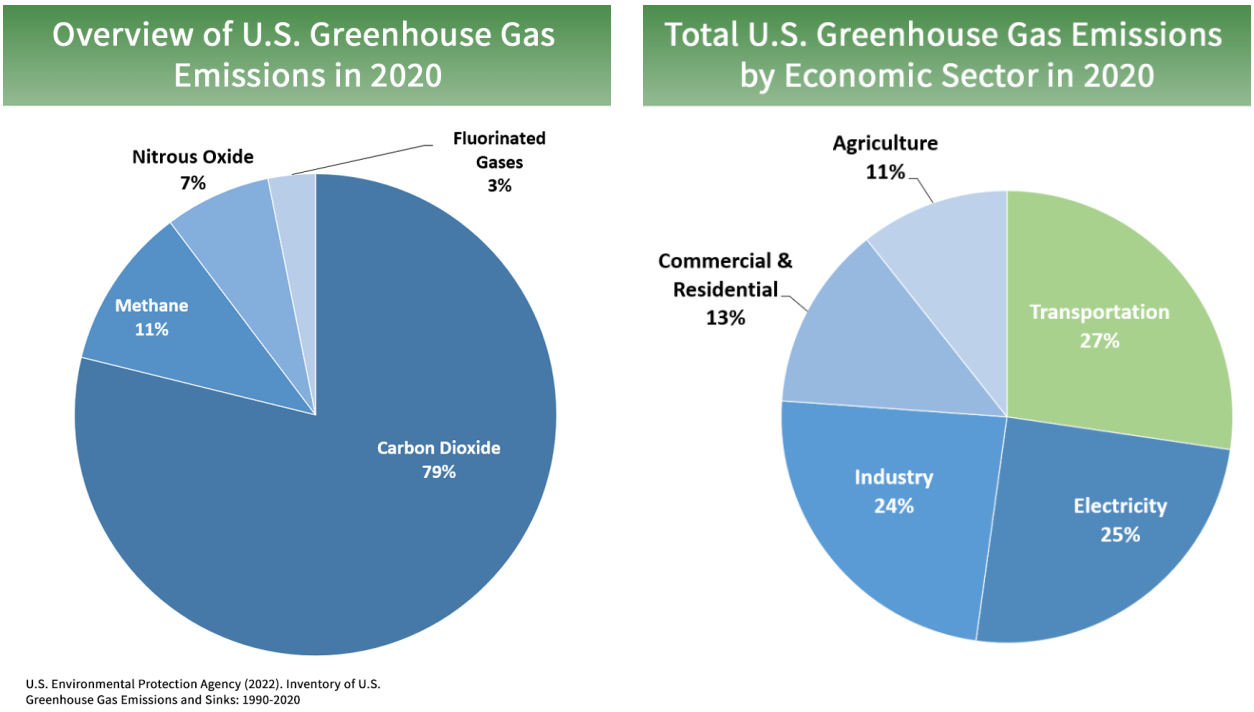

Figure 3. U.S. 2020 Greenhouse Gas Emissions (Source: U.S. EPA 2022b)

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 2022 edition of the GHG emissions inventory reported emissions trends from 2000 to 2020. Total California GHG emissions in 2020 were 369.2 $MMTCO_2e$, a reduction of 35.3 $MMTCO_2e$ from 2019 and 61.8 $MMTCO_2e$ below the 2020 statewide limit of 431 $MMTCO_2e$. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector, during which vehicle miles traveled declined under stay-at-home orders and reductions in goods movement. Nevertheless, transportation remained the largest source of GHG emissions, accounting for 37 percent of statewide emissions (Figure 4). (Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for about 47 percent of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.) California's gross domestic product (GDP) and GHG intensity (GHG emissions per unit of GDP) both declined from 2019 to 2020 (Figure 5). It is expected that total GHG emissions will increase as the economy recovers over the next few years (ARB 2022a).

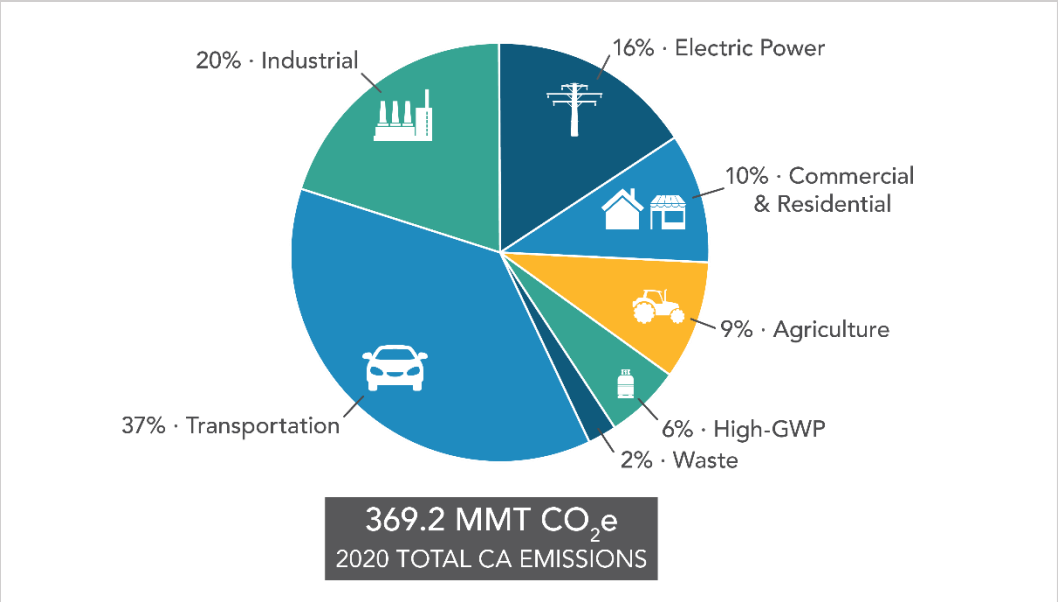

Figure 4. California 2020 Greenhouse Gas Emissions by Scoping Plan Category (Source: ARB 2022a)

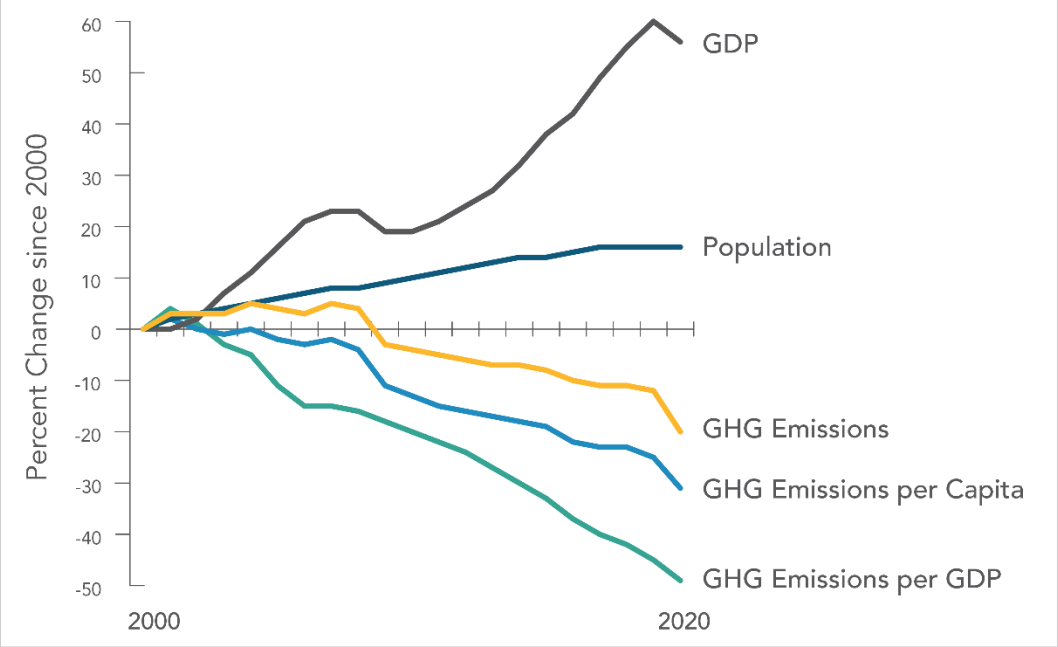

Figure 5: Change in California GDP, Population, and GHG Emissions Since 2000 (Source: ARB 2022a)

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 draft 2022 Scoping Plan Update additionally lays out a path to achieving carbon neutrality by 2045 (ARB 2022b).

Regional Plans

ARB sets regional GHG targets for California's 18 MPOs to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the MTC's RTP/SCS, Plan Bay Area 2050. The regional reduction target for MTC is 19% by 2035 (ARB 2021b).

The 2017 clean air plan, *Spare the Air, Cool the Climate* (BAAQMD 2017), defines strategies for climate protection in the Bay Area that support goals laid out in *Plan Bay Area 2040* (MTC and ABAG 2017). Those goals include transforming the transportation sector to reduce motor vehicle travel, promote zero-emissions vehicles and renewable fuels, adopt fixed- and flexible-route transit services, and support infrastructure and planning that enables a large share of trips by bicycling, walking, and transit.

2.4.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the SHS (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O.A small amount of HFC emissions related to refrigeration is also 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 project is to address structural deficiencies in the Alameda Creek Bridge (#33-0047) on I-680. The proposed project would not increase the number of travel lanes and would result in no increase in VMT. Although some GHG emissions during the construction period would be unavoidable, no significant increase in operational GHG emissions is expected because the proposed project would not increase roadway capacity or VMT.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, 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.

Use of long-life pavement, improved traffic management plans, and changes in materials, can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Based on project information available for environmental studies, the construction-related GHG emissions were calculated using the Road Construction Emissions Model (RCEM), version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that for projected construction duration of eighteen (18) months, the total amount of CO_2 produced due to construction would be 589.06 tons (Table 3).

Table 2-4. Summary of Construction-related GHG Emission Estimates

	PARAMETERS			PROJECT TOTAL
Project Location: Alameda County, I-680 Alameda Creek Bridge (Br. No. 33 0047)	CO_2 (tons)	CH_4 (tons)	N_2O (tons)	CO_2e (metric tons)
TOTAL EMISSIONS	589.16	0.15	0.01	541.06

[1]Gases are converted to CO_{2e} by multiplying by their global warming potential (GWP). Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2).

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.

2.4.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors, to take California into a sustainable, low-carbon and cleaner future, while maintaining a robust economy (ARB 2022d).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) reducing petroleum use by up to 50 percent by 2030; ; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015). OPR later added strategies related to achieving statewide carbon neutrality by 2045 in accordance with EO B-55-18 and AB 1279 (OPR 2022).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 VMT. Reducing today's

petroleum use in cars and trucks by 50% is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

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.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency (2022a) released *Natural and Working Lands Climate Smart Strategy,* with a focus on nature-based solutions.

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.

CLIMATE ACTION PLAN FOR TRANSPORTATION INFRASTRUCTURE

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which accounts for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

CALIFORNIA TRANSPORTATION PLAN

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plans' climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates

how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

CALTRANS STRATEGIC PLAN

The *Caltrans 2020-2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

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 Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level GHG Reduction Strategies

The following measures will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project:

- Construction contractors will comply with Caltrans Standard Specifications to comply with all federal, state, and local air quality requirements, such as proper construction vehicle maintenance and idling instructions. Measures that reduce vehicle emissions also help reduce GHGs.
- During construction, if feasible, the project will use solar-powered signal boards, which have reduced GHG emissions from energy consumption.
- A TMP will be developed to alleviate and minimize delays to the traveling public and potential emissions from idling traffic.

2.4.5 Adaptation

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 *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, and consideration of risk reduction, and implications under different mitigation pathways."

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). The U.S. DOT Climate Action Plan of August 2021 followed up with a statement of policy to "accelerate reductions in greenhouse gas emissions from the transportation sector and make our transportation infrastructure more climate change resilient now and in the future," following this set of guiding principles (U.S. DOT 2021):

- Use best-available science
- Prioritize the most vulnerable
- Preserve ecosystems
- Build community relationships
- Engage globally

U.S. DOT developed its climate action plan pursuant to the federal EO 14008, *Tackling the Climate Crisis at Home and Abroad* (January 27, 2021). EO 14008 recognized the threats of climate change to national security and ordered federal government agencies to prioritize actions on climate adaptation and resilience in their programs and investments (White House 2021).

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. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77% increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67% of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm even will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued EO S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 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. This EO also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk*

(Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the *California Climate Adaptation Strategy,* incorporating key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy, Wildfire and Forest Resilience Action Plan, Water Resilience Portfolio,* and the CAPTI (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2022b).

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.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. 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 (Climate Change Infrastructure Working Group 2018).

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

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 guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

SEA LEVEL RISE ANALYSIS

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

Reference was made to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06001C0460G dated August 3, 2009, that encompasses the project. Based on this FIRM, the proposed project work is within a base floodplain.

At Alameda Creek Bridge, the creek overtops its banks and floods in the vicinity of the bridge. The floodplain is identified as zone AE which denotes a base floodplain with elevations determined. The base flood elevation is 247 feet.

The proposed work does not increase impervious areas nor place additional fill in the identified floodplain. The proposed work, therefore, is not expected to result in any negative impacts to this floodplain.

WILDFIRE

The project area traverses low Fire Hazard Severity Zones in a State Responsibility Area (SRA), as designated by the California Department of Forestry and Fire Protection. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction.

Chapter 3 Comments and Coordination

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 (AMMs and MMs) 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. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

The Draft IS with Proposed Mitigated Negative Declaration (MND) for the I-680 Alameda Creek Bridge Scour Repair Project was released on October 5, 2022 for public review and comment. The Draft IS/MND was circulated to the public for 30 days, beginning on October 5, 2022 and ending on November 4, 2022.Caltrans published a Notice of Availability (NOA) for the project on October 5, 2022 via a quarter-page ad that was ran in the Valley Times. Caltrans also attended the Sunol Citizens' Advisory Committee Council Meeting on November 16, 2022 to present the Draft IS/MND and provide an overview of the project to the Council.

3.0 Agency Coordination

3.0.1 California Department of Fish and Wildlife

Caltrans initiated technical assistance with CDFW on June 21, 2022. An Incidental Take Permit will be required for CTS. The ITP will be submitted to CDFW following environmental document certification.

Coordination with CDFW for the 1602 Lake and Streambed Alteration Agreement will begin after environmental document certification.

3.0.2 Native American Heritage Commission

The NAHC was contacted on February 4, 2021 by email requesting a search of the Sacred Lands File for any Native American cultural resources within the project area. The NAHC responded on February 23, 2021, stating no sacred sites were identified within the project area and providing a list of interested individuals and groups.

Formal notification under Section 106 and AB 52 began with Native American consultation initiation letters sent to individuals on February 24, 2021. Letters were sent by email, to Chairperson Irene Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista; Chairperson Tony Cerda of the Costanoan Rumsen Carmel Tribe; Chairperson Ann Marie Sayers of the Indian Canyon Mutsun Band of Costanoan; Kanyon Sayers-Roods of the Indian Canyon Mutsun Band of Costanoan; Vice Chairwoman Monica Arellano of the Muwekma Ohlone Indian Tribe of the SF Bay Area;

Chairperson Katherine Perez of the North Valley Yokuts Tribe; Andrew Galvan of the Ohlone Indian Tribe; Chairperson Corinna Gould of the Confederated Villages of Lisjan; and Chairperson Dee Dee Ybarra of the Rumsen Am:a Tur:ataj Ohlone.

Chairperson Cerda responded by email on March 9, 2021 and stated they received our email. Chairperson Gould responded by email on March 3, 2021 and stated they wished to be contacted if there were any cultural resources found at the project area. Ms. Sayers-Roods responded by email on March 2, 2021 and stated the area was sensitive and requested a monitor be on site. Ms. Sayers-Roods was responded to about the concerns for the area.

3.0.3 National Marine Fisheries Service

Caltrans initiated technical assistance/consultation with NMFS on June 21, 2022. Caltrans will submit a Biological Assessment to NMFS after environmental document circulation.

3.0.4 San Francisco Bay Regional Water Quality Control Board

Caltrans Water Quality started early coordination with the San Francisco Bay RWQCB on June 21, 2022. Consultation is ongoing, and a permit application will be submitted to the RWQCB during the detailed design phase.

3.0.5 U.S. Army Corps of Engineers

The proposed project will affect waters of the United States as defined in Section 404 of the CWA. A permit application will be submitted to USACE during the detailed design phase.

3.0.6 U.S. Fish and Wildlife Service

The Information for Planning and Conservation online tool was used to generate a species list from the Sacramento Office of the USFWS for the project area on December 27, 2022. Caltrans initiated technical assistance with USFWS on June 21, 2022. Caltrans will submit a Biological Assessment to USFWS after environmental document circulation.

3.1 Comments Received and Responses

Caltrans filed a Notice of Completion for the Draft IS with Proposed MND with the State Clearinghouse on October 5, 2022. The filing of the Notice of Completion began a public review and comment period that extended from October 5, 2022 through November 4, 2022. State and local agencies, organizations, and members of the public submitted comments. Each comment letter or email that was received was reviewed, and substantive comments were identified. The comments that were received and the responses to those comments are presented in Appendix H.

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Chapter 4 List of Preparers

This document was prepared by the following Caltrans staff and consultants:

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Chapter 5 Distribution List

Federal Agencies

Environmental Protection Agency,
Region 9 (Pacific Southwest)
Public Affairs Office
75 Hawthorne Street
San Francisco, CA 94105

National Marine Fisheries Service
North Central Coast Office
777 Sonoma Avenue, Room 325
Santa Rosa, CA 95404

U.S. Army Corps of Engineers
San Francisco District
450 Golden Gate Avenue, 4th Floor
San Francisco, CA 94102

U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

State Agencies

California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

California Department of Conservation
801 K Street, MS 24-01
Sacramento, CA 95814

California Department of Fish & Wildlife,
Region 3
2825 Cordelia Rd #100
Fairfield, CA 94534

California Department of Parks and
Recreation
Natural Resources Division
P.O. Box 942836
Sacramento, CA 94296

California Department of Water
Resources
P.O. Box 942836
Sacramento, CA 94236-0001

California Highway Patrol
Attn: Special Projects Section
4999 Gleason Drive
Dublin, CA 94568

California Office of Emergency Services
Public Safety Communications Office
601 & 630 Sequoia Pacific Boulevard
Sacramento, CA 95811

California Office of Historic Preservation
1416 Ninth Street, Room 1442
Sacramento, CA 95814

State Agencies – continued

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

California State Lands Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

California Transportation Commission
1120 N Street, Room 2221, MS-52
Sacramento, CA 9581

Department of Toxic Substances Control
P.O. Box 806
1001 I Street
Sacramento, CA 95814-2828

Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95814

State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

State Historic Preservation Officer
California Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 9581

Regional Agencies

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604

Bay Area Air Quality Management District
375 Beale Street Suite 600
San Francisco, CA 94105

East Bay Regional Parks District
2950 Peralta Oaks Court
P.O. Box 5381
Oakland, CA 94605

Metropolitan Transportation Commission
375 Beale Street, Suite 700
San Francisco, CA 94105

San Francisco Public Utilities Commission
525 Golden Gate Avenue
San Francisco, CA 94102

San Francisco Regional Water Quality Control Board, Region 2
1515 Clay St., Suite 1400
Oakland, CA 94612

Local Agencies

Alameda County Planning Commission
224 W. Winton Avenue, Room 111
Hayward, CA 94542

Alameda County Department of Public Works
399 Elmhurst Street
Hayward, CA 94545

Alameda County Transportation Commission
1111 Broadway Ave., Suite 800
Oakland, CA 94607

Sunol Citizens' Advisory Council
County of Alameda Administration Building
1221 Oak Street, #536
Oakland, CA 94612

Federal Elected Officials

The Honorable Dianne Feinstein
United States Senate
One Post Street
Suite 2450
San Francisco, CA 94104

The Honorable Alex Padilla
United States Senate
333 Bush Street, Suite 3225
San Francisco, CA 94104

The Honorable Eric Swalwell
United States House of Representatives (CA-15
3615 Castro Valley Boulevard
Castro Valley, CA 94546

State Elected Officials

The Honorable Steven M. Glazer
California State Senate District 7
420 West Third Street
Antioch, CA 94509

The Honorable Bill Quirk
California State Assembly District 20
22320 Foothill Boulevard, Suite 540
Hayward, CA 94541

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Appendix A. Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

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Making Conservation a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures "*No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.*"

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi .

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B. Summary of Project Features, Avoidance and Minimization Measures, and Mitigation Measures

Avoidance and minimization measures (AMMs) and proposed compensatory mitigation measures (MMs) for biological resources for the project are listed below. For detailed descriptions of the following measures, refer to the appropriate topic section in Chapter 2.

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate time, the following mitigation program would be implemented: During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Some measures may apply to more than one resource area. Duplicative or redundant measures have not been listed.

Project Features

PF AES-1: Protect mature vegetation to the maximum extent feasible in order to preserve the scenic quality of the existing landscape.

PF AES-2: Plan contractor staging and operations to protect and preserve naturalized annual grassland and sporadic shrubs to the maximum extent feasible.

PF AES-3: After construction, treat areas cleared for contractor access and trenching operations with appropriate erosion control measures where required.

PF AES-4: Provide replacement highway planting, if warranted, in all areas of highway planting removal where ROW allows. Where replacement planting is not possible at the removal location, provide replacement in adjacent planting areas along the project corridor.

PF BIO-1: Permits. Caltrans would include a copy of all relevant permits within the construction bid package of the proposed project. The Resident Engineer (RE) or their designee would be responsible for implementing the Conservation Measures and Terms and Conditions of all relevant permits.

PF BIO-2: Biological Monitor Approval. Caltrans would submit the names and qualifications of the biological monitor(s) for agency approval prior to initiating construction activities for the proposed project. Only agency-approved biological monitors will implement the monitoring duties outlines in the USFWS BO and

CDFW ITP including delivery of the Worker Environmental Awareness Training Program.

PF BIO-3: Biological Monitoring. The agency-approved biologist(s) would be on-site during initial ground-disturbing activities, the installation and removal of creek diversion, and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) would keep copies of applicable permits in their possession when on-site. Through the RE or their designee, the agency-approved biologist(s) would be given the authority to communicate either verbally, by telephone, email or hard copy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the RE or their designee, the agency-approved biologist(s) would have the authority to stop project activities to minimize take of listed species or if they determine that any permit requirements are not fully implemented. If the agency-approved biologist(s) exercises this authority, the agencies must be notified by telephone and email within 48 hours.

PF BIO-4: Worker Environmental Awareness Training. All construction personnel would attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project. The program will focus on the conservation measures that are relevant to employee's personal responsibility and will include an explanation as how to best avoid take of sensitive species. Disturbed materials will include a pamphlet with distinguishing photographs of sensitive species, species' habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and will be available on request.

PF BIO-5: Preconstruction Surveys. Prior to any ground disturbance, preconstruction surveys would be conducted by an agency-approved biologist for listed species. These surveys would consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The biologist(s) would investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the project limits would be documented and allowed to leave on their own or relocated to an adequate cover site in the vicinity.

PF BIO-6: Prevention of Wildlife Entrapment. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees would be covered at the close of each working day by plywood or similar materials. Alternatively, an additional four-foot-high vertical barrier, independent of exclusionary fences, would be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional four-foot-high

vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will relocate the animal outside the limits of construction in accordance with agency established protocol. Special-status species that do not have formal USFWS, CDFW, or NMFS take covered cannot be relocated. In such cases, CDFW, USFWS, or NMFS would be contacted by telephone for guidance. CDFW, USFWS, or NMFS would be notified of the incident by telephone and electronic mail within 48 hours.

PF BIO-7: Environmentally Sensitive Area Fencing. The limits of construction zones within suitable habitat for listed species would be delineated with high visibility environmentally sensitive areas (ESA) fencing at least four feet in height to prevent wildlife from accessing the construction footprint. The fencing would be removed only when all construction equipment is removed from the site. No project activities would occur outside the delineated PCA. ESA fencing is not required for construction activities occurring outside of suitable habitat for listed species.

PF BIO-8: Special-Status Species On-Site. The RE would immediately contact the agency-approved project biologist(s) if a special-status species is observed within a construction zone. The RE would suspend construction activities within a 50-foot radius of the animal until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.

PF BIO-9: Work Windows for Nesting Birds. To the extent practicable, clearing and grubbing activities should not occur within the bird nesting season (February 1 to September 30). When it is necessary to conduct clearing during the nesting season, preconstruction surveys will be conducted within the BSA prior to clearing and grubbing of vegetation.

PF BIO-10: Preconstruction Surveys for Nesting Birds. Preconstruction surveys for nesting birds would be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to September 30). If preconstruction surveys indicate the presence of nests of any special-status species, USFWS will be consulted to determine the appropriate buffer area to be established around the nesting site for the duration of the breeding season.

PF BIO-11: Non-Disturbance Buffer for Nesting Birds. If work is to occur within 300 feet of active raptor nests or 50 feet of active passerine nests, a non-disturbance buffer would be established at a distance sufficient to minimize

disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance.

PF BIO-12: Preconstruction Surveys for Roosting Bats. Emergence surveys for roosting bats would be conducted by a qualified biologist at least 2 years prior to the start of construction. If bats are discovered to be using the bridge as a day roost, a bat exclusion plan will be developed and implemented in coordination with CDFW.

PF BIO-13: Material Storage. All construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.

PF BIO-14: Water Quality Inspection. Water quality inspector(s) would inspect the site after a rain event to ensure that the stormwater BMPs are adequate.

PF BIO-15: Vehicle Use. Project employees would be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

PF BIO-16: Night Lighting. Artificial lighting of the proposed BSA during nighttime hours would be minimized to the maximum extent practicable and would be shielded and pointed away from sensitive resources.

PF BIO-17: Trash Control. All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a day from the work area.

PF BIO-18: Firearms. No firearms would be allowed in the PCA except for those carried by authorized security personnel, or local, state, or federal law enforcement officials.

PF BIO-19: Pets. To prevent harassment, injury, or mortality of sensitive species, no pets would be permitted on the project site.

PF BIO-20: Caltrans Standard Best Management Practices (BMPs). The potential for adverse effects to water quality would be avoided by implementing temporary and permanent BMPs outlined in Section 13.2 of the 2019 Caltrans Standard Specifications. Caltrans erosion control BMPs would be used to minimize any wind or water-related erosion. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project, as one is required for all projects that have at least one acre of soil disturbance. The SWPPP complies with the

Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP would reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges, and can be found at the following website: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

Protective measures would be included in the contract, including, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocky temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and re-seeded with a native mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species.

PF BIO-21: Prohibition of Monofilament Erosion Control. Plastic mono-filament netting (erosion control matting) or similar material would not be used for the project because CRLF and CTS may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

PF BIO-22: Concrete Waste and Stockpiles. All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.

PF BIO-23: Revegetation Following Construction. All areas that are temporarily affected during construction would be revegetated with an assemblage of native grass, shrub, and trees as appropriate. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant to Executive Order 13112.

PF CULT-1: If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' OCRS will be called. A Caltrans OCRS qualified archaeologist will assess the remains and, if determined human, will contact the County Coroner as per Public Resources Code (PRC) Sections 5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC) who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

PF Energy-1: Minimize Energy Consumption from Construction Activities. The use of construction BMPs would minimize energy consumption from construction activities, including, but not limited to: (1) limit idling of vehicles and equipment; (2) use solar power as a power source, if feasible; (3) ensure regular maintenance of construction vehicles and equipment; and (4) if feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite

PF HAZ-1: Caltrans Standards will be followed for the proper handling and disposal of any unanticipated hazardous waste discovered during construction.

PF HAZ-2: The project will implement BMPs according to special provision 12-11.09 "Minimal Disturbance of Regulated Material Containing ADL."

PF HYDRO-1: Standard BMPs. The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind- or water-related erosion. BMPs to be implemented within the project area will include, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning will be allowed into storm drains or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.

c. Concrete wastes will be collected in washouts, and water from curing operations will be collected, disposed of, and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
e. Coir rolls will be installed along or at the base of slopes during constructions to capture sediment, and temporary organic hydro-mulching would be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and reseeded with a native seed mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas.

PF HYDRO-2: During construction, a silt fence will be used to intercept and slow the flow of sediment-laden sheet flow runoff. A silt fence is a temporary linear sediment barrier of permeable fabric.

PF HYDRO-3: Prior to commencement of construction activities, a SWPPP will be prepared by the Contractor and approved by Caltrans, in compliance with the requirements of the Regional Water Quality Control Board (RWQCB) as well as the 2018 Caltrans Standard Specifications, Section 13. The SWPPP will provide water pollution control practices to limit storm water and non- storm water discharges; temporary construction BMPs will be used to the maximum extent practicable.

Avoidance, Minimization, and/or Mitigation Measures

AMM BIO-1: Work Window. All work within suitable aquatic habitat for steelhead, California red-legged frog (CRLF) and California tiger salamander (CTS) would occur between June 1 and October 15, when there is less potential for an individual to enter the work area. During this time, California red-legged frog and California tiger salamander would have a lower potential for movements across upland habitat.

AMM BIO-2: Exclusion of Bats from Existing Bridge. If bats are detected prior to the start of construction, a roosting bat exclusion plan would be developed and implemented. At a minimum, this plan should address how one-way exclusion devices would be used to allow bats to safely exit the current bridge prior to joint cleaning and sealing. Specific night bat roost AMMs would be developed through technical assistance with CDFW and bat specialists. Exclusion of bats would

only occur between March 1 to April 15 and August 31 to October 15 to avoid sensitive periods.

AMM BIO-3: Water Diversion Structures. Water diversion would be designed to exclude construction activities from adversely impacting the water quality of Alameda Creek while maintaining flow through the project area. The contractor would be required to submit a Water Diversion Plan to appropriate regulatory agencies for approval prior to construction.

AMM BIO-4: Night Work. To the extent practicable, nighttime work within Alameda Creek would be minimized.

AMM BIO-5: Upland and Riparian Trees. During the design phase of the project, Caltrans Office of Biological Science and Permitting would work with the Caltrans design team to avoid and minimize project impacts to upland and riparian trees. Efforts to preserve trees in place, by designating trees on plan sheets and marking trees with ESA fencing, would be made to avoid or minimize project impacts to trees located in temporary impact areas.

AMM BIO-6: Rock Slope Protection Size and Placement. RSP shall be of an adequate size to create cover and refuge for juvenile salmonids and gravel shall be placed in interstitial areas to create spawning habitat.

AMM BIO-7: Fish Relocation Plan. A fish removal and relocation plan will be prepared and submitted to the regulatory agencies for review and approval at least 60 days prior to the installation of the dewatering system. The plan will include the methodology of capturing and relocating the fish.

AMM HYDRO-1: A temporary creek diversion system will be implemented, and water quality monitoring will be provided when working in the creek.

AMM TRANS-1: Traffic Management Plan. To minimize potential effects from construction activities to motorists, bicyclists, or pedestrians using local streets, a TMP will be developed by Caltrans and implemented throughout construction. The TMP will include public information, motorist information, incident management, construction, and alternate routes. The TMP will also include elements such as detour and haul routes, one-way traffic control, flaggers, and phasing to reduce impacts to local residents as much as feasible and to maintain access to businesses in the local area. The TMP will also provide access for police and emergency service providers.

Mitigation Measures (MMs)

Caltrans proposed to include compensatory mitigation for potential impacts to species listed under FESA and CESA. To develop an appropriate mitigation proposal that meets the regulatory requirements of CEQA and FGC 2081, Caltrans proposes that

compensatory mitigation in the form of habitat restoration and preservation will be provided on-site for temporary habitat impacts at a 1:1 ratio, and off-site at a 3:1 ratio for permanent habitat impacts.

MM BIO-1: Caltrans will compensate for impacts to CRLF habitat through on-site restoration of temporarily affected areas at a 1:1 ratio.

MM BIO-2: To partially mitigate for the elimination of potential CRLF and other amphibian species breeding habitat within the filled scour hole, a low-elevation depression will be created in the new creek alignment between piers 8 and 9. The location and depth of the pool will be determined during the design phase. To fully mitigate, Caltrans will also purchase mitigation credits at a ratio of 3:1.

MM BIO-3: Caltrans will compensate for impacts to CTS habitat through on-site restoration of temporarily affected areas at a 1:1 ratio. To meet the fully mitigated requirements of the CESA, Caltrans will purchase mitigation credits at a 1:1 ratio for temporary impacts to CTS. Multi-species credits may be purchased at an agency-approved conservation bank.

Appendix C. List of Acronyms and Abbreviations

Abbreviation	Definition
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADL	Aerially Deposited Lead
AMM	Avoidance and Minimization Measure
ARB	Air Resources Board
AWS	Alameda Whipsnake
BA	Biological Assessment
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CCC	central California coast
CDFW	California Department of Fish and Wildlife
CE	Categorical Exclusion
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRLF	California red-legged frog
CTP	California Transportation Plan
CTS	California tiger salamander
CWA	Clean Water Act
DP-	Director’s Policy
DSA	Disturbed soil area
ESA	Environmentally Sensitive Area
EO	Executive Order
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FYLF	Foothill yellow-legged frog
GHG	Greenhouse Gas
GWP	Global Warming Potential

HFCs	Hydrofluorocarbons
HOV	High Occupancy Vehicle
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ITP	Incidental Take Permit
LOC	Letter of Concurrence
MM	Mitigation measure
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
mph	Miles per hour
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
N_2O	Nitrous oxide
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OCRS	Office of Cultural Resource Studies
PCA	Project Construction Area
PCE	Primary Constituent Elements
PM	Post mile
PQS	Professionally Qualified Staff
PRC	Public Resources Code
RCEM	Road Construction Emissions Model
ROW	Right-of-way
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	Sulfur hexafluoride
SFPUC	San Francisco Public Utilities Commission
SHPO	State Historic Preservation Officer
SLR	Sea-level rise
SR-	State Route
SRA	State Responsibility Area
SWPPP	Stormwater Pollution Prevention Plan

TCE	Temporary Construction Easement
TMP	Traffic Management Plan
US-	United States Highway
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USGCRP	U.S Global Change Research Program
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle miles traveled
WPT	Western Pond Turtle

Appendix D. U.S. Fish and Wildlife Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2022-0026827
Project Name: 0P910 Alameda Creek Bridge Scour

December 27, 2022

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, 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)

Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP would reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges, and can be found at the following website: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

Protective measures would be included in the contract, including, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocky temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and re-seeded with a native mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species.

PF BIO-21: Prohibition of Monofilament Erosion Control. Plastic mono-filament netting (erosion control matting) or similar material would not be used for the project because CRLF and CTS may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

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:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0026827
Project Name: 0P910 Alameda Creek Bridge Scour
Project Type: Bridge - Maintenance
Project Description: The California Department of Transportation (Caltrans) proposes the Interstate 680 (I-680) Alameda Creek Bridge Scour Mitigation Project (Project) to rehabilitate the bridge deck and mitigate scour on the Alameda Creek Bridge (Bridge No. 33-0047). The Project is located from post mile (PM) R10.15 through R10.16 in the city of Sunol in Alameda County. The Project will include replacing existing asphalt concrete (AC) with polyester concrete, cleaning and replacing existing joint seals, and mitigating scour by placing rip rap around piers 8 and 9 of the bridge. The project also proposes to replace the structure approach slabs and their median barriers in both directions. The proposed project would result in impacts to Alameda Creek and natural habitat located along I-680 and would require the use of a creek diversion to provide a dry working environment in the creek.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.5776609,-121.8779709481359 5,14z

Counties: Alameda County, California

Endangered Species Act Species

There is a total of 13 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 Fisheries[1], 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.

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
Salt Marsh Harvest Mouse *Reithrodontomys raviventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Contra Costa Goldfields *Lasthenia conjugens*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7058

Critical habitats

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

IPaC User Contact Information

Agency: California Department of Transportation District 4
Name: Margaret Rousser
Address: 1814 Franklin Street Suite 504
City: Oakland
State: CA
Zip: 94612
Email mrousser@kleinfelder.com
Phone: 5106288106

Lead Agency Contact Information

Lead Agency: Department of Transportation
Name: Matthew Rechs
Email: matthew.rechs@dot.ca.gov

Appendix E. National Marine Fisheries Service Species List

Project Name: I-680 Alameda Creek Bridge Scour Repair Project

Project EA: 04-0P910

Agency: California Department of Transportation111 Grand Avenue Oakland, California 94612

Contact: Margaret Rousser 510-628-8106

Email: Margaret.Rousser@dot.ca.gov

Date: December 27,2022

Quad Name **Niles**
Quad Number **37121-E8**

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

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

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 -

Appendix F. List of Technical Studies

Bathymetric Survey Results. Caltrans Headquarters, Office of Photogrammetry and Preliminary Investigations. Sacramento, CA. March 8, 2022.

Comments from the Hazardous Waste Branch. Caltrans District 4, Office of Environmental Engineering. Oakland, CA. January 12, 2021.

Construction Greenhouse Gas (GHG) Emissions Analysis Memorandum. Caltrans District 4, Office of Environmental Engineering. February 2, 2021.

Energy Analysis Report. Caltrans District 4, Air Quality and Noise Branch, Oakland, CA. May 19, 2021.

Floodplain Encroachment Review. Caltrans District 4, Office of Hydraulics Engineering. Oakland, CA. July 23, 2021.

Geologic and Palaeontologic Analysis for Bridge Rehabilitation. Caltrans District 4, Office of Geotechnical Design. Oakland, CA. September 7, 2021.

Natural Environment Study: Interstate 680 Alameda Creek Bridge Scour Mitigation Project. Caltrans District 4, Office of Biological Sciences and Permits. Oakland, CA. June 22, 2022.

Section 106 Screening Memo for the Bridge Scour Repair Project between Postmiles (PM) R10.15 and R10.16, on Interstate 680, in Alameda County, California. Caltrans District 4, Office of Cultural Resource Studies. Oakland, CA. August 9. 2021.

Section 4(f) Evaluation for the Scour Repair and Deck Rehabilitation of the I-680 Alameda creek Bridge in the Town of Sunol. Caltrans District 4, Office of Environmental Analysis. November 10, 2021.

Visual Impact and Landscape Analysis Memorandum. Caltrans District 4, Office of Landscape Architecture. Oakland, CA. September 1, 2021.

Water Quality Study. Caltrans District 4, Office of Water Quality. Oakland, CA. September 2021.

Appendix G. References

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Appendix H. Responses to Comments on Draft Initial Study with Proposed Mitigated Negative Declaration

Comment 1. Erin Chappell, Regional Manager, California Department of Fish and Wildlife

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State of California
Department of Fish and Wildlife

Memorandum

Date: November 2, 2022

To: Juliane Smith
California Department of Transportation
District 4
111 Grand Avenue Oakland, CA 94623
Juliane.Smith@dot.ca.gov

DocuSigned by:
Erin Chappell
B77E9A6211EF486...

From: Erin Chappell, Regional Manager
California Department of Fish and Wildlife-Bay Delta Region, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534

Subject: Interstate 680 – Alameda Creek Bridge Scour Repair Project, Draft Initial Study with Proposed Mitigated Negative Declaration, SCH No. 2022100088, Alameda County

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Completion (NOC) for the draft Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the Interstate 680 (I-680) Alameda Creek Bridge Scour Repair Project (Project), pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1] CDFW is submitting comments on the draft IS/MND as a means to inform the California Department of Transportation (Caltrans) as the Lead Agency, of our concerns regarding potentially significant impacts to sensitive resources associated with the proposed Project.

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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(CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code. Pursuant to our jurisdiction, CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT LOCATION AND DESCRIPTION

Caltrans proposes scour repair at the Alameda Creek Bridge (Br. No. 33-0047) on I-680 in Alameda County, near the Town of Sunol, from post mile (PM) 10.15 to 10.16. The Project also proposes to reconstruct the median barrier on the approach slab, rehabilitate the bridge deck with polyester concrete in both directions and reconstruct bridge joint seals.

Temporary Creek Diversion/Dewatering

A temporary creek diversion will be installed that consists of two coffer dams, one 50 feet upstream of the work area to prevent inflow, and one 50 feet downstream. A cutoff wall may be necessary to reduce the flow of water through the substrate under the upstream dams. The cutoff wall will consist of a two-foot-deep by two-foot-wide trench spanning the width of the creek with impenetrable material placed below grade to reduce seepage under the dam into the work area.

Scour Repair

The eroded area between piers 8 and 9, 40 feet wide, 20 feet deep, and 27 feet long will be repaired. After the creek channel is diverted, the scour area will be excavated to 5.25 feet; excavated materials will be saved and protected for reuse. A gravel filter system would be installed before placing 3 feet of granular filter material and backfilling with 2.25 feet of rock slope protection (RSP). The Alameda Creek channel will be regraded and shaped to resemble upstream channel conditions. A slight centerline depression in the channel will allow for a low-flow channel to form.

Bridge Structure

The Project will cold plane the bridge deck by removing 1.5-inch asphalt and repaving with 0.75-inch polymer concrete in both directions. The approach slabs at the north and south end of the bridge will be reconstructed. Construction will not extend beyond the limits of the existing paved roadway. New approach slabs will be installed in the same location that the existing approach slabs will be demolished and removed from. As part of the roadway reconstruction, the existing median barrier would be replaced.

Creek Realignment

Alameda Creek will be realigned to the center of bridge piers 8 and 9. The creek bed between piers 8 and 9 will be excavated to a depth of 5.25 feet. A one-to-two-foot layer of clean river cobble will be placed in the excavation to create a new low-flow channel.

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The new low-flow channel will be 950 square feet and designed specifically to improve fish spawning habitat, including deeper pools. All work in the creek will be completed in one construction season.

Staging Area and Access Road

The staging area will be under the bridge deck, between Bent 5 and Bent 7. The bridge deck or mainline shoulder will not be used for storing equipment or materials for work in the creek. Preparation of the area will include clearing and grubbing. Gravel will then be placed on top of a filter fabric on the unpaved portions of the construction staging area. Heavy equipment, such as excavators or bobcats, will enter the staging area. Staging areas will be restored within one year. The staging area would be restored to existing conditions upon completion of the Project.

Revegetation and Channel Restoration

Tree and vegetation removal will be minimized to the maximum extent feasible. Trees and vegetation outside of clearing and grubbing limits will be protected from operations, equipment, and materials storage. In areas of temporary construction impact, appropriate replacement native vegetation will be planted within Caltrans right-of-way (ROW).

REGULATORY AUTHORITY

Lake and Streambed Alteration Agreement Notification

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et. seq., for or any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank (including associated riparian or wetland resources); or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are generally subject to notification requirements.

Fish and Game Code 5901

Except as otherwise provided in this code, it is unlawful to construct or maintain in any stream in Districts 1, 138, 112, 178, 2, 214, 212, 234, 3, 312, 4, 418, 412, 434, 11, 12, 13, 23, and 25, any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream.

Fully Protected Species

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except for collecting these species for necessary scientific research and relocation of a fully protected bird species for the protection of livestock. Take of any fully protected species is prohibited, and CDFW cannot authorize

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their take in association with a general project except under the provisions of a Natural Communities Conservation Plan (NCCP), 2081.7 or a Memorandum of Understanding for scientific research, including efforts to recover fully protected, threatened or endangered species. "Scientific Research" does not include an action taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code.

California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, and CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code, section 2080. More information on the CESA permitting process can be found on the CDFW website at https://www.wildlife.ca.gov/Conservation/CESA.

COMMENTS AND RECOMMENDATIONS

COMMENT 1: Project Design Analysis and Coordination

General Recommendation: Engage in early coordination with CDFW Conservation Engineering Staff and Habitat Conservation Staff for in-channel and proposed aquatic habitat designs to ensure the Project is developed in compliance with Fish and Game Code §5901 and Streets and Highway Code §156.3 – §156.4:

1.1 **Recommendation 1 – Design Coordination:** Early coordination with CDFW Habitat Conservation Program and Conservation Engineering Branch is recommended to provide review and analysis of any proposed staging, access roads, structures or Project elements with the potential to impact fish and wildlife resources. CDFW Conservation Engineering Branch should be provided engineered drawings, a basis of design report and Project specifications during the initial design process, prior to design selection and re-initiating design consultation at 30% design at minimum and through the permitting process for review and comment as identified in the Interagency Agreement (Agreement Number 43A0398).

Recommendation 2 – Site-Specific Stream Analysis: LSA Notification will be needed for the Project and the hydraulic analysis as summarized within the basis of design

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report above should be submitted when Notification is provided. CDFW recommends the hydraulic analysis include field measurements using cross-section stations twenty to thirty times the overbank channel width upstream and downstream of the bridge. Each cross section should occur in at least twenty-foot intervals upstream and downstream of the Alameda Creek bridge as the center point.

Recommendation 3 – Adult and Juvenile Salmonid Fish Passage: Project design for adult and juvenile salmonid passage should meet requirements from the California Salmonid Stream Habitat Restoration Manual, Part XII - Fish Passage Design and Implementation (CDFW, 2009). Specifically, the stream simulation design approach should be evaluated for feasibility to mimic natural conditions up and downstream the Project location. A major advantage to the stream simulation design approach is hydraulic modeling for the determination of fish passage hydraulic criteria (fish passage
1.1 cont. design flows, maximum velocities, minimum depths, dissipation of turbulence, etc.) for adult and juvenile salmonids is not required. Hydraulic characteristics under the bridge structure should simulate a natural streambed and achieve the same passage conditions as the natural channel for aquatic organisms such as salmonids (CDFW, 2009).

Recommendation 4 – Fish Spawning Gravel and Gravel Filter Design: Proposed granular filter design should be coordinated closely with CDFW Conservation Engineering Staff and follows the principles outlined in the *Federal Highway Administrations' Hydraulic Engineering Circular No. 23 (HEC-23) - Bridge Scour and Stream Instability Countermeasures-Third Edition Volume 2* (Lagasse et al, 2009) and *Caltrans' Design Information Bulletin No. 87-01 – Hybrid Streambank Revetments* (Caltrans, 2014) for design guidance on granular filter designs. Fish spawning gravel size selection should also be conducted in close coordination with CDFW. Gravel should consist of clean, creek-run rock, 0.25 to 10.2 centimeters in size, but site-specific gravel size should be determined by site specific conditions in coordination with CDFW.

COMMENT 2 – Bridge Runoff and Capture Systems

Issue: The Project could increase impervious surfaces at the Project site that can cause concentrated run-off into Alameda Creek. The Project currently proposes no system to contain roadway runoff before it enters Alameda Creek. Impervious surfaces, stormwater systems, and storm drain outfalls have the potential to significantly affect fish and wildlife resources from polluted water and by altering the hydrograph of natural streamflow
1.2 patterns via concentrated run-off that enters creeks and systems from the road.

Evidence the impact would be significant: Urbanization (e.g., impervious surfaces, stormwater systems, storm drain outfalls) can modify natural streamflow patterns by increasing the magnitude and frequency of high flow events and storm flows (Hollis 1975, Konrad and Booth 2005). A review by Eisler (1987) indicates elevated incidence of tumors and hyperplastic diseases, and some circumstantial evidence about cancers, in fish in areas with high sediment Polycyclic Aromatic Hydrocarbon (PAH) levels.

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Arsenic, cadmium, chromium, lead, mercury, nickel, and zinc have been detected in streambed sediments and Stormwater Runoff from Bridges in the tissue of fish, indicating bioaccumulation of these metals in the environment (MacCoy and Black, 1998). Lead concentrations in benthic insects, and nickel and cadmium levels in certain fish were found to be related to traffic density and sediment levels of these constituents (Van Hassel, 1980). Acute toxicity and mortality have also been tied to immediate road runoff from a compound occurring in tires, 6PPD-Quinnone (Tial, 2021).

Recommendation 1 – Bridge Capture Runoff System: The Project design should include a bridge capture runoff system to prevent direct runoff of untreated water on the bridge decks from entering Alameda Creek. The bridge runoff system should direct runoff to a land-based bio-filtration system or a mechanical filter system to avoid, minimize and treat any discharge water.

1.2 cont.

Recommendation 2 – Bridge Material Capture System: The Project Description should include additional details about the impacts created by the temporary scaffold to bed, bank, channel or riparian habitat and provide a detailed description of the additional avoidance and minimization measures to be employed that will prevent material from entering the Old River.

Recommended Measure – Concrete Monitoring: A concrete monitor shall be on-site during all concrete pours that have the potential for material to enter Alameda Creek. The monitor shall have the authority to halt construction if necessary to prevent pollution. No pouring of concrete shall occur at night. If curing compounds are proposed on-site, they shall be approved in advance by CDFW and follow the curing periods on the product label. A concrete pour monitoring log shall also be kept that notes the date, time, type of concrete and quantity of concrete installed. A concrete spill plan shall also be developed in advance of construction for CDFW review and approval.

COMMENT 3: Site-Specific Impact Analysis and Enhancements

Issue: The IS/MND describes Caltrans intent to off-set impacts from filling existing scour pools in Alameda Creek by "creating a new low-flow channel designed specifically to improve fish spawning habitat, including deeper pools…" CDFW is unclear what creation of deeper pools specifically means. The IS/MND describes the scour pool as low-quality breeding habitat for California red-legged frog (CRLF) and other amphibian species but does not provide a rationale for this characterization. A more detailed biological assessment of the scour pools habitat value is needed to understand potential Project impacts to instream resources. Similarly, more detailed information about the proposed mitigation is required in order for CDFW to determine if the habitat values have been enhanced or maintained. CDFW is concerned the mitigation as proposed could result in a net-loss of stream resources by reducing or changing aquatic habitat complexity, stream depths and/or velocities.

1.3

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Evidence the Impact Would be Significant: Instream pools provide different habitat function and value to aquatic resources than riffles used for fish spawning. Pools create habitat complexity that is important for common and special status amphibians and other aquatic life, particularly during low flow periods. Pools are typically the deepest instream features where water remains in stream during dry season for amphibians and other species to complete their life cycle. Although pools beneath bridge and other infrastructure may be created by scour, over-time they can become naturalized to the surrounding environment.

Recommendations: Snorkel surveys should be performed at the existing scour pool to document species diversity and abundance during spring and summer months. In addition, field measurements of the existing scour pool should be taken to determine its water volume. The IS/MND should provide the results of field surveys and measurements and also include a description of the existing pool feature history. The IS/MND should also explain in more detail what creation of deeper pools entails and if it they will exceed the dimensions and habitat value of currently existing pools or if there will be a net loss of available aquatic habitat.

1.3 cont.

Recommendation for Project Impacts to Fish and Wildlife Resources 1: Restoration and Mitigation Planning: CDFW strongly recommends that the lead agency develop a mitigation plan in coordination with CDFW for any permanent Project impacts that cannot be avoided that will be subject to LSA or CESA related permitting and include that plan as part of the updated IS/MND. The mitigation plan should include in detail any proposed on and/or off-site mitigation needs necessary to compensate for net-loss of river or stream resources including but not limited to the bed, bank, channel, upland riparian habitat and scour pools. CDFW recommends the Project incorporate large woody debris and bio-engineering concepts over rock and other hard-scape designs to the greatest extent feasible. CDFW also recommends proposed mitigation plan(s) include details such as engineered design drawings, mitigation location(s), proposed actions, monitoring, success criteria and any corrective actions.

Recommendation for Project Impacts to Fish and Wildlife Resources 2: Night-Work Analysis: The IS/MND should identify the proposed number of nights necessary to complete work in order to adequately avoid impacts to nocturnal species such as amphibians that have the potential to occur at this site.

COMMENT 4: Bat Assessment and Avoidance

Issue: The proposed work has the potential to result in the permanent and temporary impacts to roosting bats. If there is a permanent loss of roosting area within the bridge structure that results from sealing joints and repairing the bridge this may represent a potentially significant impact to bats at this location.

1.4

Evidence the impact would be significant: Ninety three percent of the rare bats in California either use or are likely to use bridges. A total of 18 species use bridges in one

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way or another (Erickson, 2002). According to the California National Diversity Database (CNDDB), potentially suitable habitat exists within the Project for species such as; pallid bat (*Antrozous pallidus*), Yuma myotis (*Myotis yumanensis*) and Townsends big-eared bat (*Corynorhinus townsendii)* (CNDDB, 2022). Pallid bats and many myotis species utilize bridges as day roosts, night roosts and are commonly found on bridges (Erickson, 2002). Modification of bridges may reduce the number of, or restrict the range of bats at this site.

Recommended Mitigation Measure 1 – Bat Habitat Assessment: Investigations, analysis and focused surveys should begin a minimum of two years in advance of Project initiation. A qualified biologist should conduct a habitat assessment within the Project limits for suitable bat roosting habitat. The habitat assessment shall include a visual inspection, sound analysis survey and night roost exit survey. The surveys should focus on the bridge and features within 200 feet of the work area for potential roosting features including trees, crevices, portholes, expansion joints and hollow areas (bats need not be present). The IS/MND should also include a section that discusses the results of the suitable habitat assessment and if any bats or signs of bats (feces or staining at entry/exit points) are discovered.

1.4 cont.

Recommended Mitigation Measure 2 – Bat Habitat Monitoring: If potentially suitable bat roosting habitat is determined to be present a qualified biologist shall conduct focused surveys at the bridge utilizing night-exit survey methods, sound analyzation equipment methods and visual inspection from March 1 to April 15 or September to October 15 prior to construction activities. If the focused survey reveals the presence of roosting bats, then the appropriate exclusionary or avoidance measures will be implemented prior to construction during the period between March 1 to April 15 or September 11 to October 15. Potential avoidance methods may include temporary, exclusionary blocking, one way-doors or filling potential cavities with foam. Methods may also include visual monitoring and staging of work at different ends of the Project to avoid work during critical periods of the bat life cycle to allow roosting habitat to persist undisturbed throughout the course of construction. Exclusion netting or adhesive roll material shall not be used as exclusion methods. If presence/absence surveys indicate bat occupancy, then construction should be limited from occurring during the species maternity period.

Recommended Mitigation Measure 3 – Permanent and Temporary Bat Structures: Temporary structures should be installed at the site provide habitat for the timeframe when access to the bridge is excluded until construction is complete. If structures within the bridge utilized for roosting are permanently altered as a result of construction the lead agency should design and install permanent roost structures on the bridge in coordination with CDFW. Please reference the *Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions Manual* (H.T. Harvey, 2019) for more information.

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CONCLUSION

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California's fish and wildlife resources. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

Questions regarding this letter or further coordination should be directed to Mr. Robert Stanley, Senior Environmental Scientist (Specialist), at (707) 339-6534 or Robert.Stanley@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

cc: State Clearinghouse #2022100088

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Response to Comment 1.1

The Caltrans project development team recognizes that impacts to fish and wildlife could result from construction of the project. Caltrans is in consultation with USFWS, NMFS, and CDFW to address those concerns and to create a design that will minimize impacts to fish and wildlife resources.

Caltrans will consider the recommended measures, as appropriate. Responses to specific measures cited in Comment 1.1 can be found below:

Recommendation 1 – Design Coordination

Technical assistance meetings were conducted on June 21, 2022 with Rob Stanley, CDFW Caltrans Liaison, and on July 15, 2022 with Ashok Bathulla, CDFW Senior Hydraulic Engineer. Caltrans will follow the recommendations of the Fish Passage Design for Road Crossings manual, share design plans when available, and continue communication and coordination with CDFW through the project design and construction phases.

Recommendation 2 – Site-Specific Stream Analysis

A bathymetric survey and a geomorphological study have been conducted. LSA notification is planned during the design phase. Consultation with CDFW will continue during the design phase.

Recommendation 3 – Adult and Juvenile Salmonid Fish Passage

A bathymetric survey and a geomorphological study have been conducted. Caltrans hydraulics engineers and biologists will use these studies in coordination and consultation with CDFW engineers and Caltrans Liaison.

Recommendation 4 – Fish Spawning Gravel and Gravel Filter Design

Caltrans intends to follow the recommended guidelines with considerations for site-specific conditions. CDFW will be consulted during the design phase.

Response to Comment 1.2

The Caltrans project development team recognizes the possible impacts to fish and wildlife resources that could result from concentrated run-off into Alameda Creek. However, with the implementation of PFs and AMMs, polluted water would be treated and prevented from running directly into the creek. These measures can be found in Appendix B of this document (PF HYDRO-1, PF HYDRO-2, PF HYDRO-3, AMM BIO-3). Caltrans is in consultation with USFWS, NMFS, CDFW, USACE and the RWQCB to address those concerns and to create a design that will minimize impacts to fish and wildlife resources.

Caltrans will consider the recommended measures, as appropriate. Responses to specific measures cited in Comment 1.2 can be found below:

Recommendation 1 – Bridge Capture Runoff System

Caltrans will explore all feasible options for treating roadway runoff during the design phase of the project.

Recommendation 2 – Bridge Material Capture System

A description of the proposed creek diversion system is included in Chapter 1, which would dewater the work area and limit the probability of debris entering Alameda Creek. Although the proposed recommended measure references the Old River, Caltrans assumes that CDFW meant to reference Alameda Creek, which is in the project area.

Recommended Measure – Concrete Monitoring

Caltrans will coordinate with CDFW to ensure an appropriate concrete plan is developed. Night work will be minimized to the maximum extent practicable.

Response to Comment 1.3

Caltrans determined the impact resulting from filing the existing scour hole would be less than significant with the incorporation of MM BIO-2. This determination was based on information provided in the NES and incorporated into this IS/MND. Caltrans will create new, deeper pools within the project limits, which would be equal to the amount of scour holes that would be filled by the Project. The intent is to offer a minimum of 1:1 ratio of pools with depth, area, and volume equal to that of the existing scour holes to maintain equivalent or better habitat for salmonids. Pools would be designed in consultation with, among other appropriate agencies, CDFW habitat conservation and engineers.

Caltrans will consider the recommended measures, as appropriate. Response to specific measures citied in Comment 1.3 can be found below:

Recommendations

Surveys will be conducted at the scour pool as long as they can be conducted safely and are allowed by the appropriate agencies. Results will be documented and shared during future project phases when coordinating with CDFW for the LSA and ITP.

Recommendation for Project Impacts to Fish and Wildlife Resources 1 – Restoration and Mitigation Planning

Caltrans will work with CDFW to finalize the on-site mitigation during the permitting process. Caltrans will coordinate with CDFW and other appropriate agencies on a final off-site mitigation plan.

Recommendation for Project Impacts to Fish and Wildlife Resources 2 – Night-Work Analysis

Caltrans anticipates 55 to 85 nights of work would be required to complete this project. Night work may be conducted during bridge deck resurfacing and joint sealing only. Lights will be shielded and directed away from sensitive resources.

Response to Comment 1.4

Caltrans has identified roosting bats have a potential to occur within the BSA, however, habitat assessments have yielded no evidence of bats using the bridge expansion joints as day roosting site. Caltrans will implement PFs and AMMs to reduce impacts to bat species were they to be present during construction. These measures can be found in Appendix B and Section 2.1.4 (PF BIO-12 and AMM BIO-2).

Caltrans will consider the recommended measures, as appropriate. Responses to specific measures cited in Comment 1.4 can be found below:

Recommended Mitigation Measure 1 – Bat Habitat Assessment

Habitat assessments conducted in December 2021 and November 2022 yielded no evidence of bats using the bridge expansion joints as day roosting sites. Only two expansion joints exist, one at each end of the bridge. No guano or grease stains were present. There are a large number of swallow nests on the bridge which may provide habitat for some bat species. Additionally, trees within the area may also be utilized by bats for both day and night roosting sites.

Recommended Mitigation Measure 2 – Bat Habitat Monitoring

Bat emergence surveys will be conducted 2 years before construction begins and a bat exclusion plan will be drafted in coordination with CDFW if emergence surveys yield evidence of roosting bats.

Recommended Mitigation Measure 3 – Permanent and Temporary Bat Structures

Caltrans will coordinate with CDFW to provide appropriate bat housing structures, if needed, during the permitting process.

Comment 2. Jackson Hurst

From: Jackson Hurst
To: Smith, Juliane@DOT
Subject: I-680 Alameda Creek Bridge Scour Repair Project IS/MND Document Public Comment
Date: Tuesday, October 25, 2022 3:57:01 PM

EXTERNAL EMAIL. Links/attachments may not be safe.

Name - Jackson Hurst

Address - 4216 Cornell Crossing, Kennesaw, Georgia 30144

2 Comment - I have reviewed the IS/MND Document for Caltrans I-680 Alameda Creek Bridge Scour Repair Project. I approve and support the build alternative for Caltrans I-680 Alameda Creek Bridge Scour Repair Project because the build alternative will divert the Alameda Creek around bridge piers 8 and 9 which will stop the scouring of the bridge piers.

sent from ghostlightmater@yahoo.com

Response to Comment 2

Mr. Hurst's support of the project's proposal to realign Alameda Creek in the center of a span to minimize future scouring has been acknowledged.

Comment 3. Connie De Grange, Chair, Sunol Citizens' Advisory Council

From: Connie De Grange
To: Smith, Juliane@DOT
Subject: Comments on Sunol Bridge repair project
Date: Monday, November 21, 2022 2:24:12 PM

EXTERNAL EMAIL. Links/attachments may not be safe.

Reference: Interstate 680 Alameda Creek Bridge Scour Repair Project ALAMEDA COUNTY, CALIFORNIA 04 – ALA – 680 (PM R10.15-R10.16) EA 04-0P910/ Project ID 0418000025 Initial Study with Proposed Mitigated Negative Declaration

Thank you for presenting the environmental documentation for this project to the Sunol Citizens' Advisory Council. As mentioned during the meeting, the citizens of Sunol are concerned about the number of trees that may be affected by the project. It is unclear how many trees will be removed and this adds to our concern. As you may know, Sunol has lost over 1000 trees this year due to Caltrans projects. Some of the trees were heritage sized trees in pivotal locations for our town. 3.1

We are concerned that Caltrans calls out eucalyptus trees as nonnative, somehow indicating that they are of less value. Eucalyptus trees are the primary habitat for the Western Monarch butterfly population which has evolved in response to the presence of these trees. We request that Caltrans take every precaution to protect the eucalyptus trees. We also request that Caltrans update their practices to include the eucalyptus trees as important trees to California ecology, equivalent to native trees. 3.2

Connie De Grange, Chair

Sunol Citizens' Advisory Council

.

- Caltrans, District 4 – Office of Environmental Analysis ATTN: Juliane Smith, Associate Environmental Planner P.O. Box 23660, MS-8B, Oakland, CA 94623-0660

Response to Comment 3.1

Impacts to trees, including tree removal, will be minimized to the greatest extent practicable (AMM BIO-5). As noted in IS/MND Table 2-3, there are 27 trees located within temporary and permanent impact areas. To be conservative, Caltrans is accounting for removal of all trees in temporary and permanent impact areas. The final number of trees impacted by the project will be determined during the design phase, by Caltrans Office of Landscape Architecture, and Biological Sciences and Permits.

As part of the project, Caltrans will restore and enhance visual quality and habitat value of the project area. Tree replanting will be maximized on-site (PF BIO-23), and details for off-site replanting will be determined in coordination with the appropriate regulatory agencies during the design phase.

Response to Comment 3.2

We understand your concern. The term nonnative indicates that a species did not originate from the area but has instead been introduced. It is not a determination of its value as species habitat. Caltrans recognizes many nonnative species of plants that provide habitat for native species, including eucalyptus groves. However, the presence of trees alone is not enough to consider them to be habitat for Monarchs, which require very specific microhabitat conditions for overwintering. Between Mendocino County and Santa Barbara County, overwintering is confined to groves within 5 miles of the coast (USFWS 2021). Eucalyptus trees within the project area, which is more than 10 miles from the coast, are not expected to be used by Monarchs as overwintering sites. Caltrans will minimize impacts to trees within the project area as much as possible.

Comment 4. Tim Ramirez, Division Manager, San Francisco Public Utilities Commission

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Natural Resources and Lands Management Division

November 4, 2022

Juliane Smith, Environmental Scientist
California Department of Transportation, District 4 Office of Environmental Analysis
P.O. Box 23660, MS-8B Oakland, CA 94623-0660

Via Email: Juliane.Smith@dot.ca.gov

Re: San Francisco Public Utilities Comments on the Initial Study/Proposed Mitigated Negative Declaration for the Interstate 680 Alameda Creek Bridge Scour Repair Project

Dear Ms. Smith:

Thank you for the opportunity to review and comment on Caltrans' Proposed Initial Study/Mitigated Negative Declaration (IS/MND) for the Interstate 680 Alameda Creek Bridge Scour Repair Project (Project). The San Francisco Public Utilities Commission (SFPUC) offers the following comments on the IS/MND.

Background

The City and County of San Francisco, through the SFPUC, owns and manages more than 38,000 acres of land as part of its Alameda Watershed in unincorporated Alameda County (SFPUC Property). The Alameda Watershed is adjacent to various segments of Interstate 680 (I-680), including at the I-680 bridge near the Town of Sunol. The Project is situated adjacent to SFPUC Property.

General Comments

4a SFPUC Infrastructure: The project site does not appear to include the SFPUC's water transmission pipeline easement area, but Caltrans' engineers should verify the location of any SFPUC infrastructure near or within the project site. Appropriate measures should be taken to protect any SFPUC infrastructure that could be impacted by construction activities. Please contact SFPUC Water Supply and Treatment Division, Land Engineering for assistance and to request design drawings (contact Stacie Feng, Senior Engineer, at sfeng@sfwater.org or (650) 871-2037).

Biological Resources: The SFPUC has a commitment to protect and restore native species and their habitats in the Alameda Watershed through our Water Enterprise Environmental Stewardship Policy, as well as the policies and management actions

London N. Breed Mayor
Newsha Ajami President
Sophie Maxwell Vice President
Tim Paulson Commissioner
Tony Rivera Commissioner
Kate Stacy Commissioner
Dennis J. Herrera General Manager

Services of the San Francisco Public Utilities Commission

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

set forth in the SFPUC's Alameda Watershed Management Plan. With significant construction and staging occurring adjacent to, and possibly on SFPUC property, the SFPUC has concerns about biological resources impacts. We encourage Caltrans to continue to work with the USFWS, NMFS, and CDFW to ensure that compliance with all applicable regulations regarding special status, threatened and endangered species are addressed throughout the duration of the Project.

In addition, the SFPUC provides the general comments below:

- The IS/MND does not include measures to prevent the introduction of aquatic invasive pest species. All equipment entering the creek should be appropriately disinfected to prevent aquatic pests. It should be noted that invasive New Zealand mud snails are present in this area of Alameda Creek and efforts to prevent spreading them on equipment to other locations should be taken.

- To prevent the introduction of harmful invasive plant pests and pathogens, gravel, rock, and aggregate (aside from the material used on top of the bridge) should be virgin (non-recycled). Imported soil and organic material should be pest and pathogen free and decontaminated before brought on-site. All equipment should arrive clean (i.e., free of weeds, seeds, visible mud or soil). SFPUC staff can provide equipment cleaning and decontamination procedures if desired. 4b

- If de-watering occurs in the summer, the riparian trees and vegetation could be impacted without supplemental irrigation.

- The area under the bridge is a heavily used wildlife corridor, including deer; exclusion fencing should be set-up to allow for safe passage.

- The individual sycamore is a component of a larger sycamore riparian community and is therefore part of a sensitive natural community that runs along Alameda Creek. Please avoid impacts to the sycamore riparian community if possible.

- If exclusion fencing is the type that appears transparent or translucent when viewed from any angle (and if amphibians are able to climb the fencing), then a climbing barrier is recommended to avoid stranding amphibians on/at the fencing.

- Avoidance measures for potential bat roosts should consider roosts that may be in trees to be removed/limbed (as well as for roosts that are associated with the bridge itself).

Specific Comments

The SFPUC offers the following comments regarding specific passages in the IS/MND:

	Section No.	Page No.	IS/Draft MND Text	SFPUC Comment
4.1	1.5	4	**The new low-flow channel would be approximately 950 square feet and would be designed specifically to improve fish spawning habitat, including deeper pools where feasible**	This is not a stretch of the creek where steelhead spawning should be encouraged, and deep cobble pools are not spawning habitat. Fish passage should remain the priority at this location, and encouraging a low flow channel does make sense for that objective.
4.2	2.1.4	24	***Caltrans has determined that steelhead will be affected and may be adversely affected by the project.***	What are these expected impacts? Is the project expecting interruptions of steelhead migration and are there any proposed solutions for providing upstream or downstream passage during construction?
4.3	2.1.4	27	*Careful attention to details of RSP installation may benefit Alameda Creek by improving fish passage and spawning habitat and reducing the maintenance needs of the bridge.*	Please explain how spawning habitat will benefit from this project?
4.4	2.1.4	27	*The implementation of AMMs, including wildlife exclusion fencing and seasonal work restrictions, would minimize project impacts to species by allowing for their safe passage outside the proposed construction area and limiting construction to seasons when species are least likely to move through the project area.*	What are the seasonal restrictions? What time frame will passage be interrupted?

SFPUC Project Review Process

4c On page 5 of the IS/MND, it states: *A Temporary Construction Easement (TCE) from the San Francisco Public Utilities Commission (SFPUC) may be needed to conduct the scour repair work under the bridge*. If the proposed project involves the use of the SFPUC watershed lands, then such a proposal will be subject to the SFPUC's Project Review Process. The proposal must first be vetted in Project Review, and then the project sponsor must receive authorization from the SFPUC (typically through a final executed lease or revocable license) before the San Francisco Property can be used or modified.

To initiate the Project Review process, Caltrans can download and fill out a Project Review application from https://sfpuc.org/construction-contracts/lands-rights-of-way/project-review-and-land-use-bay-area and return the completed application to Casey Rando, Senior Environmental Compliance Planner, at crando@sfwater.org.

Proposed projects and other activities on any SFPUC property must undergo the Project Review Process if the project will include: construction; digging or earth moving; clearing; installation; the use of hazardous materials; other disturbance to watershed and ROW resources; or the issuance of new or revised leases, licenses and permits. This review is done by the SFPUC's Project Review Committee (Committee).

The Committee is a multidisciplinary team with expertise in natural resources management, environmental regulatory compliance, engineering, water quality and real estate. Projects and activities are reviewed by the Committee for:

1. Conformity with the Alameda and Peninsula Watershed Management Plans;
2. Consistency with our Environmental Stewardship Policy, Real Estate Guidelines, Interim ROW Use Policy and other policies and best management practices; and
3. Compliance with the California Environmental Quality Act (CEQA) and environmental regulations including mitigation, monitoring and reporting plans.

In reviewing a proposed project, the Committee may conclude that modifications or avoidance and minimization measures are necessary. Large and/or complex projects may require several project review sessions to review the project at significant planning and design stages.

Again, thank you for the opportunity to provide comments on this important project. If you have any questions or need further information, please contact me or Joanne Wilson, Senior Land and Resources Planner, at jwilson@sfwater.org.

Sincerely,

Tim Ramirez
Division Manager

C: Ellen Natesan, Casey Rando, Brian Sak, Clayton Koopmann, Jessica Appel, Scott Chenue, Stacie Feng, Rosanna Russell

Response to Comment 4a

During the design phase, Caltrans engineers will verify the location of any SFPUC infrastructure near or within the project area and take appropriate measures to protect identified infrastructure that could be impacted by project construction.

Response to Comment 4b

Caltrans will continue to coordinate with USFWS, NMFS, and CDFW to ensure compliance with all application regulations regarding special-status, threatened, and endangered species.

Responses to specific comments cited in Comment 4b can be found below:

- All equipment will be disinfected prior to entering and upon leaving the Project site. Caltrans will coordinate with SFPUC to ensure that disinfection protocols meet their standards.
- Existing trees and vegetation outside of the area of impact are to be protected during this project and will not be impacted by the dewatering of the creek. Supplemental irrigation will be considered if dewatering is expected to impact protected vegetation.
- Caltrans acknowledges this important wildlife corridor and will set up the minimum amount of exclusion fencing to allow safe passage for species.
- Caltrans will work with SFPUC to avoid or minimize impacts to individual trees and the sycamore community during construction.
- Exclusion fencing will be composed of high visibility fencing and may include temporary reinforced silt fencing.
- Measures listed in Section 2.1.4, including AMM BIO-13 Preconstruction Surveys for Nesting Bats and AMM BIO-14 Exclusion of Bats from Existing Bridge would minimize the project's impacts to roosting bats. An emergence survey, as well as a habitat survey, will be conducted at least 2 years prior to construction and again before any trees are impacted.

Response to Comment 4.1

The "new" low-flow channel will replace the existing channel which currently flows along Bent 8 and is creating scour. Replacing the current low-flow channel with the equivalent will continue to allow fish passage.

Response to Comment 4.2

Caltrans expects that steelhead will be temporarily impacted by the creek diversion system and excluded from habitat during construction. A seasonal work window will prevent impacts from occurring during the spawning season.

Response to Comment 4.3

Though extensive amounts of RSP within streams may be detrimental, small amounts, thoughtfully placed, may improve habitat. In-stream impacts will be minimized by increasing the slope of the embankment, planting woody vegetation, such as willow and mulefat, within the interstices of the RSP, and sizing RSP to create adequate habitat within the aquatic environment. Using stone that is larger than necessary will improve fish habitat within the aquatic environment by providing refugia and cover for fry and juveniles (Fishenich 2003, Reid and Church 2015). In already degraded streams, appropriately sized RSP has been shown to increase fish density, abundance, and diversity (Craig and Zale 2001). Additionally, aquatic invertebrates flourish in RSP due to interstitial spaces and large amount of surface area, providing abundant food sources for salmonid fry and juveniles (Craig and Zale 2001). Keeping the dewatering process to one season will minimize the adverse impacts to the benthic invertebrate community (Herbst et al. 2019).

Response to Comment 4.4

Seasonal restrictions are expected to last from October 15 through June 1. Passage will be interrupted between June 1 and October 15.

Response to Comment 4c

Caltrans recognizes SFPUC's role as a responsible agency. Caltrans is committed to maintaining a partnership with SFPUC and commits to continued coordination through the design and construction of the project.

Comment 5. Qi Yan, Water Resource Control Engineer, Watershed Management Division, San Francisco Bay Regional Water Quality Control Board

CALIFORNIA Water Boards

GAVIN NEWSOM GOVERNOR

YANA GARCIA SECRETARY FOR ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

November 21, 2022

California Department of Transportation
Attn: Juliane Smith
Office of Environmental Analysis
111 Grand Ave.
Oakland, CA 94623-0660

Subject: Comments on the Interstate 680 Alameda Creek Bridge Scour Repair Project – Initial Study with Proposed Mitigated Negative Declaration

Dear Ms. Smith:

Thank you for the opportunity to comment on the Initial Study with Proposed Mitigated Negative Declaration (or IS/MND) for the proposed Interstate 680 (I680) Alameda Creek Bridge Scour Repair Project (Project) near the town of Sunol in Alameda County. The Project is proposed by the California Department of Transportation (Department) to improve Alameda Creek Bridge by reconstructing the media barrier on the approach slab, rehabilitating the bridge deck and addressing structural deficiencies due to scouring in the creek channel.

As directed by 14 CCR §15096, the Water Board is a Responsible Agency under the California Environmental Quality Act (CEQA) that must determine the adequacy of CEQA analysis. We therefore offer the following comments on the IS/MND. These comments are meant to advise the Department and its partners of our policies and requirements, so they may be incorporated into the environmental documentation and design processes, and facilitate Water Board review and permitting.

Potential Impacts to Aquatic Resources

5.1 As stated in the IS/MND, the Project will result in the placement of permanent and temporary fill material within jurisdictional waters, wetlands, and riparian habitat. Both a Clean Water Act (CWA) Section 401 water quality certification and a CWA Section 404 Permit from the U.S. Army Corps of Engineers are necessary for projects involving discharge of fill to waters of the U.S. Additionally, the Department may need to file a Report of Waste Discharge if the project may result in a discharge of waste to waters of the State. The Water Board adopted U.S. EPA's Section 404(b)(1) "Guidelines for

Specification of Disposal Sites for Dredge or Fill Material," dated December 24, 1980, in its Basin Plan for determining the circumstance under which filling of wetlands, streams, or other waters of the State may be permitted.

Section 404(b)(1) Guidelines prohibit all discharges of fill material into regulated waters of the United States if there is a less environmentally damaging practicable alternative to the proposed discharge that would have lesser effects on waters of the U.S. and that would achieve the basic project purpose.

The Guidelines sequence the order in which proposals shall be approached: 1) Avoid - avoid impacts to waters; 2) Minimize - modify project to minimize impacts to waters; and 3) Mitigate - once impacts have been fully minimized, compensate for unavoidable impacts to waters. Disturbance should be minimized when it is not possible to avoid impacts to water bodies. Mitigation for lost water body acreage, length, and functions through restoration or creation should only be considered after disturbance has been minimized. The creation, restoration, enhancement of adequate mitigation habitat to compensate for the loss of water body acreage and linear feet, and functions and values must be provided for any anticipated adverse impacts. 5.1 cont.

After the Department has demonstrated full avoidance and minimization of impacts to jurisdictional waters, all individual and cumulative impacts to jurisdictional waters or wetlands associated with the project must be mitigated. The Project proposes to address the scour and structural deficiencies of the Alameda Creek Bridge by placing Rock Slope Protection (RSP) in the scoured area at pier 8 and realigning the creek in the center of piers 8 and 9. Placement of RSP into the creek channel is considered as permanent impact to jurisdictional waters and will trigger compensatory mitigation requirements. The Water Board strongly recommends that the Department develop a mitigation plan in coordination with the Water Board to compensate for the loss of aquatic resources. Mitigation is preferably in-kind and on-site, with no net destruction of habitat value. A proportionately greater amount of mitigation is required for projects that are out-of-kind and/or off-site. Mitigation should be completed prior to, or at least simultaneous to, the filling or other loss of existing waters or wetlands.

Post Construction Stormwater Treatment and Trash Controls

The IS/MND notes that the Project would rehabilitate the bridge deck, reconstruct approach slabs in both directions and replace the existing media barrier. All these activities could result in new and reworked impervious area. Stormwater runoff from impervious areas may contain hydrocarbons, metals, volatile organic compounds, trash, sediment, and other pollutants that may significantly impacts water quality. Added impervious areas may result in alterations to existing hydrologic regimes, resulting in erosion and/or changes of sediment transport in receiving waters (hydromodification). 5.2

As required by Caltrans' Statewide Stormwater NPDES Permit provision E.2.d.2, the Department shall implement Low Impact Development (LID)-based stormwater treatment controls for all new development and/or redevelopment projects. Also, in

order to obtain 401 water quality certification or waste discharge requirements from the Water Board, the Department will be required to provide stormwater treatment and hydromodification mitigation on-site, or if impracticable on-site, at an off-site location that treats an equivalent area of impervious surface with similar pollutant loading to the Project site. The total post-construction stormwater treatment requirement includes all new and reworked impervious surface areas associated with project activities. The Department is also required to characterize the extent project implementation will result in hydromodification impacts and propose mitigation for any significant impacts.

5.2 cont.

The Project must also install trash controls to control trash from any significant trash generating areas within the Project limits, as required by Cease and Desist Order No. R2-2019-0007, as amended (Order No. R2-2021-0030), issued to the Department on February 13, 2019. Current Department trash generation rate mapping shows the I680 Alameda Creek Bridge in the Project area to be a significant trash generating area. The IS/MND doesn't propose trash controls for the significant trash generating areas within the Project limits. Structural trash controls must be installed within the Project's proposed storm drain system and/or stormwater treatment BMPs to the extent practicable to prevent trash from discharging to Alameda Creek or other receiving waters through existing or proposed storm drain outfalls.

Closing

We look forward to working collaboratively with the Department and the Project's partners at an early stage to ensure avoidance and minimization measures are considered, appropriate compensatory mitigation plans are developed, and stormwater and trash controls are appropriately assessed, designed, and implemented with the Project. We are available to meet to discuss the above comments. If you have questions or would like to meet to discuss our comments, please contact Qi Yan of my staff at qi.yan@waterboards.ca.gov.

Sincerely,

qi yan

Qi Yan
Water Resource Control Engineer
Watershed Management Division

cc: Caltrans:
Cyrus Vaifai, cyrus.vafai@dot.ca.gov

Response[SJ6] to Comment 5.1

As noted in DED Table 1-1. Required Permits and Approvals, Caltrans will apply for both a Clean Water Act (CWA) Section 401 Water Quality Certification from the San Francisco RWQCB and a CWA Section 404 Water Quality Certification from the U.S. Army Corps of Engineers.

The potential temporary fill to jurisdictional waters would result from the cofferdams for the temporary creek diversion system. To prevent and minimize temporary impacts to water resources during construction activities, appropriate construction site BMPs will be implemented throughout construction according to Caltrans standard specifications and the SWPPP prepared for the project.

Caltrans will coordinate with the RWQCB during the design phase of the project to develop a mitigation plan for the impacts to jurisdictional waters, wetlands, and habitats.

Response to Comment 5.2

The project will not result in any net new impervious surfaces. The reworked impervious surface is estimated to be 1.89 acres. Caltrans recognizes the potential for stormwater runoff from impervious surfaces to contain pollutants, however, with the implementation of standard construction site BMPs and AMMs, these temporary discharges will be minimized and prevented.

Caltrans is proposing stormwater treatment, including a bioretention swale, to be maximized on-site, and details for off-site treatment will be determined if needed. Caltrans will develop the stormwater treatment plan during the design phase of the project. Hydromodification is not required since the project will not result in any new impervious surfaces.

The project is located in a low and moderate significance trash generating area; therefore, trash capture will be considered. The project is proposing trash nets be connected at the outlets of drainage pipes. Caltrans will develop the trash capture system during the design phase of the project.