Marin State Route 37 Petaluma River Bridge Project

MARIN COUNTY, CALIFORNIA
DISTRICT 4 – MRN – 37 (PM 14.50)
04-2Q500/0419000019

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
State of California, Department of Transportation

May 2022

Caltrans

General Information about this Document

What's in this document:

The California Department of Transportation Caltrans) has prepared this Initial Study (IS) with Proposed Mitigated Negative Declaration (MND) for the proposed Marin State Route (SR) 37 Petaluma River Bridge Project (Project), Marin and Sonoma counties, California, at post mile (PM) 14.50 (see Figure 1-1). The Project would include rehabilitation of the Petaluma River Bridge (bridge) deck, replacement of the bridge fender system, bridge scour protection, and upgrading the bridge railings to meet current safety standards and maintain the structure in a reliable and serviceable condition. Two temporary construction easements would be anticipated during construction. Additional Project information is provided in Chapter 2.

As the lead agency under the California Environmental Quality Act (CEQA), Caltrans has prepared this IS/MND, which describes why the Project is being proposed, how the existing environment could be affected by the Project, potential environmental impacts, and proposed Project features, avoidance and minimization measures, and mitigation measures.

What you should do:

- Please read this document.

  The document, maps, and Project information, is available to download at www.sr37corridorprojects.com. Additionally, the document will be made available at the following two locations in the vicinity of the proposed Project:

  Novato Library
  1720 Novato Boulevard
  Novato, CA 94947

  South Novato Library
  931 C Street
  Novato, CA 94949

  Vallejo John F. Kennedy Library
  505 Santa Clara Street
  Vallejo, CA 94590

- We would like to hear what you think. Send comments by the August 5, 2022 deadline to:

  Caltrans, District 4
  ATTN: Arnica MacCarthy, Senior Environmental Planner
  P.O. Box 23660, MS-8B
  Oakland, CA 94623-0660

Or

petalumabridge37@dot.ca.gov

What happens next:

Per CEQA Section 15073, Caltrans will circulate the IS/MND for review for 30 days from July 6 to August 5, 2022. During the 30-day public review period, the general public and responsible and trustee agencies can submit comments on this document to Caltrans. Caltrans will consider the comments and respond to them after the 30-day public review period.

After comments have been received from the public and reviewing agencies, Caltrans may grant environmental approval to the proposed Project, conduct additional environmental studies, or abandon the Project. If the Project is granted environmental approval and funding is obtained, Caltrans could design and construct all or part of the Project.

Alternative Formats:

For individuals with sensory disabilities, the document can be made available in Braille, in large print, on audiocassette, or on computer disk by writing to the above address or email or by calling **California Relay Service (800) 735-2929 (TTY)**, **(800) 735-2922 (Voice)**, or **711**.

An accessible electronic copy of this document is available to download at: www.sr37corridorprojects.com.

Initial Study with Proposed Mitigated Negative Declaration

04-MRN-37	14.50	04-2Q500
Dist. – Co. – Rte.	PM	E.A.

Project title:	Marin State Route 37 Petaluma River Bridge Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Arnica MacCarthy, Senior Environmental Planner (510) 506-0481
Project location:	Marin County, California
General plan description:	Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements); CEQA Responsible Agencies are denoted with an asterisk (*):	• Clean Water Act 404 Nationwide Permit from the U.S. Army Corps of Engineers • Clean Water Act 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board * • Section 9 Permit from the U.S. Coast Guard • Section 10 Navigable Waters Permit from the U.S. Army Corps of Engineers • Section 1602 Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife* • Biological Opinion from the U.S. Fish and Wildlife Service • Biological Opinion from the National Marine Fisheries Service • San Francisco Bay Conservation and Development Commission Consultation

The document, maps, and project information are available for review and download at www.sr37corridorprojects.com.

Scott M. Williams
Acting Office Chief, Office of Environmental Analysis
District 4, California Department of Transportation

5/31/2022
Date

To obtain a copy in Braille, in large print, on computer disk, or on audiocassette, please contact: Department of Transportation, Attn: Arnica MacCarthy, Senior Environmental Planner, Office of Environmental Analysis, 111 Grand Avenue, MS 8-B, Oakland CA 94612: (510) 506-0481 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

Proposed Mitigated Negative Declaration

Project Description

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS) with Proposed Mitigated Negative Declaration (MND) for the proposed Marin State Route (SR) 37 Petaluma River Bridge Project (Project), Marin and Sonoma counties, California, at post mile 14.50 (see Figure 1-1). The Project would include rehabilitation of the bridge deck, replacement of the bridge fender system, bridge scour protection, and upgrade of the bridge railings to meet current safety standards. The Project would maintain the bridge structure in a reliable and serviceable condition. Temporary construction easements would be anticipated at two staging areas. Additional Project information is provided in Chapter 2.

Determination

This proposed MND is included to give notice to interested agencies and the public that Caltrans intends to adopt an MND for this Project. This does not mean that Caltrans decision regarding the Project is final. This MND is subject to change based on comments received by interested agencies and the public.

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

- The proposed Project would have no impact on mineral resources, population and housing, public services, or tribal cultural resources.
- The proposed Project would have less than significant impacts on aesthetics, agriculture and forest resources, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous waste, hydrology and water quality, land use and planning, noise, recreation, transportation and traffic, utilities and service systems, and wildfire.

With the following mitigation incorporated, the proposed Project would have less than significant impacts on biological resources. The mitigation measure is detailed as follows:

- **Mitigation Measure BIO-1:** Caltrans would address the need for compensatory mitigation during the permitting and design phase and in coordination with agencies, including, but not limited to: the U.S. Army Corps of Engineers,

Regional Water Quality Control Board, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and National Marine Fisheries Service. Potential compensation would be based on the estimate of impacts to wetlands, waters, and other suitable habitat within the range of listed species. Caltrans would discuss in-lieu compensation options with state and federal agencies through onsite restoration, funding of a restoration project that would create or enhance habitat in the Bay Area as appropriate with Project impacts, or the purchase of credits at an approved mitigation bank. The final acreage value of compensatory mitigation would be determined in coordination with the regulatory agencies.

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

Date

Table of Contents

List of Tables

List of Figures

List of Appendices

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is the California Environmental Quality Act (CEQA) lead agency and sponsor for the proposed Marin State Route (SR) 37 Petaluma River Bridge Project (Project). The Petaluma Bridge on SR 37 is a vital part of the SR 37 expressway system, which is an east-west corridor that runs 21 miles along the northern shore of the San Pablo Bay. The route extends from U.S. 101 in Marin County, through Sonoma County, to Interstate 80 in Solano County.

The proposed Project is located in Marin and Sonoma counties, California, on SR 37 at post mile (PM) 14.5 from Harbor Drive to near Sears Point Road on SR 37 (Figure 1-1). The Project would include rehabilitation of the bridge deck, replacement of the bridge fender system, bridge scour protection, and upgrading the bridge railings. The Project would meet current safety standards and maintain the structure in a reliable and serviceable condition. Figure 1-2 shows the location of proposed Project components.

This Project would be funded by the State Highway Operation and Protection Program (SHOPP) under codes: 201.110, Bridge Rehabilitation and Replacement; 201.111, Bridge Scour Mitigation; 201.112, Bridge Rail Replacement and Upgrade; 201.113, Bridge Seismic Restoration; and 201.322, Transportation Permit Upgrades for Bridges. The Project cost is estimated at approximately $32,042,000.

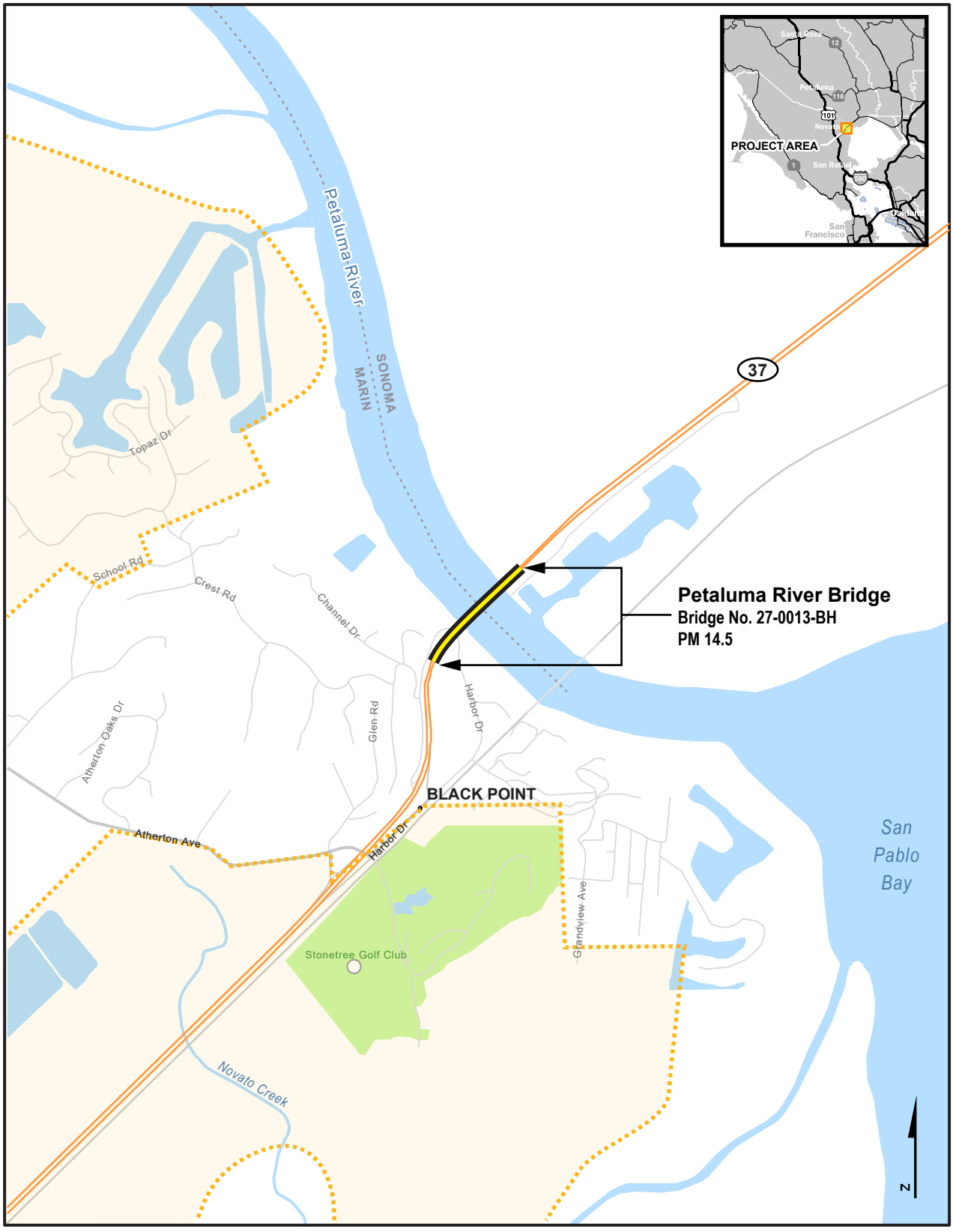
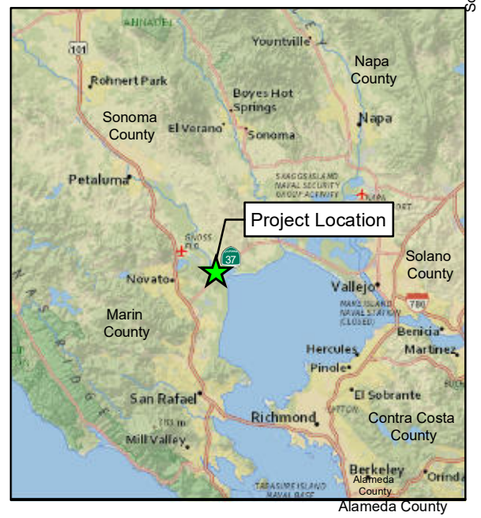


FIGURE 1-1
Vicinity Map
Petaluma River Bridge Project
EA 2Q500, 04-MRN-37-PM 14.50
Marin and Sonoma Counties, California



LEGEND

- Project Limit (39.65 acres)
- Staging Area - Black Point Boat Launch Parking Lot (0.39 acre)
- Barge Loading Area - Black Point Boat Launch (0.77 acre)
- Fender System
- Post Mile Markers
- Right of Way
- County Boundary

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

N

0 450 900
Feet

Caltrans

FIGURE 1-2
Project Components
Petaluma River Bridge Project
EA 2Q500, 04-MRN-37-PM 14.50
Marin and Sonoma Counties, California

1.2 Purpose and Need

The purpose of the Project would be to address identified condition deficiencies of the bridge, including the bridge fenders, railing, decking, and bridge scour protection.

This Project is needed to meet current safety standards and maintain the structure in a reliable and serviceable condition. The following components of the bridge have safety or maintenance issues that need to be addressed:

- The bridge's concrete railing system needs to be replaced because the existing railing is outdated, damaged and does not meet current safety standards.
- The fender system needs to be upgraded from the existing timber fender system, which has deteriorated because of age, rot, and impact from marine vessels.

  Because the Petaluma River is a navigable route for marine vessels, a 140-foot-wide channel exists for ships to pass under the bridge at bents 7 and 8. The channel under the bridge features a timber fender system surrounding bents 7 and 8 to protect marine vessels and bridge piers in the navigable waters of the Petaluma River.
- Rehabilitation of the bridge deck is needed because the existing deck surface has patches and holes, and is experiencing deterioration that causes an uneven surface.
- Scour prevention is needed at piers within the banks of the Petaluma River to extend the integrity and longevity of the bridge's structural system.

Chapter 2 Project Description

2.1 Introduction

The Project would include rehabilitation of the Petaluma River Bridge deck, replacement of the bridge fender system, bridge scour protection, and upgrading the bridge railings.

2.2 Existing Structure

The existing Petaluma River Bridge was built in 1958; it is a 29-span structure composed primarily of precast concrete "T" girders, with the main navigation span consisting of welded-steel-plate girders with a concrete deck. The original pavement surface was a 2-inch-thick layer of asphalt over the concrete deck and has since been overlaid with asphalt concrete.

The existing bridge railings are primarily see-through concrete railings. The replacement railing is a modified Type 85 barrier on a curb that matches the original railings.

The existing bridge approach railing consists of metal beam guard rail (MBGR) at the edge of the outside shoulders. The MBGR at the eastbound approach is approximately 400 feet long and the westbound departure of the bridge is approximately 1,120 feet long. The bridge has asphalt concrete (AC) approach pavement. The bridge is 67 feet 4 inches wide. The existing bridge is a 4-lane divided expressway with 12-foot-wide lanes and inside and outside shoulder widths of 4 feet and 3 feet 5 inches, respectively.

The median of the bridge consists of a Type 50 concrete barrier that runs the length of the bridge and transitions from the median barrier of SR 37. There is existing damage to the median concrete barrier at the bridge approach at Abutment 1 of the bridge; however, this median barrier is not included in the scope of this Project and would not be modified as a result. There are no driveways or intersections located within the Project limits. The bridge has a posted speed of 65 miles per hour. There are no pedestrian facilities on the bridge.

The Project components and work areas are shown on Figure 1-2. Project limits include the Project components, as well as the SR 37 roadway at and adjacent to PM 14.50.

2.3 Proposed Project

The Project includes rehabilitation of the Petaluma River Bridge deck, replacement of the bridge fender system, bridge scour protection, and upgrading the bridge railings.

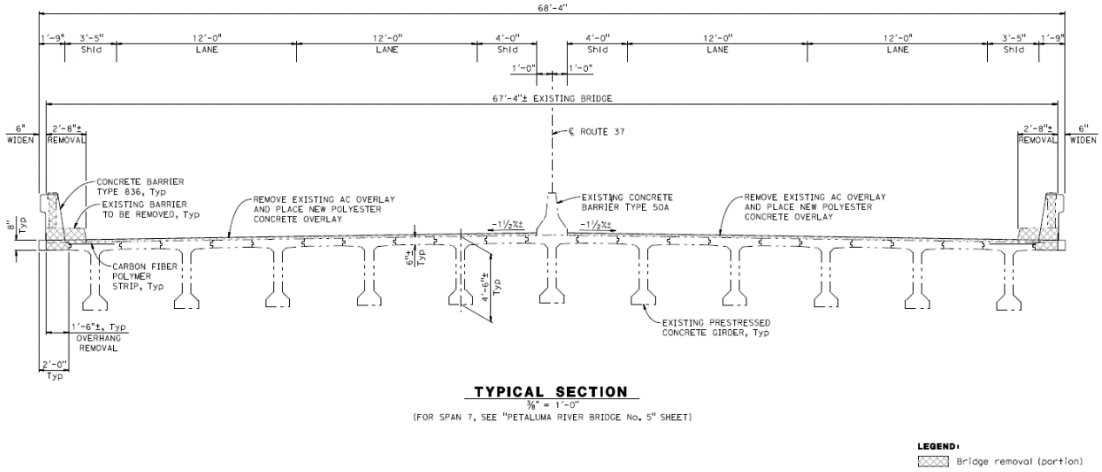
2.3.1 Bridge Rehabilitation

Bridge rehabilitation activities include the resurfacing the existing bridge deck. The existing 2 inches of AC pavement would be removed and replaced with polyester concrete deck surfacing. The new bridge deck would conform to the existing grade of the bridge as the polyester concrete would be at the same depth as the existing AC overlay. Current standard pavement striping, and markers would be applied. All signs and object markers located along the bridge and its approaches would be relocated or reset in place.

A total widening of 1.5 feet would be needed to accommodate bridge railing (Section 2.3.4). The proposed bridge structure width would be 68 feet 4 inches. The proposed inside and outside shoulder widths would be of 2 feet, and 5 feet 5 inches, respectively.

Photo 1 shows the condition of the existing bridge deck. A plan drawing for a typical bridge section with proposed rehabilitation is presented in Drawing 1.

Photo 1. Petaluma River Bridge Existing Pavement Condition



Drawing 1. Plan Drawing for a Typical Bridge Section with Proposed Rehabilitation

The existing finger joints and header dams would be replaced with Caltrans standard strip-joint-seal assemblies. Portions of the median barrier would be removed to replace the finger joints and replaced in kind.

2.3.2 Bridge Fender System Replacement

The existing timber bridge fender system would be removed and replaced. The new fender system would consist of steel pipe piles and steel walers, with plastic lumber sheathing. The height of the fender system would be increased to allow for anticipated sea level rise. Navigation lighting would be upgraded to meet the current U.S. Coast Guard requirements. A discussion of sea level rise, which includes discussion of the Petaluma River Bridge, is in the document *SR 37 Segment A PIR Sea Level Rise and Flooding Risk Assessment and Shoreline Evaluation* (AECOM 2021). The existing fender system is shown in Photo 2.

Photo 2. Petaluma River Bridge Timber Fender System (looking east)

2.3.3 Bridge Scour Protection

Scour protection would be placed at bents 6 through 14, which are located within the Petaluma River. Scour protection would consist of one-quarter ton rock slope protection (RSP) to a depth of 5 feet, placed approximately 10 feet around each bent.

2.3.4 Bridge Railing Replacement and Upgrade

The Project would replace and upgrade the existing 4,412 feet of bridge railing with the appropriate Manual for Assessing Safety Hardware compliant bridge railing system. The replacement railing would be a modified Type 85 barrier on a curb that matches the original railings. A total widening of 1.5 feet would be needed to accommodate the railing. The Type 85 see-through barrier would maintain the character of the existing railing. The existing bridge railing is shown in Photo 3.

Photo 3. Petaluma River Bridge Existing Concrete Baluster Railing

In addition to the bridge railing replacement, the MBGR approaches and departures would be replaced as necessary, with transition railing between the guardrail and the proposed bridge railing. To provide a standard connection between the Midwest guardrail system (MGS) and the proposed bridge railing, 25 feet of existing guardrail would be removed and replaced with standard transition railing WB-31.

2.4 Construction Methodology

This section discusses how construction of the proposed Project would occur.

2.4.1 Construction Staging and Traffic Management

Construction staging would primarily involve one lane closure in each direction during non-peak hours in order to construct the bridge railing, perform deck rehabilitation, and install MGS. One lane closure would also be needed at night.

Construction of the bridge railing would be expected to be completed in sections along the bridge on each side. Resurfacing and pavement delineation work would also be completed with a similar construction staging concept, with one lane of the bridge completed at a time. However, this work would likely be done during nighttime lane closure hours. Temporary K-railing would be installed prior to the beginning of demolition and subsequent construction of the bridge widening and railing installation.

Work below the bridge deck level at the Petaluma River, such as at the fender system reconstruction and scour protection, could be done independently of the highway work on the bridge. Temporary access from SR 37 to the river level would be needed to bring in equipment and materials. Temporary site access on the western side of the bridge may be needed through the Black Point Boat Launch area, which is at a Marin County facility (Figure 1-2). Work on the eastern side of the bridge on SR 37 would be within Caltrans right of way (ROW).

2.4.2 Utility Relocation

Prior to start of work, all existing utilities would be located and protected from possible damage during construction. Relocation of an existing electrical system is expected on the westbound (northern) side of the bridge, where an existing electrical conduit runs along the toe of the existing concrete baluster railing. The conduit runs from the beginning of the bridge to approximately 200 feet downstream of the bridge fender system. This conduit would need to be relocated and incorporated into the design of the proposed bridge railing. This relocation would not require additional ROW. Other, unidentified utilities may also be affected with bridge widening and barrier replacements; this would be determined during later Project phases.

2.4.3 Temporary Access and Work in the Petaluma River

Temporary access would be necessary for work within and along the Petaluma River. Work in the navigational channel would most likely be conducted using barges to access to bents 6 through 14 and to replace the fender system at bents 7 and 8. Steel

piles would be driven into the riverbed to create an isolated work area to facilitate construction of the fenders.

The navigational channel at the fender system is approximately 140 feet wide. For the fender system, work would occur on one pier at a time (Pier 7 or Pier 8) and, therefore, would not completely obstruct the navigational channel, allowing boat traffic to pass through during construction. For scour protection work on bent 6, and bents 9 through 14, barges would also be used during construction; however, work on these bents would not obstruct the navigational channel.

Scour protection would be constructed at bents 6 through 14, which would consist of placement of RSP. Temporary cofferdams would be constructed around each bent, and dewatering would occur prior to placement of RSP. The temporary cofferdams would be constructed of sheet piles.

2.4.4 Site Considerations

During construction, vegetation clearing would be confined to areas within the Project footprint, construction access roads, and the staging areas necessary for construction activities. Habitat that could be avoided during construction would be flagged and designated as an environmentally sensitive area (ESA). All ESAs are to be avoided by all construction activities, materials, and personnel. After construction is complete or after each successive construction cycle, restoration of the riverbank, access roads, and staging areas may be required.

2.4.5 Construction Staging

Two staging areas would be required during construction: the Black Point Boat Launch parking lot, and the Black Point Boat Launch, located on the western end of the bridge (Figure 1-2). The Black Point Boat Launch would be used for loading and unloading of barges for work within the Petaluma River and temporary parking of construction vehicles. . The Black Point Boat Launch would be temporarily closed to the public during barge loading and unloading activities. The Black Point Boat Launch parking lot (located across the street from the boat launch on Harbor Drive) would be used for construction staging and laydown and would be closed to the public for the duration of construction.

2.4.6 Construction Equipment

Equipment used for the Project activities would include, but not be limited to, the following:

- Rollers and grinders would be used to replace existing highway wearing surface.
- A backhoe and/or bobcat would be used to remove debris and material.
- Concrete trucks and long-reach concrete pump trucks would be used for the construction of the new railing.
- Temporary barges would be needed to replace the fender system and for placement of RSP at bents 6 through 14.
- Steel pipe piles would be vibrated and driven into the riverbed with a pile driver to allow attachment of the fenders.
- Other equipment may include trucks, lifts, generators, hoe ram, jackhammers/breakers, dump trucks, and saw-cut machines.

2.4.7 Order of Activities

Construction would generally proceed as follows for work on the highway and under the bridge:

WORK ON THE ROADWAY

- Provide public notification of construction activities.
- Install construction area signs.
- Close lane during off-peak hours or at night.
- Remove existing 2 inches of AC deck pavement.
- Demolish existing bridge railing.
- Relocate and protect existing utilities.
- Place 2-inch-thick layer of polyester concrete.
- Build new bridge railing.
- Remove existing MBGR and install MGS.

WORK UNDER THE HIGHWAY/BRIDGE

- Conduct work on piers in the river from a barge.
- Construct temporary cofferdams and dewater.

- Remove/excavate out vegetation and loose soil.
- Remove fender system.
- Drive steel piles into the riverbed to allow attachment of the fenders.
- Bring in equipment and materials via barge to replace the fender system.
- Dredge the riverbed to an approximate depth of 5 feet and place RSP for scour protection.
- Implement permanent erosion control and site cleanup.

2.4.8 Construction Schedule

Caltrans may decide to rehabilitate the bridge deck in advance of in-water construction activities within the Petaluma River. The purpose of rehabilitating the bridge deck in advance of in-water work would be to accelerate addressing deficiencies of the bridge deck in order to maintain the structure in a reliable and serviceable condition and improve ride quality. Splitting the construction schedule between the bridge deck and the in-water work would be determined prior to Project construction.

Construction of the Project is anticipated to begin in 2025 and would last approximately 300 working days. Construction in the river would be limited to the dry season of June 1 to October 31, in or near aquatic habitat when drainages and wetlands would be either dry or at their lowest water level, to minimize impacts to biological resources or soil hydrology.

The proposed fender system would be composed of approximately 146 piles. Pile-driving activities could last approximately 35 days, depending on installation rate. Replacement of the fender system and scour protection is anticipated to be completed in one construction season.

2.4.9 ROW Requirements

Work on the bridge or substructure would occur within the existing footprint of the bridge. Widening required for the upgraded bridge railing would occur within the existing ROW.

The Project is anticipated to require an approximately 15,250-square-foot (0.39 acre) temporary construction easement (TCE) for staging at the Black Point Boat Launch parking lot during construction. The Project is also anticipated to require an

approximately 33,540-square-foot (0.77 acre) TCE for use of the Black Point Boat Launch, for loading and unloading of barges for work within the Petaluma River. The Black Point Boat Launch would be temporarily closed to the public during barge loading and unloading activities.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Appendix A includes Caltrans Title VI Policy Statement.

2.5 Project Features

Project features, which can include both design elements of the Project and standardized measures (such as best management practices [BMPs]) that are applied to all or most Caltrans projects, and measures included in the standard plans and specifications, or as standard special provisions, are integral to the Project. Such Project features have been considered prior to any significance determinations. These Project features are detailed in Chapter 3 and included in Appendix B.

2.6 Permits and Approvals Needed

Table 2-1 lists the permits, licenses, agreements, and certifications that are anticipated to be required for Project construction.

Table 2-1. Required Permits

Agency	Permit	Permit Status
U.S. Army Corps of Engineers	Section 404 Permit	Application submittal anticipated during later Project phase
State Water Resources Control Board	Section 401 Water Quality Certification	Application submittal anticipated during later Project phase
U.S. Coast Guard	Section 9 Bridge Permit	Application submittal anticipated during later Project phase
U.S. Army Corps of Engineers	Section 10 Navigable Waters Permit	Application submittal anticipated during later Project phase
California Department of Fish and Wildlife	Section 1602 Lake and Streambed Alteration Agreement	Application submittal anticipated during later Project phase
U.S. Fish and Wildlife Service	Biological Opinion	Application submittal anticipated during later Project phase
National Marine Fisheries Service	Biological Opinion	Application submittal anticipated during later Project phase

Agency	Permit	Permit Status
San Francisco Bay Conservation and Development Commission (BCDC)	BCDC Permit	Application submittal anticipated during later Project phase
State Lands Commission (SLC)	SLC Permit	Application submittal anticipated during later Project phase

Chapter 3 California Environmental Quality Act Evaluation

The following sections evaluate potential environmental impacts related to the CEQA checklist to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091). The environmental analysis considers potential impacts of the proposed Project, as detailed in Chapter 2.

3.1 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 impacts were identified: agricultural and forest resources, cultural resources, mineral resources, population and housing, public services, and tribal cultural resources. The environmental factors checked would be potentially affected by this Project. Further analysis of these environmental factors is included in the following chapter.

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

3.2 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 in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE 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, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:	**Date:**
Printed Name: Scott M. Williams	**For:**

3.3 CEQA Environmental Checklist

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

Project features, which can include both design elements of the Project, and standardized measures that are applied to all or most Caltrans projects, such as 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; see Chapter 3 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

Sections 3.3.1 through 3.3.21 of this section 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 are 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 avoidance and minimization measures.
- Less than Significant Impact with Mitigation Incorporated: Indicates the potential for a significant impact that would be mitigated with the implementation of a mitigation measure to a level of less than significance.
- Potentially Significant Impact: Indicates the potential for significant and unavoidable environmental impact.

3.3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

Question	CEQA Determination
a) Have a substantial adverse effect on a scenic vista?	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant Impact

CEQA Significance Determinations for Aesthetics

A visual impact assessment (VIA) was completed for the Project (Caltrans 2021a). The VIA was prepared in accordance with the guidelines in the Federal Highway Administration's (FHWA's) *Visual Impact Assessments for Highway Projects* (FHWA 1981). SR 37 is eligible for State Scenic Highway designation throughout the Project limits.

SR 37 within the Project limits is a conventional highway, with two lanes of travel in each direction. The Project would be located north of the mouth of the Petaluma River that discharges into San Pablo Bay. The land use within the Project vicinity is predominately rural, with residential on the western end of the bridge and agricultural on the east, with some locations of light industrial uses. There are two recreational facilities along the Petaluma River at or adjacent to the bridge. The Black Point Boat Launch, a Marin County facility, is on the western shoreline of the river, and Port Sonoma, a privately owned marina, is adjacent to the eastern end of the bridge.

a, b) No Impact

The Project would not have a substantial adverse effect on a scenic vista, or damage scenic resources. The Project would be compatible with the existing visual character and quality of the corridor. The Project would not impact or degrade the existing visual character or quality of the Project area.

On the bridge deck, the existing AC paving would be removed and replaced with Polyester Concrete, resulting in a minor visual change. The proposed bridge rails would be similar in height, location, and transparency to the existing bridge rails maintaining views to the surrounding landscape. The bridge fender system would be removed and replaced in the same location. Existing vegetation removal is expected to be minimal to allow for access adjacent to or under the bridge for placement of the proposed RSP.

The Project would not adversely affect any designated scenic resource (such as a rock outcropping, tree grouping, or historic property), as defined by CEQA statutes or guidelines, or Caltrans policy. Existing vistas are expected to remain unaltered. The Project elements would not substantially affect the appearance of the highway corridor and would be visually consistent with the character of the surrounding area.

c) Less than Significant Impact

The Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Temporary visual impacts from construction of the Project would not be considered substantial. Temporary visual impacts during construction would include the appearance of construction equipment, temporary construction area lighting, staging of materials, and removed debris. Specific impacts to scenic characteristics along the Project corridor would be reduced with implementation of avoidance and minimization measures (AMMs), which would minimize visual changes that could occur as part of the Project.

d) Less than Significant Impact

The Project would not create a new source of substantial light or glare. Day and nighttime construction activities could temporarily add new sources of light and glare for residents, businesses, and local motorists along the Project corridor. These visual impacts would be minimized through implementation of AMMs AES-3 and -6, thereby reducing the impact to less than significant.

Avoidance and Minimization Measures

Caltrans would incorporate the following AMMs into the Project to offset or avoid potential impacts to aesthetics.

AMM AES-1: Revegetate disturbed soil areas and disturbed portions of the riparian corridor with native and climatically appropriate species.

AMM AES-2: Design planned RSP with material of an appropriate size, scale, and color such that it reduces visual contrast and enhances visual character.

AMM AES-3: Reduce glare from the concrete portions of the bridge, concrete bridge rails, and concrete anchor blocks, by using a combination of roughening surface texture and coloring concrete to make the concrete appear to be aged.

AMM AES-4: Screen appearance of construction equipment and staging areas.

AMM AES-5: Use staging areas that do not damage existing vegetation or require vegetation or tree removal.

AMM AES-6: If nightwork is included, limit light trespass to residences with the use of directional lighting, shielding, and other measures as needed.

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

Question	CEQA Determination
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?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
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))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR AGRICULTURE AND FOREST RESOURCES

a) No Impact

Within the Project limits, the surrounding area primarily consists of open space, agricultural land, recreation and visitor serving commercial land, and very low density residential. Land adjacent to SR 37 is designated urban and built-up land, up-land, farmland of local importance, other land, and water by the Farmland Mapping and Monitoring Program (California Department of Conservation 2022).

The Project would not convert prime farmland, unique farmland, or farmland of statewide importance because the Project would be constructed within Caltrans ROW and would not impact adjacent farmlands. Therefore, no impact would occur.

b-e) No Impact

There are no Williamson Act lands within the Project limits. The Project would not conflict with existing zoning for agriculture use or convert Williamson Act lands to non-agricultural uses; therefore, there would be no impact.

No timber or forest lands are in the Project limits or Project vicinity; so, the Project would not convert forest land or conflict with existing timberland zoning. Therefore, there would be no impact to forests or timberlands.

According to maps prepared pursuant to the Farmland Mapping and Monitoring Program, temporary impacts to land designated as farmland of local importance could occur during construction. However, the Project would not convert farmlands to non-agricultural use; therefore, no impact would occur.

3.3.3 Air Quality

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

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	No Impact
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?	Less than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR AIR QUALITY

a, d) No Impact

The Project would fall under widening narrow pavements or reconstructing bridges (no additional travel lanes) and, therefore, would be exempt from air quality conformity determination under 40 *Code of Federal Regulations* 93.126, Table 2. An air quality study is not required (Wu [Caltrans], pers. comm. 2021). Construction activities would not be in conflict with an air quality plan or generate emissions resulting in excessive odors. There would be no impact.

b) Less than Significant Impact

The Project would be required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air-pollution control rules, regulations, ordinances, and statutes that apply in the Project area. Construction air pollutants are expected to be minimal to negligible and short term. Potential impacts to air quality, including violation of air quality standards, criteria pollutants, exposure of sensitive receptors to pollutants, and creation of odors, are not anticipated based on the scope of the proposed Project. Project Feature Air Quality (AQ) -1 would help minimize impacts from fugitive dust.

c) No Impact

The Project would be required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air-pollution control rules, regulations, ordinances, and statutes that apply in the Project area. Construction air pollutants are expected to be minimal to negligible and short term. They would not expose sensitive receptors to substantial pollutant concentrations. Therefore, there would be no impact.

Project Feature

Caltrans would incorporate a standard measure into the Project to offset or avoid potential impacts to air quality. This feature is described in the following paragraph.

Project Feature AQ-1: Control Measures for Construction Emissions of Fugitive Dust. Dust control measures would be implemented to minimize airborne dust and soil particles generated from construction. For disturbed soil areas, the use of tackifier to control dust emissions would be included in the construction contract. Any material stockpiles would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

3.3.4 Biological Resources

Would the project:

Question	CEQA Determination
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 or U.S. Fish and Wildlife Service, or NOAA Fisheries?	Less than Significant Impact
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?	Less than Significant Impact
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?	Less than Significant Impact with Mitigation Incorporated
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?	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
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?	No Impact

CEQA Significance Determinations for Biological Resources

A natural environment study (NES) was prepared for the Project to evaluate the effects of this project on biological resources, including sensitive plant and wildlife species (Caltrans 2022a). This section summarizes the findings of the study.

The biological study area (BSA) includes the Project limits with an additional buffer area of 700 feet to capture surrounding tidal wetland (salt marsh) habitat (upstream and downstream) of the Petaluma River. The BSA encompasses 164 acres (Figure 3-1), and includes the bridge, the Petaluma River, Marin County's Black Point Boat Launch along the river's western bank, portions of the Port Sonoma Marina along the river's eastern bank, and the coastal salt marsh immediately abutting the riverbanks on both sides. The Project limits are within the Caltrans ROW

on either side of SR 37 in most areas, with the exception of a staging area, river access at the Black Point Boat Launch, and barge river access surrounding the bridge, where the Project limits extend further than the Caltrans ROW.

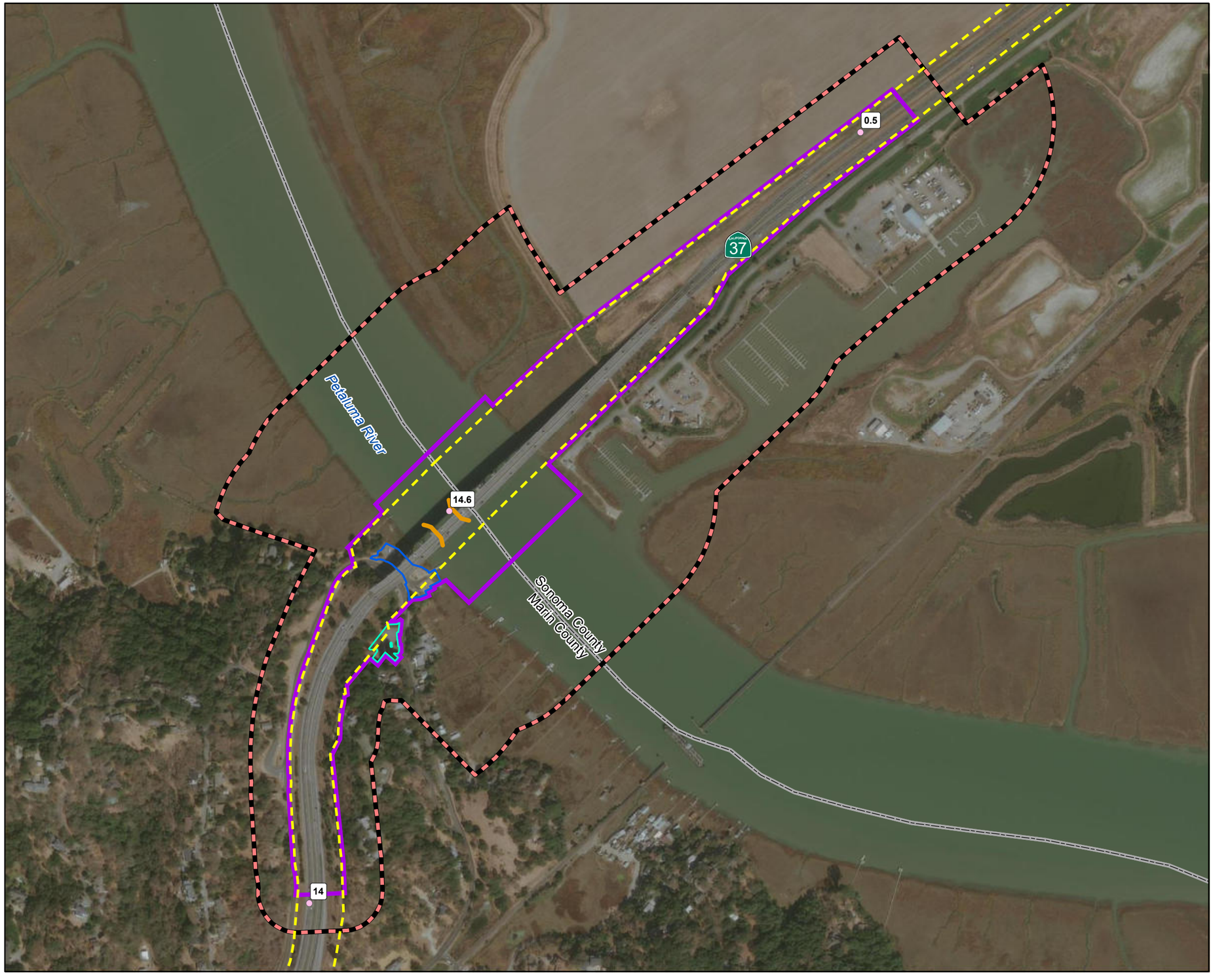
The BSA is directly adjacent to the San Pablo Bay National Wildlife Refuge and supports similar biological conditions as to what is found in the refuge, including tidally influenced salt marsh habitat, brackish water, and the presence of similar climates and plant and wildlife species.

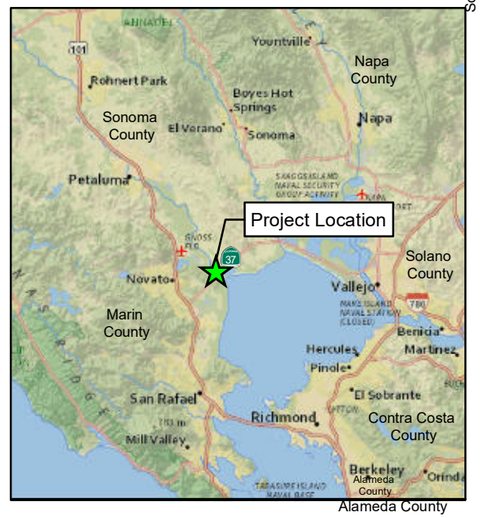
The BSA consists of the following vegetation and landcover types: water, developed roadways, North American Pacific Coastal Salt Marsh, tidal panne, *Baccharis pilularis* Alliance (coyote brush), California annual and perennial grassland (*Mesembryanthemum* spp.-*Carpobrotus* spp.), Provisional Alliance (invasive ice plant), and the *Quercus agrifolia* and *Quercus douglasii* Alliances (coast live oak and blue oak woodlands) (Sonoma County 2017; GGNPC 2021) (Figure 3-2).

Biological Studies

Databases were used to evaluate potential impacts that could occur to sensitive biological resources as a result of the Project. Database searches included the California Natural Diversity Database (CNDDB); species list and critical habitat from the U.S. Fish and Wildlife Service (USFWS) (USFWS 2021a), a species list from NOAA Fisheries (NOAA Fisheries 2021); and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2021). A complete list of species from the database searches is provided in Appendix C. In addition to database queries, biologists conducted field reconnaissance surveys of focused areas of the Project limits (such as, underneath the bridge for bats) and adjacent BSA to assess existing natural resources. No species-specific or protocol-level surveys were conducted for this analysis.

The USFWS National Wetlands Inventory database was reviewed for wetlands analysis and potential habitat for special-status aquatic species analysis (USFWS 2021b). Climatic information was obtained from the Western Regional Climate Center (2021) for wetlands analysis.





LEGEND

- Project Limit (39.65 acres)
- Biological Study Area (BSA)
- Staging Area - Black Point Boat Launch Parking Lot (0.39 acre)
- Barge Loading Area - Black Point Boat Launch (0.77 acre)
- Fender System
- Post Mile Markers
- Right of Way
- County Boundary

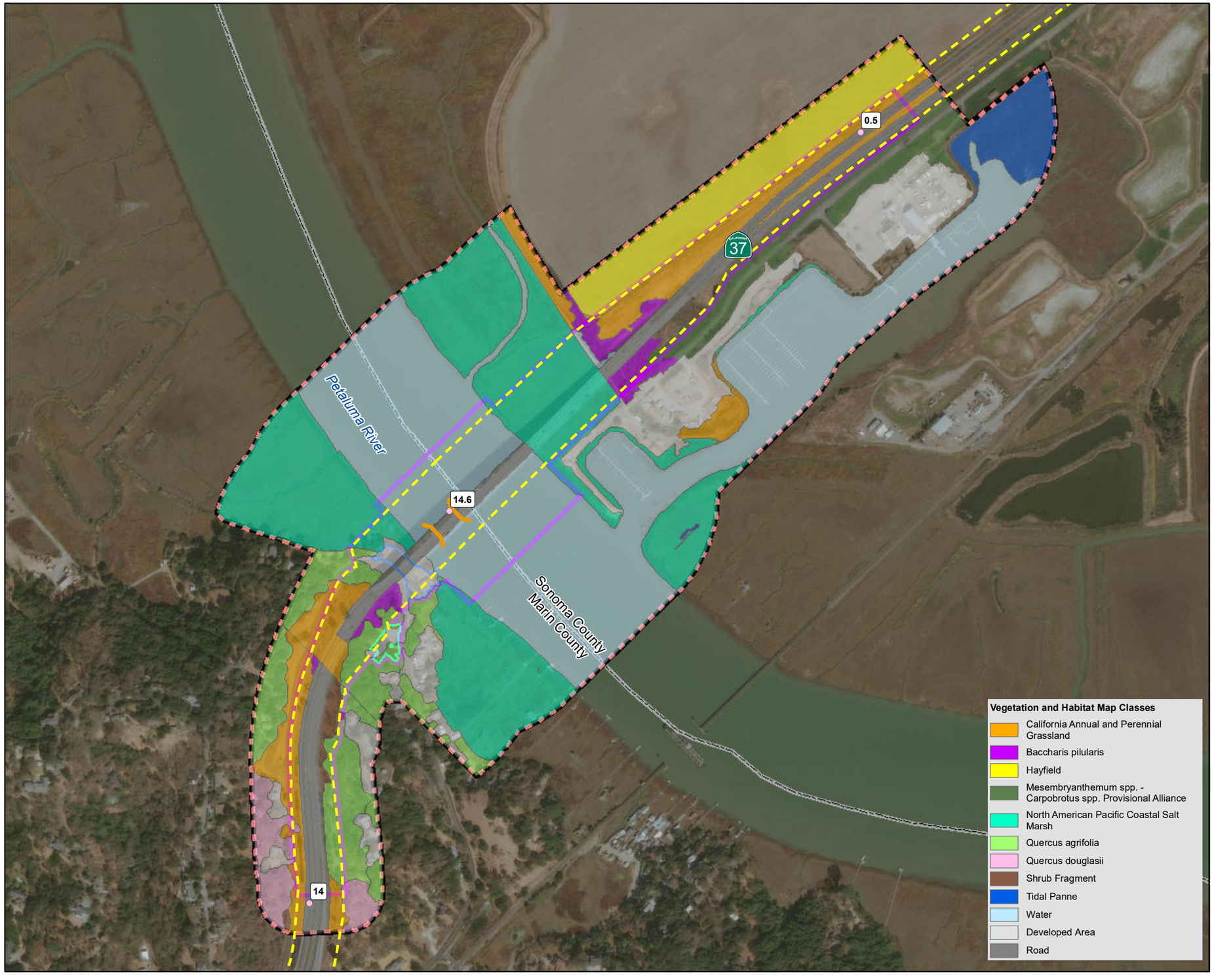
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

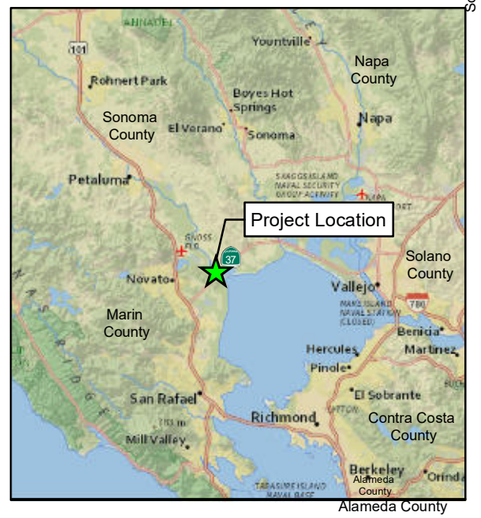
N

0 500 1,000
Feet

Caltrans

FIGURE 3-1
Biological Study Area
Petaluma River Bridge Project
EA 2Q500, 04-MRN-37-PM 14.50
Marin and Sonoma Counties, California





LEGEND

- Project Limit (39.65 acres)
- Biological Study Area (BSA)
- Staging Area - Black Point Boat Launch Parking Lot (0.39 acre)
- Barge Loading Area - Black Point Boat Launch (0.77 acre)
- Fender System
- Post Mile Markers
- Right of Way
- County Boundary

Source:
Marin County GIS, 2021
Sonoma County GIS, 2021

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

N

0 500 1,000
Feet

Caltrans

FIGURE 3-2
Vegetation and Habitat Map
Petaluma River Bridge Project
EA 2Q500, 04-MRN-37-PM 14.50
Marin and Sonoma Counties, California

a) Less than Significant Impact

With implementation of Project features and AMMs identified in the following subsection, the Project would have a less than significant impact, either directly or through habitat modifications, on any identified candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW), USFWS, or NOAA Fisheries. General Project features that would reduce impacts to special-status species include BIO-5, Worker Environmental Awareness Training, and BIO-6 Mark Environmentally Sensitive Areas. Special-status species potentially present within or adjacent to the BSA are discussed in the following subsections and followed by species specific Project features as necessary.

Plants

Soft salty bird's-beak (*Chloropyron molle* ssp. *molle [Cordylanthus mollis* ssp. *mollis*]): Soft salty bird's-beak is a federally endangered, state rare, and California rare plant, ranked as 1B.2 (a plant that is rare, threatened, or endangered in California and elsewhere, and moderately threatened in California). The closest occurrences of soft salty bird's-beak to the BSA are located approximately 4 miles upstream along the Petaluma River; however, both occurrences are historical and possibly extirpated. Although the two occurrences in the BSA's watershed are extirpated, the salt marsh habitat in the BSA could support soft salty bird's-beak. The Project would have no direct effects to tidal wetland/salt marsh habitat; therefore, no direct impacts are anticipated for the soft salty bird's-beak.

Implementation of the following Project features would avoid impacts to salt marsh habitat: BIO-4: Work Period in Dry Weather Only; BIO-6: Mark Environmentally Sensitive Areas, BIO-10: Construction Site Management Practices; BIO-11: Restore Disturbed Area; BIO-17: Agency-Approved Biologist, and WQ-1, Stormwater Best Management Practices (Section 3.3.10 Hydrology and Water Quality).

Point Reyes salty birds-beak (*Chloropyron maritimum* ssp. *palustre*): Point Reyes salty bird's beak has a California rare plant rank of 1B.2 (a plant that is rare, threatened, or endangered in California and elsewhere, and moderately threatened in California). The closest reported CNDDB occurrence is 4.5 miles upstream, along the Petaluma River in brackish coastal marsh habitat (CDFW 2021). This is the only occurrence reported in the BSA's watershed and the far most "inland", and northern, occurrence in the San Pablo Bay. Approximately 1,675 plants were counted in this

population in 1993 (CDFW 2021). Because of the presence of tidal wetland habitat surrounding the Petaluma River, there is potential for the BSA to support Point Reyes salty bird's-beak habitat; the species is presumed to have potential to occur in the BSA.

Implementation of the following Project features would avoid impacts to salt marsh habitat: BIO-4: Work Period in Dry Weather Only; BIO-6: Mark Environmentally Sensitive Areas, BIO-10: Construction Site Management Practices; BIO-11: Restore Disturbed Area; BIO-17: Agency-Approved Biologist, and WQ-1, Stormwater BMPs.

Fish

Special-status fish species with the potential to be present within the BSA include the North American green sturgeon, southern Distinct Population Segment (DPS) (*Acipenser medirostris*), central California coast (CCC) steelhead (*Oncorhynchus mykiss irideus*), longfin smelt (*Spirinchus thaleichthys*), and Sacramento splittail (*Pogonichthys macrolepidotus*). The following paragraphs describe Project activities with the potential to result in impacts to special-status fish species.

Sheet piles for the temporary cofferdams at the bridge bents in the Petaluma River would be installed with a vibratory hammer, which would limit hydroacoustic impacts; however, impact driving may also be required when vibratory methods are not feasible. Installation of the sheet piles for the temporary cofferdam would temporarily degrade water quality associated with increased turbidity and sediment mobilization. However, once installed, the temporary cofferdams would contain debris that would otherwise be released as a result of pile driving, minimize the generation of turbidity plumes in the Petaluma River from impact pile driving and placement of RSP, dampen hydroacoustic impacts, and prevent fish from entering the work area during the installation of piles for the new fender system and RSP around the bridge piers.

Installation of the temporary cofferdams around the bridge piers may result in fish stranding. However, the temporary cofferdam would be closed off during low tide to avoid fish entrapment to the maximum extent possible. This portion of the Petaluma River, where the temporary cofferdams would be installed, is approximately 8 feet deep; so, at low tide, there would still be flowing water within the river, but the temporary cofferdams may somewhat diminish the potential for fish to be present in the BSA because fish tend to follow the current toward deeper waters as the tide goes out. In addition, given that vibratory pile driving activities would be required to form

the temporary sheet pile cofferdams, it is highly unlikely that fish would remain within the cofferdam area while the cofferdam is being installed. As such, fish would not be anticipated to be captured within the cofferdam. The area within the temporary cofferdams would be dewatered, during which a NOAA Fisheries-approved biologist would be onsite to observe dewatering activities, and rescue and relocate any fish observed in isolated areas during dewatering activities if safe to do so. During impact pile driving, a NOAA Fisheries-approved biologist would be on site to monitor for any potential fish take.

The installation of the temporary cofferdams would result in a temporary loss of 0.5 acre of aquatic habitat. The placement of RSP around piers for scour mitigation would result in a permanent modification of 0.33 acre of bottom aquatic habitat. The new fender system would encompass the same footprint as the existing fender system; therefore, there would be no loss to aquatic habitat from the new fender system. Additionally, presuming the existing fender piles are a treated wood (such as coated with creosote), replacement of the fender piles with clean materials would result in a beneficial effect to the fish and the Petaluma River. The presence of the new fender system and RSP around piers would not diminish foraging habitat and open-water habitat within the Project area because the special-status fish species are known to forage in areas with both rock and sediment bottoms. Placement of boulder clusters within a stream channel creates a diversity of water depth, substrate, and velocity, thereby increasing habitat diversity of an otherwise plain streambed and providing cover and foraging habitat for special-status fish species (Saldi-Caromile et al. 2004).

There is the possibility of take associated with sound pressure levels from the installation of steel piles for the fender system. The Fisheries Hydroacoustic Working Group (2008) has designated a 183-decibel (dB) cumulative sound exposure level (SEL) as the threshold criterion for mortality of small fish (that weigh less than 2 grams), a 187-dB cumulative SEL as the threshold criterion for mortality of fish that weigh more than 2 grams, and a peak threshold criterion of 206 dB for all sizes of fish; this peak is associated with the maximum sound levels associated with a single strike during impact pile driving. Having installed the dewatered cofferdam when impact pile driving occurs, the 206-dB peak sound levels would not be anticipated to be reached or exceeded.

Depending on the pile size (24- or 30-inch piles), number of piles that would be installed per day, and the number of strikes that would ultimately be required per pile, with the use of an underwater sound pressure attenuation system (e.g., a dewatered

cofferdam or a bubble curtain system), the buffer associated with the 187-dB cumulative SEL over the course of a working day would extend to approximately 400 meters from the pile. A complete hydroacoustic analysis would be prepared once Project details related to pile driving have been determined; this analysis would identify the buffer needed for a 187-dB cumulative SEL for pile-driving activities, as well as recommend appropriate attenuation methods.

Specific accounts of each of the special-status fish species, and measures to minimize impacts from the Project, are further discussed in the sections that follow.

North American green sturgeon, southern (DPS) (*Acipenser medirostris*): The North American green sturgeon southern DPS is listed as federally threatened. Adult and sub-adult green sturgeon frequently congregate in the San Francisco Bay and San Pablo Bay during the summer and fall but can be found in these areas year-round (Lindley et al. 2008) and could forage within the BSA in the Petaluma River, which is designated as critical habitat for the species. An acoustic telemetry study detected 29 adult green sturgeon at the Port Sonoma/Petaluma River mouth from 2009 to 2012 (Chapman et al. 2019). Detections increased from January through July, when the most fish were detected, then decreased through late summer and fall (Chapman et al. 2019).

There is a moderate potential for adult and sub-adult green sturgeon to be in the BSA during the proposed in-channel work period (June 1 to October 31). Therefore, the species is presumed to be present. As such, there would be the possibility of take associated with sound pressure levels from the installation of steel piles for the fender system. Because green sturgeon are highly mobile, it is unlikely that any individuals would be affected by the 187-dB cumulative SEL because they would be able to easily transit outside of the 400-meter cumulative SEL buffer in the course of a working day. In addition to the Project features that protect aquatic resources and provide biological oversight and wildlife protection, the following AMM would be implemented to avoid and/or minimize potential impacts to North American green sturgeon: AMM BIO-24, Hydroacoustic Minimization and Monitoring Plan.

Central California Coast (CCC) steelhead (*Oncorhynchus mykiss irideus*): The CCC DPS of steelhead is listed as federally threatened. There are no CNDDB recorded occurrences of CCC steelhead within 5 miles of the BSA. The Petaluma River watershed historically supported steelhead runs and CCC steelhead are known to occur in the watershed, although the habitat available in the Petaluma River system

is of substantially lesser importance than the Sonoma Creek system to the east (Leidy et al. 2005).

The proposed in-channel work period (June 1 to October 31) would avoid the period when adults are anticipated to be migrating upstream and typical downstream emigration of smolts into the estuary. A complete hydroacoustic analysis would be prepared once Project details related to pile driving have been determined. This analysis would identify the buffer needed for a 187-dB cumulative SEL for pile driving activities as well as recommend appropriate attenuation methods. In addition to the Project features that protect aquatic resources and provide biological oversight and wildlife protection, the following AMM would be implemented to avoid and/or minimize potential impacts to CCC steelhead: AMM BIO-24, Hydroacoustic Minimization and Monitoring Plan.

Longfin smelt (*Spirinchus thaleichthys*): The longfin smelt is listed as state threatened and is a federal candidate for listing. There is one CNDDB recorded occurrence of longfin smelt within 5 miles of the BSA, within San Pablo Bay. There are no CNDDB records of longfin smelt directly in Petaluma River within the BSA; however, San Pablo Bay supports habitat for the species and the CNDDB-recorded occurrence extends throughout San Pablo Bay to the mouth of the Petaluma River. Because of the close proximity to the San Pablo Bay, there is a possibility for fish to incidentally forage in the BSA; however, there is no spawning habitat present. The extent to which longfin smelt use habitat upstream of the mouth of the Petaluma River is unknown (Robinson et al. 2011). The species preferentially avoids waters at or above 22 ºC (CDFW 2009). There is moderate potential for longfin smelt to occur within the BSA and the species would be presumed to be present during the proposed in-channel work period. As such, there would be the possibility of take associated with sound pressure levels from the installation of steel piles for the fender system. Because longfin smelt are highly mobile, it is unlikely that any individuals would be affected by the 183-dB cumulative SEL because they would be able to easily transit outside of the 400-meter cumulative SEL buffer in the course of a working day.

In addition to the Project features that protect aquatic resources and provide biological oversight and wildlife protection, the following AMM would be implemented to avoid and/or minimize potential impacts to longfin smelt: AMM BIO-24: Hydroacoustic Minimization and Monitoring Plan.

Sacramento splittail (*Pogonichthys macrolepidotus*): Sacramento splittail is a state species of special concern (SSC). Sacramento splittail are known to occur in the Petaluma River estuary, which apparently supports a self-sustaining population (Moyle et al. 2004, Feyrer et al. 2005). There is one occurrence of Sacramento splittail within 5 miles of the BSA, located approximately 0.25 mile southeast of the BSA within Carl's Marsh, near the mouth of the Petaluma River. The Petaluma River estuary provides spawning habitat and adult and juvenile rearing habitat (Moyle et al. 2004); therefore, Sacramento splittail have potential to occur within the BSA, as they may rear or forage in the BSA or migrate through the BSA to spawning grounds during the proposed in-channel work period. As such, there is the possibility of take associated with sound pressure levels from the installation of steel piles for the fender system. Because Sacramento splittail are highly mobile, it is unlikely that any individuals would be affected by the 183-dB cumulative SEL because they would be able to easily transit outside of the 400-meter cumulative SEL buffer in the course of a working day.

In addition to the Project features that protect aquatic resources and provide biological oversight and wildlife protection, the following AMM would be implemented to avoid and/or minimize potential impacts to Sacramento splittail: AMM BIO-24: Hydroacoustic Minimization and Monitoring Plan.

Amphibians

California Red-Legged Frog (*Rana draytonii*): California red-legged frog is federally listed as threatened and is also a state SSC. There is one mapped CNDDB occurrence of California red-legged frog within 1 mile of the BSA (CDFW 2021). However, this occurrence does not have a publicly identifiably location and is only recorded as within the entire Sears Point 7.5-quadrangle (CDFW 2021). The closest recorded CNDDB occurrence with a specified location occurs approximately 1.7 miles northeast of the eastern terminus of the BSA within a small drainage pool (CDFW 2021). It was recorded in 1997 and is presumed extant. The hayfield and annual and perennial grasslands mapped east of the Petaluma River are within the maximum dispersal distance of CNDDB occurrence. These habitats may support suitable upland dispersal/refugia habitat for the California red-legged frog; however, the grassland habitat within the proposed Project limits includes highly disturbed herbaceous roadside vegetation that is annually mowed and maintained. It is unlikely that the species would use this area for upland refugia when there is mesic hayfield habitat nearby that is further from the highway. There is potential, although low, for

California red-legged frog upland habitat to occur within the BSA. There is no suitable aquatic habitat within the BSA.

It is unknown what construction activities, if any, would occur in the grassland habitat along the SR 37 westbound shoulder, east of the Petaluma River. It is presumed that activities may include staging and parking, both of which would be temporary. If there are burrows identified in these areas, California red-legged frogs could be directly impacted by compaction of burrows and loss of upland refugia habitat. The proposed Project would have potential, although low, to temporarily impact approximately 3.5 acres of suitable California red-legged frog upland dispersal habitat.

In addition to the Project features that protect aquatic resources and provide biological oversight and wildlife protection, the following AMMs would be implemented to avoid and/or minimize potential impacts to California red-legged frog: BIO-25: California Red-Legged Frog Habitat Work Window; BIO-26: California Red-Legged Frog Pre-Construction Surveys; BIO-27: California Red-Legged Frog Monitoring Protocols.

Birds

California Ridgway's Rail (*Rallus obsoletus* [*R. longirostris obsoletus*]): California Ridgway's rail is listed as federally endangered, state endangered, and is a state fully protected species. The California Ridgway's rail is known to occur within the tidal wetlands surrounding the mouth of the Petaluma River and as far as 10 miles upstream. There are four relatively current (in 2011 and 2016) reported occurrences that overlap the BSA, located on both banks of the Petaluma River, both north and south of the SR 37 bridge (CDFW 2021).

Implementation of the Project would not include ground-disturbing work to salt marsh habitat. However, the fender replacement and RSP placement around piers within the river channel would include pile driving, which could impact California Ridgway's rail via noise disturbance. The USFWS considers the species sensitive to disturbance, and seeks to minimize human intrusion to occupied marshes, particularly during the breeding season (USFWS 2013). Pile driving could cause the birds to flush, making them more vulnerable to predators, if they are located within close proximity to the construction work. Additionally, close proximity of staging and access associated with the Black Point Boat Launch, as well as general construction activities, could cause abandonment of active nests.

In addition to the Project features, the following two AMMs would be implemented to avoid and/or minimize potential impacts to California Ridgway's rail: BIO-28: California Ridgway's Rail and California Black Rail Pre-Construction Survey and BIO-29: California Ridgway's Rail and California Black Rail Monitoring.

California Black Rail (*Laterallus jamaicensis coturniculus*): California black rail is a state threatened and state fully protected species. The California black rail is known to occur within the tidal wetlands surrounding the mouth of the Petaluma River and as far as 10 miles upstream. There are four relatively current reported occurrences overlapping or within the direct vicinity of the BSA, located on both banks of the Petaluma River, both north and south of the SR 37 bridge (CDFW 2021).

Implementation of the Project would not include ground-disturbing work to salt marsh habitat. However, the fender replacement and RSP placement around piers within the river channel would include pile driving, which could impact California black rail via noise disturbance. The USFWS considers the species sensitive to disturbance, and seeks to minimize human intrusion to occupied marshes, particularly during the breeding season (USFWS 2013). Pile driving could cause the birds to flush, making them more vulnerable to predators, if they are located within close proximity to the construction work. Additionally, close proximity of staging and access associated with the Black Point Boat Launch, as well as general construction activities, could cause abandonment of active nests.

In addition to the Project features, the following two AMMs would be implemented to avoid and/or minimize potential impacts to California black rail: BIO-28: California Ridgway's Rail and California Black Rail Pre-Construction Survey; and BIO-29: California Ridgway's Rail and California Black Rail Monitoring.

Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*): Saltmarsh common yellowthroat is a state SSC. There are six reported occurrences of salt marsh common yellowthroat (all recorded in 2004) in the tidal wetlands bordering the Petaluma River, three of which are less than 0.5 mile away from the BSA. Based on the presence of both saltmarsh/brackish marsh habitat and the recorded occurrences, the BSA is presumed to support breeding habitat for the salt marsh common yellowthroat.

Implementation of the proposed Project would not include ground-disturbing work to salt marsh habitat. However, the fender replacement and RSP placement around piers within the river channel would include pile driving, which could impact nesting birds

via noise disturbance. Pile driving could cause the birds to flush, making them more vulnerable to predators, if they are located within close proximity to the construction work. Additionally, close proximity of staging and access associated with the Black Point Boat Launch, as well as general construction activities, could cause abandonment of active nests. However, the proposed fender locations (that is, the point source of impact pile driving) will be located a minimum of 100 feet from the shoreline, which will likely be an adequate distance from nesting birds to provide an attenuated buffer zone from the noise.

Implementation of the following Project features would result in minimizing impacts to the species: BIO-6: Mark Environmentally Sensitive Areas; BIO-8: Nesting Bird Surveys; BIO-9: Active Nest Buffers; BIO-10: Construction Site Management Practices; BIO-17: Agency-Approved Biologist; and WQ-1: Stormwater Best Management Practices.

San Pablo song sparrow (*Melospiza melodia samuelis*): The San Pablo song sparrow is a state SSC. There are 13 recorded CNDDB occurrences of San Pablo song sparrow within 5 miles of the BSA. Six current occurrences are located in the tidal wetlands bordering the Petaluma River. Surveys conducted in 2004 reported more than 200 detections throughout these occurrences (CDFW 2021). The vegetation that makes up the tidal wetland habitat within the BSA can support San Pablo song sparrow habitat. Because of the presence of tidal wetland habitat, as well as species observations surrounding the BSA, San Pablo song sparrow nesting and foraging habitat is presumed present.

Implementation of the proposed Project would not include ground-disturbing work to salt marsh habitat. However, the fender replacement and RSP placement around piers within the river channel would include pile driving, which could impact nesting birds via noise disturbance. Pile driving could cause the birds to flush, making them more vulnerable to predators, if they are located within close proximity to the construction work. However, the proposed fender locations (that is, the point source of impact pile driving) will be located a minimum of 100 feet from the shoreline, which will likely be an adequate distance from nesting birds to provide an attenuated buffer zone from the noise.

Implementation of the following Project features would result in minimizing impacts to the species: BIO-6: Mark Environmentally Sensitive Areas; BIO-8: Nesting Bird Surveys; BIO-9: Active Nest Buffers; BIO-10: Construction Site Management

Practices; BIO-17: Agency-Approved Biologist; and WQ-1: Stormwater Best Management Practices.

Tricolored Blackbird (*Agelaius tricolor*): The tricolored blackbird is a state threatened species and a California SSC. There are two reported CNDDB occurrences of tricolored blackbird, slightly more than 2 miles northeast of the bridge. Approximately 100 to 200 birds were observed carrying food and nesting material at an occurrence in 2013, but no birds were seen in 2014; 12 adult birds observed at a nesting colony were reported in 1997. Both the occurrences in 2013 and 1997 were identified at stock ponds. There have been no bird surveys conducted for this Project, but because of the presence of the surrounding wetlands and recorded observations, the species cannot be ruled out. The BSA does not support nesting habitat; however, wintering habitat for the tricolored blackbird is presumed.

There would be no impacts to the tricolored blackbird habitat as a result of implementation of the proposed Project because a foraging bird (such as, a bird performing activities in wintering habitat) can easily fly away and avoid construction and noise.

There are no anticipated impacts to the tricolored blackbird. Therefore, no avoidance or minimization efforts are needed.

Western Burrowing Owl (*Athene cunicularia*): Western burrowing owl is a California SSC. There are six occurrences of the species within a 5-mile radius of the BSA. The nearest occurrence is less than 0.5 mile north of the BSA, along the eastern bank of the Petaluma River. Based on the presence of suitable habitat and surrounding observations, burrowing owl habitat is assumed to be present within the BSA. However, because of the minimal amount of habitat present, the likelihood of burrowing owl presence is low.

The Project limits include approximately 7 acres of mapped annual and perennial grassland, which may be suitable burrowing owl habitat. The adjacent hayfield habitat is outside of the Project limits and would not be impacted. It is unknown what construction activities, if any, would occur in the grassland habitat, but such activities may include staging and parking, both of which would be temporary. If burrows are identified in these areas, then burrowing owls could be directly impacted by compaction of burrows and loss of habitat. Foraging birds would be able to fly away to surrounding habitats if disturbed by construction. The proposed Project has

potential, although low, to temporarily impact burrowing owl via noise disturbance, if they are within the BSA.

In addition to the Project features that provide biological oversight and wildlife protection, the following two AMMs would be implemented to avoid and/or minimize potential impacts to the burrowing owl: BIO-30: Western Burrowing Owl Pre-Construction Surveys; and BIO-31: Western Burrowing Owl Nest Avoidance.

American Peregrine Falcon (*Falco peregrinus anatum*): The American peregrine falcon is a fully protected state species. According to eBird.org, the species has been observed near the Black Point Boat Launch (December 2020), the Port of Sonoma (September 2021), and the Bahia Marsh (February 2021). There are no known nesting sites with the BSA; however, peregrines could possibly nest in the open areas underneath the bridge deck if suitable nesting substrate (prey remains, bird droppings, gravel, or some other substrate aside from concrete) is present on top of the bents. Because of the species' affinity for nesting on bridges, the bridge structure is presumed to have the potential to support suitable nesting habitat for the American peregrine falcon.

The proposed Project could directly impact nesting birds and fledglings if they are present during construction. Resurfacing the bridge deck, replacing bridge railing and guardrails, installing coffer dams, and driving piles for the fender system could directly impact a nesting pair and/or fledglings via noise disturbance, increased vibrations, and general presence of workers and equipment in the vicinity of a nest.

Implementation of the following Project features would result in minimizing impacts to the species: BIO-8: Nesting Bird Surveys; BIO-9: Active Nest Buffers; and BIO-17: Agency-Approved Biologist.

Mammals

Salt-marsh harvest mouse (*Reithrodontomys raviventris*): The salt marsh harvest mouse is federally endangered, state endangered, and a state fully protected species.

There are many historical trapping records of the salt marsh harvest mouse within the Petaluma Marsh tidal wetlands, adjacent to the Petaluma River, dating from 1945 through 2005, where "2-5" mice were observed in a nest approximately 0.5 mile north of the SR 37 bridge (CDFW 2021). The species is known to occur in the Petaluma Marsh as well as the marshes of Lower Tubbs Island, 3 miles east of the

BSA. Because of the presence of suitable habitat and a known history of the species within and adjacent to the BSA, the species is presumed present within the BSA.

Although the species is presumed present within the BSA and Project limits, there would be no construction within salt marsh habitat and, therefore, no effects to salt marsh harvest mouse habitat. No impacts are anticipated for the salt marsh harvest mouse.

Implementation of the following Project features would result in avoiding indirect impacts to salt marsh harvest mouse: BIO-4: Work Period in Dry Weather Only; BIO-6: Mark Environmentally Sensitive Areas; BIO-10: Construction Site Management Practices; and WQ-1: Stormwater Best Management Practices.

Protected Marine Mammals

Two marine mammals with low potential to occur within the BSA are the California sea lion (*Zalophus californianus*) and the Pacific harbor seal (*Phoca vitulina*). Neither of these species are federally or state listed as threatened or endangered; however, all marine mammals are protected under the Marine Mammal Protection Act (MMPA) of 1972. These species may infrequently occur within or immediately adjacent to the BSA within the Petaluma River or the San Pablo Bay. Marine mammals occurring in the bay, though not considered special-status species (threatened or endangered), are protected under the MMPA; harassment of these mammals from underwater noise requires authorization from NOAA Fisheries.

A hydroacoustic study would be conducted for the Project. Marine mammals exposed to noise may experience masking of other environmental noises and change their behaviors in response to the noise, such as moving away from the activity, startle responses, and changes to underwater vocalizations. Such noisemasking and behavioral effects would be temporary, localized, and less than significant in nature. As required by the MMPA, Caltrans would obtain a marine mammal incidental harassment authorization from NOAA Fisheries. All conditions in that permit would be followed.

The following AMM would be implemented to avoid harassment of marine mammals, if required: BIO-32: Marine Mammal Protection.

Other Species

Other species listed as endangered or threatened under federal Endangered Species Act or California Endangered Species Act, defined by CDFW as a SSC, or plant

species in CNPS Online Inventory of Rare and Endangered Plants were eliminated from further consideration based on the BSA being outside of the species' range, and no suitable habitat being identified in the BSA.

Designated Critical Habitat

There is federally designated critical habitat for the Southern DPS of green sturgeon and the CCC steelhead DPS within the BSA and Project limits.

Southern DPS of Green Sturgeon. Designated critical habitat includes all waterways of the Sacramento-San Joaquin Delta, up to the mean higher high water (MHHW) elevation, except for certain excluded areas and all tidally influenced areas of San Francisco Bay, San Pablo Bay, and Suisun Bay, up to the MHHW elevation. Within the BSA, the Petaluma River is designated critical habitat for green sturgeon as there are suitable food resources, water flow and quality, depth, and sediment quality within the Petaluma River. The Petaluma River does not provide a migration corridor.

In-water work activities may result in temporary increases in turbidity and sound levels within the BSA. Turbidity is expected to subside quickly, and increased noise levels would only occur during pile driving. With the incorporation of BMPs outlined in the most up-to-date standard specifications, there are no anticipated direct or indirect impacts to the primary constituent elements of green sturgeon critical habitat.

CCC Steelhead DPS. Designated critical habitat for the CCC steelhead DPS near the BSA is in the San Pablo Bay, including the Petaluma River. Critical habitat includes freshwater spawning areas, freshwater rearing and migration areas, and estuarine rearing and migration areas. All tidally influenced waters that overlap the BSA are included as critical habitat for this species. Within the BSA, Petaluma River provides suitable foraging and rearing habitat and a migration corridor.

In-water work activities may result in temporary increases in turbidity and sound levels within the BSA. Turbidity would be expected to subside quickly, and increased noise levels would only occur during pile driving. With the incorporation of BMPs outlined in the most up to date standard specifications, there are no anticipated direct or indirect impacts to the primary constituent elements of CCC steelhead critical habitat.

b) Less than Significant Impact

The Project would not have a substantial, adverse effect on riparian habitat or environmentally sensitive natural communities.

SENSITIVE NATURAL COMMUNITIES

Pacific coastal salt marsh is a macrogroup under the U.S. National Vegetation Classification System, which includes intertidal salt marshes and brackish marsh vegetation alliance; the coastal marsh considered a sensitive natural community. Sonoma County's Vegetation Mapping classifies the vegetation along both banks of the Petaluma River as the Pacific coastal salt marsh macrogroup (Sonoma County 2017).

According to the vegetation mapping, there are an estimated 37 acres of North American Pacific Coastal Salt Marsh and 4 acres of salt marsh tidal plain, described as barren and/or sparsely vegetated, within the BSA. The Project would have no direct effects to Pacific coastal salt marsh habitat and, therefore, no direct impacts would be anticipated for this sensitive natural community.

Implementation of the Caltrans standard specifications and Project features would result in avoiding indirect impacts to this sensitive natural community. In particular, implementation of the following Project features would specifically avoid impacts to salt marsh habitat: BIO-10: Construction Site Management Practices; BIO-17: Agency-Approved Biologist; and WQ-1: Stormwater Best Management Practices.

ESSENTIAL FISH HABITAT

The Project is located in the Novato U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, which has designated essential fish habitat (EFH) for Chinook and coho salmon, groundfish, and coastal pelagics (NOAA Fisheries 2021). The BSA contains a portion of the Petaluma River. Several proposed Project activities could potentially impact Chinook salmon, coho salmon, groundfish, and coastal pelagic species EFH; these activities would include installation of temporary cofferdams, dewatering, pile driving within the Petaluma River, increased sediment mobilization, and water quality degradation. In-water work activities could result in temporary increases in turbidity and sound levels adjacent to construction activities. Turbidity would be expected to subside quickly, and increased noise levels would only occur during pile driving. Placement of RSP around the pier footings could serve as an aggregation location for predatory fish; however, the amount of RSP would be

minimal in relation to the amount of surrounding bottom-water habitat free of RSP. The proposed Project would not adversely impact the hydrology or bathymetry of Chinook salmon, coho salmon, groundfish, or coastal pelagic species EFH. No permanent, adverse modifications to EFH would result from the proposed Project activities.

c) Less than Significant Impact with Mitigation Incorporated

The Project is anticipated to have a less than significant impact on federally and state-protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal areas). The Project would have direct impacts to the Petaluma River. Approximately 0.5 acre (21,354 square feet) of jurisdictional waters of the United States (WOTUS) would be temporarily affected by cofferdam placement. Approximately 2,628 cubic yards of RSP would be permanently placed within WOTUS, resulting in approximately 0. 33 acres of RSP placed below the ordinary high-water mark.

Caltrans would address the need for compensatory mitigation during the permitting and design phases, working in coordination with the U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB)), as well as other state and federal agencies. Potential compensation would be based on the estimate of impacts to jurisdictional aquatic resources. Caltrans would discuss in-lieu compensation possibilities with state and federal agencies, through purchasing credits at an approved bank or by funding restoration at a restoration project that would create or enhance habitat in the Bay Area as appropriate with Project impacts. The final acreage value of compensatory mitigation would be determined in coordination with the regulatory agencies. Implementation of Mitigation Measure BIO-1 would reduce the impact on jurisdictional aquatic resources to less than significant.

d) No Impact

The Project would not construct any new permanent barriers to wildlife movement, or otherwise interfere with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, there would be no impact.

e) No Impact

This Project would not conflict with any local policies or ordinances protecting biological resources; therefore, there would be no impact.

f) No Impact

This Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, there would be no impact.

Project Features

Caltrans would incorporate its standard measures into the Project to offset or avoid potential impacts to biological resources. These features include those described in the following paragraphs.

Project Feature BIO-1: Documentation at Project Site. A permit compliance binder would be maintained at the construction site at all times and presented to resource agency (USACE, NMFS, USFWS, RWQCB, BCDC, USCG, CDFW and/or SLC) personnel upon request. The permit compliance binder would include a copy of all original permits and agreements, and any extensions and amendments to the permits and agreements.

Project Feature BIO-2: Work According to Documents. Except as they are contradicted by measures within the issued permits and agreements, all work would be conducted in conformance with the project description in the contract plans, specifications, Project features, and AMMs included in the environmental clearance.

Project Feature BIO-3: In-Channel Work Period. With the exception of non-ground disturbing vegetation removal (to avoid impacts to nesting birds), in-channel work and any dewatering necessary within the Petaluma River would be scheduled between June 1 and October 31. Modifications to the work windows would be implemented based on conditions stated in the permits.

Project Feature BIO-4: Work Period in Dry Weather Only. Work in the bed, bank, channel of the Petaluma River, and any associated riparian habitat would only be conducted during periods of dry weather. Work during precipitation events would adhere to the applicable permit conditions.

Project Feature BIO-5: Worker Environmental Awareness Training. Prior to the start of construction, a biologist would provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later would receive the same

training before beginning work. Upon completion of the education program, employees would sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the Project limits, descriptions of ESAs within the Project site, and notes of key avoidance measures, as well as employee guidance would be given to each person who completes the training program. These forms would be made available to the resource agencies upon request.

Project Feature BIO-6: Mark Environmentally Sensitive Areas. Before construction begins, ESAs would be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking would remain in place throughout construction. It may be removed during the wet season (winter suspension), and subsequently re-installed prior to the following construction season. The final Project plans would depict all locations where ESA markings would be installed and how they would be installed. The bid solicitation package special provisions would clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings would be maintained in good repair throughout the Project site.

Project Feature BIO-7: Wildlife Exclusion Fencing (WEF). Before starting construction, WEF would be installed where wildlife could enter the Project site. Locations of the WEF would be determined in coordination with the Project biologist. WEF installation locations would be identified during the plans, specifications, and estimates phase of the Project; the final plans would depict the locations where WEF would be installed and how it would be assembled/constructed. The special provisions in the bid solicitation package would clearly describe acceptable WEF material and proper WEF installation and maintenance. The WEF would remain in place throughout the Project construction duration, and would be fully maintained and regularly inspected for stranded animals. The WEF would be removed following completion of construction activities or when construction is completed at that location, at the discretion of the Project biologist.

Project Feature BIO-8: Nesting Bird Surveys. If Project activities occur between February 1 and September 30, a pre-construction survey(s) would be conducted for nesting birds no more than 3 days before any vegetation removal, staging, and/or construction. If active nests are found, then an appropriate buffer would be

established and the nest would be monitored for compliance with the Migratory Bird Treaty Act and California Fish and Game Code Section 3503.

Project Feature BIO-9: Active Nest Buffers. If an active bird nest is found during construction activities, then the following ESA buffers would be established: if an active raptor nest is observed, a 300-foot-wide ESA buffer would be implemented to avoid impacting the young until they have fledged; if an active nest of non-raptor birds is observed, a 50-foot-wide ESA buffer would be implemented to protect the young until they have fledged, or as otherwise determined by consultation with USFWS and CDFW regarding appropriate action to comply with the Migratory Bird Treaty Act (16 U.S. Code, Section 703-712) and California Fish and Game Code, Section 3503.

Project Feature BIO-10: Construction Site Management Practices. The following site restrictions would be implemented to avoid or minimize potential impacts on sensitive biological resources:

- Enforce a speed limit of 15 miles per hour for project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.
- Locate construction access, staging, storage, and parking areas within the Caltrans ROW and outside of any designated ESA to the extent practicable. Limit access routes, staging and storage areas, and contractor parking to the minimum necessary to construct the proposed Project. Clearly mark routes and boundaries of roadwork before initiating construction.
- Certify, to the maximum extent practicable, borrow material is non-toxic and weed free.
- Enclose food and food-related trash items in sealed trash containers and remove them from the site at the end of each day.
- Prohibit pets from entering the Project area during construction.
- Prohibit firearms within the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

Project Feature BIO-11: Invasive Weed Control. To reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order 13112. If noxious

weeds are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these noxious weeds and dispose of them in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance would be replanted with fast growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the Project footprint would be covered to the extent practicable with heavy black plastic solarization material until the end of the Project.

If work occurs in sensitive habitat, vehicles and equipment would be thoroughly cleaned before arriving on the Project site to prevent the spread of noxious weeds from other locations.

Project Feature BIO-12: Vegetation and Tree Removal. Vegetation would be cleared only where necessary and would be cut above soil level, except in areas that would be permanently affected or excavated. This would allow plants that reproduce vegetatively to resprout after construction.

Project Feature BIO-13: Restore Disturbed Areas. Temporarily disturbed areas would be restored to the maximum extent practicable. Exposed slopes and bare ground would be reseeded with native vegetation or other methods to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species would be replanted, based on the local species composition.

Project Feature BIO-14: Bat Protection. A habitat assessment would be conducted for potentially suitable bat roosting habitat prior to construction activities. If the habitat assessment reveals any structures are suitable roosting habitat for bats, then the appropriate exclusionary measures would be implemented prior to construction during the periods between March 1 and April 15 or August 31 and October 15. Potential avoidance could include exclusionary blocking or filling potential cavities with foam, visual monitoring and/or staging Project work to avoid bats. If bats are known to use the structures, then exclusion netting would not be used. Bats would not be disturbed without specific notice to, and consultation with, CDFW.

Project Feature BIO-15: Prevent Inadvertent Entrapment. To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1 foot deep would be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed

of earthen fill or wooden planks at an angle no greater than 30 degrees. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project footprint overnight would be inspected before they are subsequently moved, capped, or buried.

Project Feature BIO-16: Night Lighting. Nighttime work would be avoided to the maximum extent practicable. For unavoidable nighttime work, all lighting would be shielded and directed downwards, toward the active construction area to avoid exposing nocturnal wildlife to excessive glare.

Project Feature BIO-17: Agency-Approved Biologist. A biologist approved by USFWS and/or NMFS, and CDFW would conduct pre-construction surveys for federally and state-listed species. The biologist would be present during construction activities, including vegetation clearing and grubbing, as required by the resource agencies. If, at any point, any listed species is discovered within the Project limits, the agency-approved biologist, through the Resident Engineer or his/her designee, would halt all work within 50 feet of the animal and contact the corresponding agency (USFWS or CDFW) to determine how to proceed.

Project Feature BIO-18: Construction Noise. Construction noise limitations, as they relate to listed species, would be determined through consultation with state and federal agencies, and implemented during construction.

Project Feature BIO-19: Stop Work Authority. Through the Resident Engineer or their designee, the Project biologist(s) would have the authority to stop Project activities to minimize take of listed species or if any permit requirements are not fully implemented. Caltrans would provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

Project Feature BIO-20: Discovery of Injured or Dead Special-Status Species. If discovery occurs of any dead, injured, or entrapped special-status species regulated by USFWS, NOAA Fisheries, or CDFW, Caltrans would provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

Project Feature BIO-21: Wildlife Species Relocation. When listed wildlife species (that do not have state fully protected status) are present and it is determined that they could be injured or killed by construction activities, the Project biologist, in coordination with the appropriate state and federal wildlife agencies, and as outlined

within the applicable permits, would identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected.

Project Feature BIO-22: Wetland Protection. The following measures would be implemented in and adjacent to delineated wetland ESAs in the Project footprint:

- Work in and adjacent to delineated wetlands where flooding has potential to occur would be scheduled outside of the wet-weather season.
- In-water work requiring dewatering in tidal waters would be scheduled to occur between June 1 and October 31. Other work below MHHW mark, where no surface water is present, (excluding impact pile driving) may be done year-round.
- Work in and adjacent to delineated tidal wetlands would not occur within 2 hours before or after extreme high tide events (6.5 feet above mean lower low water elevation or greater, as determined from the National Oceanic and Atmospheric Administration tidal gauge station nearest to the activity) when the marsh plain is inundated.

Avoidance and Minimization Measures

Caltrans would incorporate the following AMMs into the Project to offset or avoid potential impacts to biological resources.

AMM BIO-24: Hydroacoustic Minimization and Monitoring Plan. Depending on the results of a hydroacoustic analysis of the proposed construction methods (including pile size, number of piles per day and the number of strikes per pile), and in coordination with NOAA Fisheries, a Hydroacoustic Minimization and Monitoring Plan will be developed and will include measures such as the following:

1. **Hydroacoustic Monitoring.** During all impact pile-driving events, Caltrans will monitor in-water sound pressure levels relative to the 187-dB cumulative SEL and 206-dB peak pressure level. Vibratory pile driving will not be monitored.
2. **In-Water Impact Pile Driving Work Window.** All in-water impact pile driving, in water depths greater than 2 feet, at any time during work, will use an underwater sound pressure attenuation system (e.g., a dewatered cofferdam or a bubble curtain system).
3. **Soft Start.** Prolonged, soft-start procedures will be implemented when impact pile driving is required for piles greater than 20 inches in diameter, in waters that

provide habitat for federally listed anadromous fish species. Soft-starts will include pile driving at 40 to 60 percent reduced energy for at least 15 seconds, followed by a 1-minute waiting period. This procedure will be repeated at least two times before commencing full-energy impact pile driving.

4. **Vibratory pile driving.**
   a. All sheet piles will be installed with a vibratory driver or direct-push methods.
   b. Impact pile driving below the MHHW must take place after the sheet pile cofferdams have been installed, and the area has been dewatered.
   c. Where temporary piles cannot be extracted, they will be cut 3 feet below existing mudline.
5. **In-Water Sheet Pile Fish Entrapment Avoidance.** When sheet piles are installed below the MHHW mark, they will be installed in a way that avoids fish entrapment (e.g., by closing off pile walls during low tide). An agency-approved (USFWS/NMFS/CDFW) Project biologist will be present during any sheet pile installation below the MHHW mark.

AMM BIO-25: California Red-Legged Frog Habitat Work Window. These work windows are applicable only to those portions of the Project area where suitable California red-legged frog habitat occurs. Areas that are not considered habitat (including paved surfaces and other hardscape) are accessible for construction work year-round (unless other seasonal restrictions are outlined in a federal or state permit).

Initial ground disturbance (that is, areas that have not been previously disturbed in such a way that removes or destroys access to burrows and migratory habitat, or areas that have not previously been enclosed with WEF) in upland dispersal habitat for the California red-legged frog, as identified by a USFWS-approved Project biologist, will be timed to occur between April 15 and October 31.

AMM BIO-26: California Red-Legged Frog Pre-Construction Surveys. Pre-construction surveys for the California red-legged frog will be conducted by the Project biologist within 14 calendar days of the initiation of Project activities in suitable upland habitat prior to ground-disturbing activities, vegetation removal, and WEF installation. Surveys will be conducted as outlined in the 2005 USFWS species survey guidelines for California red-legged frog. Access to habitat during surveys may be limited by appropriate safety measures and protocols available at:

https://www.fws.gov/ventura/docs/species/protocols/crlf/caredleggedfrog_survey-guidelines.pdf. Pre-construction surveys will include:

- Foot surveys will be conducted of potential frog habitat within the Project limits and accessible adjacent areas (within at least 50 feet of Project limits).
- Investigation will occur of potential cover sites (burrows, rocks, soil cracks, vegetation, and other potential refuge habitat) and any areas of disturbed soil for signs of California red-legged frog.

Native vertebrates found in cover sites within the Project limits will be documented and, if handling is allowed, relocated to an adequate cover site in the vicinity. Species that cannot be relocated because of their special protection status will be addressed in coordination with the appropriate agency (USFWS and/or CDFW) with jurisdiction.

AMM BIO-27: California Red-Legged Frog Monitoring Protocols. During construction in and near potential California red-legged habitat, the following protocols will be observed by the Project biologist during construction monitoring:

- Within 24 hours prior to initial ground-disturbing activities, portions of the Project footprint where potential California red-legged frog habitat has been identified will be surveyed by a Project biologist(s) to clear the site of frogs moving above ground or taking refuge in burrow openings or under materials that could provide cover.
- A Project biologist(s) will be present during all initial ground-disturbing activities and vegetation removal in suitable refugia habitats for the California red-legged frogs to monitor the removal of the top 12 inches of topsoil.
- If potential aestivation burrows are discovered, the burrows will be flagged for avoidance.
- After a rain event, and prior to construction activities resuming, the Project biologist(s) will inspect the work area and all equipment/materials for the presence of California red-legged frogs.
- Upon discovery of a California red-legged frog in an active construction area, all work will cease within a 50-foot radius of the frog. The frog will be allowed to leave the site on its own; or if the frog(s) does not leave on its own, it will be

relocated as close to the Project site as feasible and with permission from the property owner, and placed in a natural burrow by a Project biologist with the appropriate USFWS 10(a)1(A) handling permit.

The USFWS will be notified by phone and email within one working day of any California red legged frog discovery in the Project area.

AMM BIO-28: California Ridgway's Rail and California Black Rail Pre-Construction Survey. If California Ridgway's rail or California black rail habitat is present within 700 feet of the immediate Project area and work is to occur during the rail nesting season (February 1 through August 31), a pre- construction survey by a USFWS 10(a)1(A) permit holder for California Ridgway's rail will be conducted to determine whether the species are present. Survey requirements and timing will be determined in consultation with USFWS and CDFW.

If California Ridgway's rail and/or California black rail are detected during pre-construction surveys, then Project activities will not occur within 700 feet of an identified detection (or smaller distance if approved by USFWS and CDFW) during the rail nesting season. If rail activity is detected within the 700-foot buffer, immediate consultation with USFWS and CDFW will be required.

AMM BIO-29: California Ridgway's Rail and California Black Rail Monitoring. The following monitoring protocols for California Ridgway's rail and California black rail are typically required by USFWS and CDFW. Conditions in the final biological opinion and as agreed upon with CDFW will supersede these monitoring protocols:

- A USFWS- and CDFW-approved biological monitor will be present on site to monitor for California Ridgway's rail and California black rail during the operation of large equipment within 300 feet of salt marsh areas.
- The Project biologist will be on site during construction. A Project biologist will periodically inspect the site to verify that habitat protection measures remain effective.

AMM BIO-30: Western Burrowing Owl Pre-Construction Surveys. Pre-construction surveys will be conducted where western burrowing owl nesting habitat has potential to occur within 500 feet of work. Survey protocol will include:

- Conduct 4 survey visits.

- Note that an initial visit must occur between February 15 and April 15.
- Conduct a minimum of three subsequent surveys, with at least 3 weeks between visits, with at least one visit to occur after June 15.
- Conduct an additional take avoidance survey no less than 14 days prior to initiating ground-disturbing activities where work will occur.

AMM BIO-31: Western Burrowing Owl Nest Avoidance. If a western burrowing owl active nest is discovered during pre-construction surveys or biological monitoring, the following initial buffers will be implemented:

- From April 1 through October 15, establish a 660-foot-wide (200-meter-wide), no-work buffer from the active nest site.
- From October 16 through March 31, establish a 164-foot-wide (50-meter-wide), no-work buffer from the active nest site.
- Buffers and minimization measures (such as., blinds and screens) may be adjusted or implemented after coordination with CDFW.

AMM BIO-32: Marine Mammal Protection. Measures to avoid harassment will be developed in consultation with NOAA Fisheries. Examples of measures that may be implemented include performing biological monitoring and stopping work if marine mammals are within a specified distance; using soft start techniques for impact pile driving; using pile cushions; and/or using bubble curtains to attenuate sound.

Mitigation Measures

Caltrans would incorporate the following measure into the Project to mitigate for potential impacts to WOTUS.

Mitigation Measure BIO-1: Caltrans would address the need for compensatory mitigation during the permitting and design phases and in coordination with, including but not limited to, USACE, RWQCB, USFWS, CDFW, and NMFS. Potential compensation would be based on the estimate of impacts to wetlands, waters, and other suitable habitat within the range of listed species. Caltrans would discuss in-lieu compensation options, with state and federal agencies through onsite restoration, funding of a restoration project that would create or enhance habitat in the Bay Area as appropriate with Project impacts, or the purchase of credits at an

approved mitigation bank. The final acreage value of compensatory mitigation will be determined in coordination with regulatory agencies.

3.3.5 Cultural Resources

Would the project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR CULTURAL RESOURCES

Cultural resource evaluations prepared for this Project include the memorandum, *Revised Office of Cultural Resource Studies (OCRS) Section 106 Closeout Memo for the Petaluma River Bridge Project at Post Mile 14.5, on State Route 37, in Marin County* (Caltrans 2022e). This section summarizes the findings of this memorandum. No further archaeology or architectural history studies are required. A finding of No Historic Properties Affected is appropriate for this undertaking because no historic properties are present.

The architectural area of potential effects (APE) encompasses the entire Petaluma River Bridge structure, 1,500 feet northeast and southwest of the bridge on SR 37, within Caltrans ROW and temporary construction easements where construction activities would take place, including staging and access areas. The vertical APE includes areas where excavation would be required below the ground surface. The maximum depth of the proposed fender system is 50 feet.

Caltrans contacted the Native American Heritage Commission on March 1, 2021, requesting that they conduct a search of their Sacred Land Files to determine if there were known tribal resources within or near the Project area. The Native American Heritage Commission responded on March 15, 2021, with a list of 11 Native American individuals representing 8 tribes, and negative results from the Sacred Land File search. Emails requesting input along with Project area map were sent to one representative from each of the eight tribes on March 18, 2021. Follow-up phone calls soliciting comments and concerns were made September 14, 2021.

Lynn Laub, Executive Assistant at Dry Creek Rancheria, emailed March 19, 2021, stating the Project was outside of their tribal territory. Brenda Tomaras, responded for

Chairperson Marjorie Mejia of the Lytton Rancheria of California via email that the Lytton Rancheria is not seeking any further consultation on this Project (Caltrans 2022e).

Messages were left for the following individuals, with no response to date: Tribal Historic Preservation Officer James Rivera of Middletown Rancheria of Pomo Indians of California; Tek Tekh Gabaldon of the Mishewal-Wappo Tribe of Alexander Valley; Chairperson Patricia Hermosillo of the Cloverdale Rancheria of Pomo Indians; and Chairperson Leona Williams of the Pinoleville Pomo Nation.

Attempts were made to contact the following individuals by phone, with no responses received: Tribal Historic Preservation Officer Buffy McQuillen of the Federated Indians of Graton Rancheria, Chairperson Scott Gabaldon of the Mishewal-Wappo Tribe of Alexander Valley, and the Guidiville Indian Rancheria.

a, b, c) No Impact

Based on literature review, database searches, and outreach to local Native American organizations, the proposed Project has no potential to affect cultural resources. The only other properties present within the APE meet the criteria for Section 106 PA Attachment 4, "Properties Exempt from Evaluation." The Project would have no impact on historic resources or archaeological resources because there are no historic properties within the APE. Implementation of Project features CULT-1 and CULT-2 would reduce potential impacts to undiscovered cultural resources.

Project Feature

Caltrans would incorporate its standard measures into the Project to offset or avoid potential impacts to cultural resources. These Project features include those described in the following paragraphs.

Project Feature CULT-1: Discovery of Cultural Resources. If previously unidentified cultural resources are unearthed during construction, work would be halted in that area until a qualified archaeologist can assess the significance of the discovery.

Project Feature CULT-2: Discovery of Human Remains. If remains are discovered, all work within 60 feet of the discovery would halt and Caltrans Cultural Resource Studies Office would be called. Caltrans Cultural Resources Studies Office staff would assess the remains and, if they are determined to be human, would contact

the County Coroner, per Public Resources Code, 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, then the coroner would contact the Native American Heritage Commission, which would assign a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of Public Resources Code, Section 5097.98 would be followed as applicable.

3.3.6 Energy

Would the project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR ENERGY

The document, *Energy Analysis Report* (Caltrans 2022c), was completed for the Project. This section summarizes the findings of this report.

a) Less than Significant Impact

Activities that consume energy also generate by-products. Greenhouse gases (GHGs) are the most closely studied byproducts of energy consumption because they are linked to climate change. To assess energy consumed by construction equipment and vehicles, the Construction Emissions Tool 2020 (CAL-CET 2020), version 1.0, developed by Caltrans, was used to quantify carbon dioxide (CO_2) emissions. The U.S. Environmental Protection Agency's GHG equivalencies formulas were used to convert CO_2 to fuel volumes. It was assumed that diesel would be used by all construction vehicles and equipment. A summary of energy usage in terms of fuel consumption is shown in Table 3-1.

Table 3-1. Construction Equipment and Vehicle Fuel Consumption

Fuel Consumption (gallons) Diesel
75,343.81

The Project would not be a congestion relief project. There would be different phases in construction, and energy use would depend on construction equipment used per activity of each phase. Because construction activities would be temporary and short term, the increase of energy consumption within the Project area would also be short

term. Construction activities would not increase highway capacity or otherwise alter long-term vehicular circulation that could affect energy use. During construction, BMPs, as described under Project feature Energy-1, would be implemented for energy efficiency of construction equipment.

This Project would not result in changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in energy consumption. During Project operation, energy consumption would be limited to routine maintenance, with less short-term maintenance required by upgrading the bridge railings to current standards. The impact would be less than significant.

b) No Impact

The Project would result in improved ride quality, which would improve vehicle operations, reduce emissions, and reduce energy consumption. Traffic volumes and types of vehicles using the highway would not change as result of the Project. Therefore, the proposed Project would not conflict with the regional/statewide goals on climate change, air quality, and petroleum reduction.

The Project would not conflict with a state or local plan for renewable energy or energy efficiency. There would be no impact.

Project Feature

Caltrans would incorporate a standard measure into the Project to offset or avoid potential impacts to energy. This feature is described in the following paragraph.

Project Feature 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 limit idling of vehicles and equipment; use solar power as a power source, if feasible; ensure regular maintenance of construction vehicles and equipment; and if feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite.

3.3.7 Geology and Soils

Would the project:

Question	CEQA Determination
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No Impact
(ii) Strong seismic ground shaking?	No Impact
(iii) Seismic-related ground failure, including liquefaction?	No Impact
(iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	No Impact
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?	No Impact
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?	No Impact
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?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

CEQA Significance Determinations for Geology and Soils

A *Geologic and Palaeontologic Analysis for Bridge Rehabilitation* technical memorandum (Caltrans 2022b) was prepared for the Project. This section includes the findings of this study.

The Project is in the central portion of the Coast Ranges Geomorphic Province of California. The dominant feature of the province is the San Andreas Fault, an 800-mile-long fault zone that generally forms the dividing line between major tectonic plates, with the Pacific Plate situated west of the fault and the North American Plate situated east of the fault. The Project is located approximately 17 miles east of the San Andreas Fault. The Burdell Mountain Fault is an undifferentiated Quaternary Inferred fault located north of the Project site (USGS 2022).

The Project limits includes the following soils series in order of prevalence: Reyes clay, 0 to 2 percent slopes, Novato clay, 0 to 1 percent slopes; water, Xerorthents, fill; and Bressa variant-McMullin variant complex, 30 to 50 percent slopes (NRCS 2022).

a(i) – (iv) No Impact

The Project would not affect geologic or native soil conditions. It also would not disturb the native subsurface because the Project would be located on previously disturbed ground. There are no known sensitive geologic or paleontological resources in the Project limits. There would be no additional impacts to the public from earthquakes, landslides, liquefaction, or other geologic hazards.

The Project would be subjected to strong ground shaking from nearby faults; however, the potential for fault rupture would not exist at the Project site. The Project would not directly or indirectly increase the potential for surface rupture, or strong ground shaking, or expose the public to increased risk of loss, injury, or death.

The Project would not expose the public to hazards from landslides, erodible soils, soft soils, expansive, nor collapsible soils. Soils may be subject to liquefaction during a strong seismic event; however, Project elements would not further add to the hazard. Therefore, the Project would not increase the potential risk of loss, injury, or death resulting from seismically related liquefaction. There would be no impact.

SR 37 through the proposed Project limits lies on engineered (artificial) fill overlying marsh deposits. Project excavation would be in engineered fill over marsh deposits. These units are not fossil bearing; therefore, there would be no impact.

b) No Impact

Bridge rehabilitation work would not result in substantial soil erosion or the loss of topsoil; therefore, there would be no impact.

c, d, f) No Impact

There are no sensitive geologic, paleontological, or mineral resources in the Project limits. No additional impacts to the public from earthquakes, landslides, liquefaction, or other geologic hazards would result from the Project. The Project would be located on the SR 37 Petaluma River Bridge, and in the Petaluma River. Project excavation would be in engineered fill over marsh deposits; therefore, no impact would occur.

e) No Impact

No septic tanks or alternative wastewater delivery systems would be constructed or affected by the Project; therefore, no impact would occur.

3.3.8 Greenhouse Gas Emissions

Would the project:

Question	CEQA Determination
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR GREENHOUSE GAS EMISSIONS

A *Construction Greenhouse Gas Emissions Analysis* memorandum (Caltrans 2022d) was completed for the Project. This section summarizes the findings of this review.

a) Less than Significant Impact

The GHG emissions resulting from construction activities would not result in long-term impacts on the environment. Construction-generated GHG would include emissions resulting from material processing by onsite construction equipment, workers commuting to and from the Project site, and traffic delays resulting from construction. The emissions would be produced at different rates throughout the Project, depending on the activities involved at various phases of construction. The analysis was focused on vehicle-emitted GHG. CO_2 is the single most important GHG pollutant because of its abundance when compared with other vehicle-emitted GHG, including methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbon and black carbon.

Based on Project information available for environmental studies, the construction-related GHG emissions were calculated using the Caltrans Construction Emissions Tool (CAL-CET 2020), version 1.0. It was estimated that for construction duration of 13.5 months, the total amount of CO_2 produced as a result of construction would be 767 tons. Table 3-2 summarizes the construction-related emissions, including the total carbon dioxide equivalent (CO_2e) emission. Frequency and occurrence of GHG emissions would be reduced through Project Feature GHG-1, described in the following subsection.

Table 3-2. Construction-related GHG Emissions

Project Location: Marin County SR 37, PM 14.50	Parameters			Project Total
	CO_2 (tons)	CH_4 (tons)	N_2O (tons)	CO_2e[a] (Metric Tons)
Total Emissions	767	0.023	0.042	707.89

[a] 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 CO_2.

b) No Impact

The proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The proposed Project would not contribute to a long-term increase in GHG emissions. Therefore, it would not be in conflict with reducing long-term emissions. There would be no impact.

Project Feature

Caltrans would incorporate a standard measure into the Project to offset or avoid potential impacts to greenhouse gases. This feature is described in the following paragraph.

Project Feature GHG-1: Control Measures for Greenhouse Gases. Measures would be determined during later Project phases and implemented during construction to ensure regular maintenance of construction vehicle and equipment; limit idling of vehicles and equipment on site; recycle nonhazardous waste and excess material if practicable; and use solar-powered signal boards, if feasible.

3.3.9 Hazards and Hazardous Materials

Would the project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant Impact
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?	Less than Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact

CEQA Significance Determinations for Hazards and Hazardous Materials

There is the potential for encountering hazardous materials during the construction stage of the Project (Wilson [Caltrans] pers. comm. 2021). Limited testing may need to be conducted during later Project phases, including a bridge survey to screen the existing bridge railings for asbestos, as required by the U.S. Environmental Protection Agency's National Emission Standards for Hazardous Pollutants when a concrete bridge structure is renovated. The bridge survey likely would also include screening the fender system for asbestos-containing materials that could be affected by the proposed work.

a, b) Less than Significant Impact

The Project would not create a significant hazard to the public related to the routine transport, use, or disposal of hazardous materials. Also, the Project would not 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.

Caltrans standard specifications BMPs would be implemented to prevent spills or leaks from construction equipment, as well as from storage of materials, such as fuels, lubricants, and solvents. All aspects of the Project associated with removal, storage, transportation, and disposal would be in strict accordance with the appropriate regulations of the California Health and Safety Code. Handling of hazardous materials would comply with Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste. The impact would be less than significant.

c) No Impact

The Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school because there are no existing or proposed schools within 0.25 mile of the Project; therefore, there would be no impact.

d) No Impact

The Project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the Project would not create a significant hazard to the public or the environment. Based on a review of the State Water Resources Control Board's GeoTracker database (SWRCB 2022), four leaking underground storage tank (LUST) cleanup sites were found south of the Project, near Harbor Boulevard, and one LUST cleanup site was found east of the bridge, at the Port Sonoma Marina. The LUST sites each have a completed case-closed status, are not located within the Project limits, and would not be affected by the Project. Compliance with Caltrans Standard Specifications 14-11, Hazardous Waste and Contamination, is required. There would be no impact.

e) No Impact

The Project is not located within an airport land use plan, or within 2 miles of a public airport or public use airport. There would be no impact.

f) Less than Significant Impact

The Project would minimally interfere with any emergency response or evacuation plan. Potential traffic delays would result from construction activities. One-way traffic control and one lane closure would be required during construction. Prior to construction, a traffic management plan (TMP) (see AMM Transportation and Traffic TRANS-1 in the Transportation and Traffic section) would be developed to control traffic, minimize traffic delays, and provide alternative routes. Emergency response times would not be anticipated to change during construction because the TMP would provide priority to emergency vehicles during one-way traffic control. The TMP would provide instructions for emergency response or evacuation in an emergency. In addition, the Project would not conflict with any other emergency response or evacuation plan. The impact would be less than significant.

g) No Impact

The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Caltrans proposes to upgrade existing facilities on SR 37 and would not have occupants or require installing associated infrastructure that would exacerbate fire risk or expose people or structures to risks. There would be no impact.

3.3.10 Hydrology and Water Quality

Would the project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	No Impact
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: (i) result in substantial erosion or siltation on- or off-site;	No Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No Impact
(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	No Impact
(iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

CEQA Significance Determinations for Hydrology and Water Quality

Caltrans completed the following hydrology and water quality technical studies for the Project, the *Location Hydraulic Study/Floodplain Analysis* (Caltrans 2021b), and *Water Quality Study* (Caltrans 2021c). This section summarizes the findings of those reviews.

The Petaluma River at the bridge location is subject to tides and the effects of sea level rise. However, much of the bridge is well above these effects. On the Sonoma side of the bridge, the bridge elevation drops significantly. At the conformance of the bridge and highway, the edge of traveled way elevation is approximately 7 feet and the highway elevation continues to drop to less than elevation 4 feet. This low-lying portion of SR 37 is currently protected by private levees along the northeastern bank of the river, with elevations beginning at about 8 feet. A discussion of sea level rise,

which includes discussion of the Petaluma River Bridge, is in the document *SR 37 Segment A PIR Sea Level Rise and Flooding Risk Assessment and Shoreline Evaluation* (AECOM 2021).

The Project location is subject to tidal influence of current and future sea-level rise as provided in the State of California Sea-Level Rise Guidance, 2018 Update (California Ocean Protection Council, 2018). However, a discussion of climate change, including sea-level rise, is not covered in this document because of the interim nature of the Project, the purposes of which are to address deficiencies of the bridge, including the bridge fenders, railing, decking, and bridge scour protection. The deck rehabilitation is expected to last at least 20 years, while the life expectancy of the fender system would depend on vessel strikes and other conditions, and is, therefore, unknown. Climate change and future sea-level rise will be considered through the environmental evaluation process of future projects scoped to address these issues on SR 37 in the Project limits; such projects include Caltrans SR 37 Corridor Planning and Environmental Linkages Study (U.S. 101 to Interstate 80), currently under preliminary environmental review.

The Project would be located within the San Francisco Bay RWQCB (Region 2). The Project would be within the San Pablo Hydrologic Unit, Petaluma River Hydrologic Area and Undefined Sub-Area (Hydrologic Sub-Area 206.30). The Project would be within the San Pablo Bay Watershed and the San Pablo Bay Estuaries Sub-Watershed.

a) Less than Significant Impact

The proposed Project would not violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality.

Water bodies located within and around the Project vicinity include the Petaluma River, San Antonio Creek, and San Pablo Bay. The Petaluma River, Petaluma River Tidal Portion, and San Pablo Bay are in the 2014-2016, 303(d) listed impaired water bodies. The Petaluma River is a sediment-sensitive waterbody.

The Project would result in a disturbed soil area of 0.97 acre; therefore, a Water Pollution Control Plan would be required. The new impervious surface would be 0.15 acre; the new net impervious surface would be 0.05 acre.

A 401 Water Quality Certification from the RWQCB, and a 404 permit from the USACE would be required for this Project because of work and fill in waters of the United States (Petaluma River). With implementation of Project features WQ-1, the Project would comply with the requirements of the 401 Water Quality Certification, which may require implementation of a stormwater pollution prevention plan to reduce impacts to less than significance.

Potential temporary impacts to existing water quality would result from active construction areas, which could lead to the release of fluids, concrete material, construction debris, sediment, and litter beyond the perimeter of the site. Impacts may include a change in localized pH and turbidity of receiving water courses. The anticipated sources for potential impacts to the water quality during construction could include, but not be limited to, the following:

- Debris and sediments from excavation
- Piling and foundation construction
- Structure demolition
- Concrete curing and waste
- Dewatering
- Drilling/removal of metal beam guard rails
- Earthwork and stockpiling of soil
- Contractor's staging area
- Vegetation removal
- Oil and grease from vehicles and construction equipment
- Sanitary wastes
- Chemicals used for equipment and restriping
- Trash

Implementation of Project features described in the following subsection, would be used for sediment control and material management. With implementation of Project features WQ-1, through WQ-8, the Project would not substantially degrade surface water quality and the impact would be less than significant.

b) No Impact

The Project would have no effect to groundwater supplies or groundwater recharge areas in the Project vicinity. There would be no impact.

c(i), (ii), (iii), (iv)) No Impact

The Project would not substantially alter the existing drainage pattern of the Project site and would not result in substantial erosion or siltation. The Project would not result in an increase of surface runoff, create runoff that would exceed existing storm drain systems, or create substantial additional sources of polluted runoff. The Project would not impede or redirect flood flows. There would be no impact.

d) No Impact

Per the Federal Emergency Management Agency's Flood Insurance Rate Map number 06097C1082F, dated October 2, 2015, the Project is within a Zone AE floodplain, with a base flood elevation between 10 and 11 feet. The water surface elevation in the Petaluma River, at the Project site and further upstream, is tidally influenced by San Pablo Bay. Based on the nature of the proposed work, no impacts to the Federal Emergency Management Agency's Federal Emergency Management Agency's base floodplain are anticipated.

No new impervious areas would be constructed within the floodplain. Therefore, there would be no impact on the floodplain.

The proposed Project is not in seiche or tsunami zones. There would be no impact.

e) No Impact

The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. There would be no impact.

Project Features

Caltrans would incorporate its standard measures into the Project to offset or avoid potential impacts to hydrology and water quality. These features include those described in the following paragraphs.

Project Feature WQ-1: Water Quality Best Management Practices: This Project will require a 401 permit from the San Francisco RWQCB. It is anticipated that the RWQCB permit would require a stormwater pollution prevention plan, which would

provide guidance on erosion control BMPs to be implemented to minimize wind- or water-related erosion. These BMPs would also be implemented via language in the *Construction Site Best Management Practices (BMPs) Manual* (Caltrans 2017), which provides guidance for including provisions in all construction contracts to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges.

Project Feature WQ-2: Job Site Management: This non-stormwater discharge and waste management practice would include considerations for operations, illicit discharge detention and reporting, vehicle and equipment cleaning, vehicle and equipment fueling, and material use.

Project Feature WQ-3: Sediment Control Practices: Sediment control practices would include, but not be limited to, the following:

- Silt fence
- Sediment/distilling basin
- Check dam
- Fiber rolls (A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers, rolled or bound into a tight tube shape and placed on the toe and face of slopes to intercept runoff, reduce the runoff's flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff.)
- Street sweeping and vacuuming

Project Feature WQ-4: Tracking Control Practices. Tracking control practices would include:

- Temporary (stabilized) construction entrance (exit)
- Temporary construction roadway
- Entrance/outlet tire wash
- Street sweeping and vacuuming

Project Feature WQ-5: Waste Management and Materials Pollution Control. Waste management and materials pollution control measures would be as follows:

- Stockpile management: This practice is needed to reduce or eliminate air and stormwater pollution from stockpiles of soil and paving materials.

- Concrete waste management: The concrete quantity has not been determined at this phase of the Project. However, it is imperative to confirm that procedures and practices are in place to eliminate or minimize the discharge of concrete slurry to the storm drain system. These measures would include, but not be limited to, the following:
    - Concrete slurry waste-handling procedures
    - Onsite concrete washout facility
    - Transit truck washout procedures
    - Procedures for removal of temporary concrete washout facilities
- Material delivery and storage
- Spill prevention control
- Solid waste management
- Hazardous waste and contaminated soil management
- Sanitary/septic and liquid waste management

Project Feature WQ-6: Non-stormwater Management. Non-stormwater management practices would include the following:

- Dewatering Operations: At this phase of the Project, no water table data or log of test boring have been provided. There is a bridge fender system upgrade involved in the Project scope and de-watering operation may prove to be a necessity on this Project. Dewatering effluent that would be discharged from the construction site to a storm drain or receiving water would be subject to requirements of the applicable National Pollutant Discharge Elimination System permit but would most often be regulated under a 401 certification or waste discharge requirements administered by RWQCB. An active treatment system may be necessary to meet the effluent limits of the construction general permit for turbidity and pH in the stormwater.
- Pile-driving operations: Proper control and use of equipment, materials, and waste products generated by the pile-driving operations would reduce the discharge of potential pollutants to the storm drain system or receiving water bodies.

- Concrete curing: This BMP consists of procedures that would minimize pollution of stormwater runoff during concrete curing.
- Concrete finishing: This BMP consists of procedures that would minimize the impact concrete finishing methods may have on stormwater runoff. These methods would include sand blasting, lead shot blasting, grinding, or high-pressure water blasting.
- Water conservation practices
- Potable water/irrigation
- Vehicle and equipment operations (fueling, cleaning, and maintenance)
- Material and equipment use

Project Feature WQ-7: Soil Stabilization. Soil stabilization would include preservation of existing vegetation, slope protection, slope interrupter devices, and channelized flow.

Project Feature WQ-8: Wind Erosion Controls. Wind erosion controls would include hydraulic mulch and temporary covers.

Project Feature WQ-9: Turbidity Control. During the fender replacement work, and at other locations where ground disturbance would be conducted below MHHW, a silt-curtain, sheet pile, or gravel-bag cofferdam, or other equivalent means, would be installed as needed to minimize the generation of turbidity plumes in nearby tidal waters. Such cofferdams would be installed when there is no surface water present (that is, at low tide). This requirement does not apply to in-water pile driving.

3.3.11 Land Use and Planning

Would the project:

Question	CEQA Determination
a) Physically divide an established community?	No Impact
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?	Less than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR LAND USE

SR 37 runs 21 miles along the northern shore of San Pablo Bay, from U.S. Highway 101 in Novato through northeastern Marin County, crossing over the Petaluma River and through southern Sonoma and Solano counties, to Interstate 80 in Vallejo. The Project would be located at the Petaluma River Bridge on SR 37 in Marin and Sonoma counties. Within the Project limits, SR 37 is a conventional highway with two lanes of travel in each direction, and is currently listed as being eligible for State Scenic Highway designation.

Within the Project limits, the surrounding area primarily consists of open space, agricultural land, recreation and visitor serving commercial land, and very low density residential land. Open space dominates, with the nearest residences located along Harbor Boulevard, adjacent to the western end of the bridge and Project staging areas, within Marin County. Port of Sonoma Marina is within view and a short distance south of the bridge, within Sonoma County (Figure 3-3).

On the western side of the bridge, the Project limits are within Marin County and the East District of the Novato General Plan with the Petaluma River defining the eastern boundary. The Project area is largely rural with the major activity center in the area being the Black Point Boat Launch Park. The unincorporated Black Point community is south of the Project limits. Under General Plan policies, agricultural and open space lands would be encouraged to remain in these uses.

On the eastern side of the bridge, the Project limits are within the Sonoma County General Plan, Planning Area 8 – Petaluma and Environs. This portion of the Project area is bounded by the Petaluma River to the west, agricultural land to the north, and recreational land, primarily the Port Sonoma Marina to the south. Designated land uses within the proposed Project area are depicted in Figure 3-3, Land Use.

Portions of the Project are within BCDC jurisdiction, as defined by the McAteer-Petris Act and the San Francisco Bay Plan (BCDC 2022) (Figure 3-3). BCDC is responsible for granting or denying permits for any proposed Project scope that involves fill; extraction of materials; or substantial changes in use of any water, land, or structure within the Commission's jurisdiction (California Government Code Section 66632). Additionally, Section 66602 of the McAteer-Petris Act states, "that maximum feasible public access, consistent with a proposed project, should be provided." Relevant areas of BCDC jurisdiction for the Project scope may include the following:

- The Project may include work within the shoreline band consisting of all territory located between the shoreline of the Bay and 100 feet landward of and parallel with the shoreline (California Government Code CGC Section 66610[b]).
- Any work that would impact public recreation, including the proposed San Francisco Bay Trail (Bay Trail) alignment along SR 37, a San Francisco Water Trail (Water Trail) site at Black Point and other recreational facilities (Black Point Boat Launch), which are potentially within the BCDC jurisdiction.

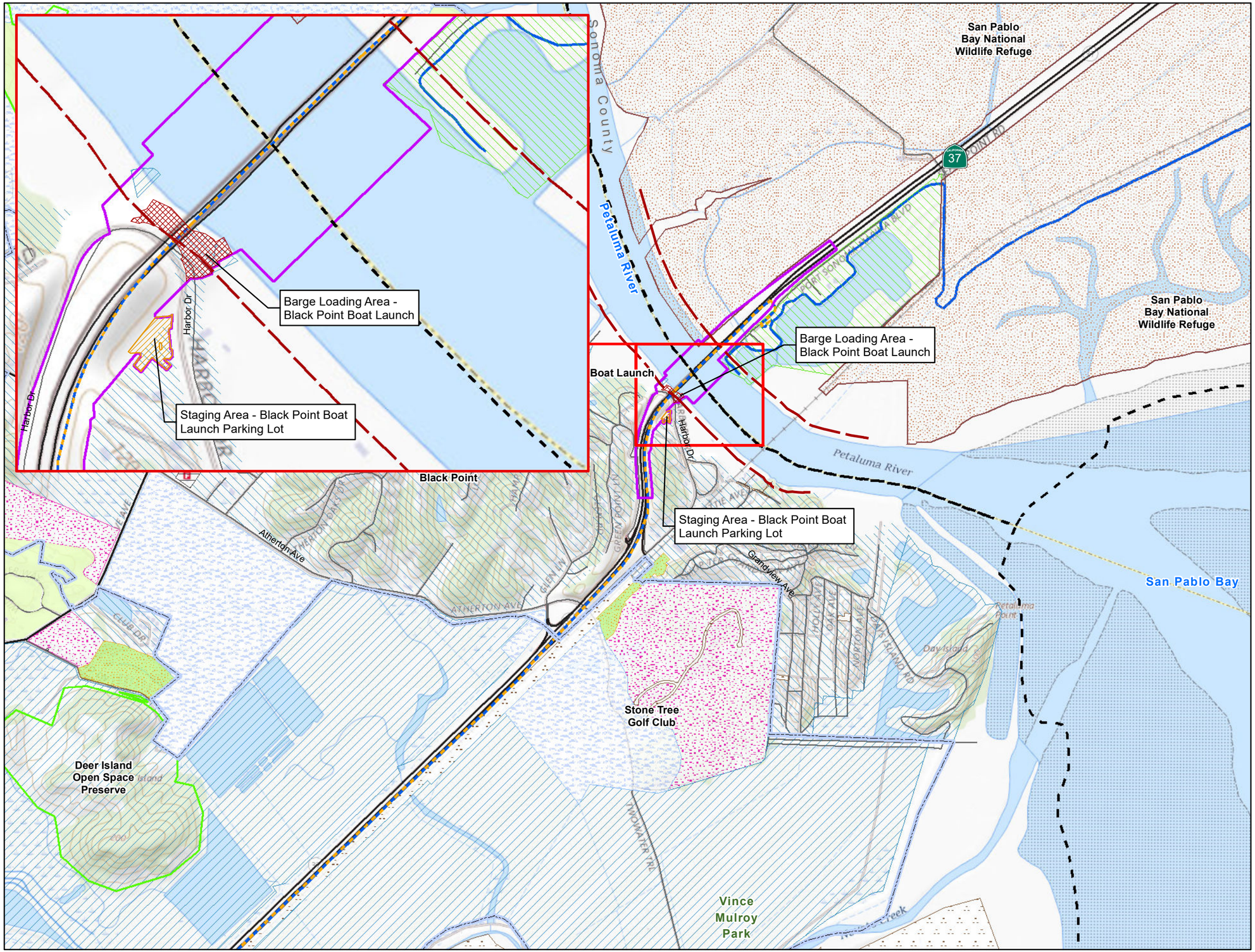
a) No Impact

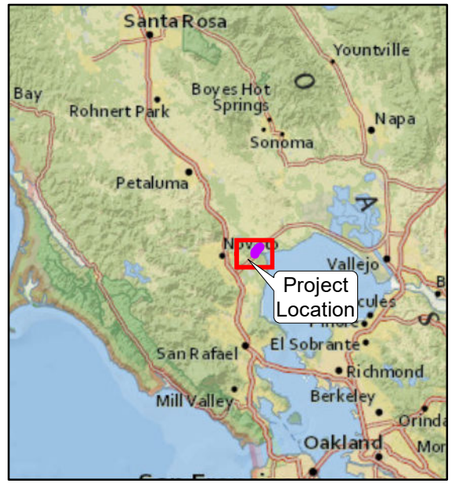
No changes in land use would occur from the Project. The Project would not physically divide an established community. There would be no impact.

b) Less than Significant Impact

CONSISTENCY WITH STATE, REGIONAL, AND LOCAL PLANS AND PROGRAMS

Land use plans, policies, and regulations that are applicable to the Project include the Final Bay Area Plan 2050 (ABAG and MTC 2021); Marin Countywide General Plan (Marin County 2007), the Sonoma County General Plan (Sonoma County 2020), and the San Francisco Bay Plan (BCDC 2022). The Project would be consistent with both the Marin County and Sonoma County general plans.





LEGEND

- Project Limit
- 100-foot shoreline band
- Novato City Limits
- Staging Area
- Barge Loading Area
- County Boundary

San Francisco Bay Trail

- Existing Segment
- Proposed Segment

Sonoma County General Plan

- Agricultural (LEA)
- Recreation and Visitor Serving Commercial (RVSC)

Novato General Plan

- Community Facilities (CF)
- Conservation (CON)
- Light Industrial/Office (LIO)
- Low Density Residential (R1)
- Neighborhood Commercial (CN)
- Open Space (OS)
- Parkland (P)
- Rural Residential (RR)
- Undesignated
- Very Low Density Residential (RVL)

Source:
Sonoma County (2020)
Navato General Plan, Accessed (2022)

N

0 750 1,500
Feet

Caltrans

FIGURE 3-3
Land Use
Petaluma River Bridge Project
EA 2Q500, 04-MRN-37-PM 14.50
Marin and Sonoma Counties, California

BAY CONSERVATION AND DEVELOPMENT COMMISSION

The San Francisco Bay Plan (BCDC 2022) Public Access Policy 8 states:

> *Public access improvements provided as a condition of any approval should be consistent with the project, the culture(s) of the local community, and the physical environment, including protection of Bay natural resources, such as aquatic life, wildlife and plant communities, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should provide barrier free access for persons with disabilities, for people of all income levels, and for people of all cultures to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs, including using appropriate languages or culturally-relevant icon-based signage.*

The purpose of the Project is to rehabilitate the aging infrastructure of the Petaluma River Bridge. This rehabilitation of the bridge deck and replacement of the fender system falls within BCDC jurisdiction. This proposed Project would permanently place approximately 2,628 cubic yards of RSP within WOTUS, resulting in approximately 0. 33 acre of RSP placed below the ordinary high-water mark. A 401 Water Quality Certification from the RWQCB, and a 404 permit from the USACE, would be required. Temporary construction activities would occur within the 100-foot-long shoreline band of BCDC jurisdiction, such as the use of temporary barges moving to and from construction sites under the bridge via the Black Point Boat Launch.

The Project would not include either permanent impacts or improvements to public access within the Project limits. Construction activities could temporarily impact public access on both SR 37 and within the Black Point Boat Launch. These activities would be temporary, and construction materials would be staged in nearby parking lots outside of BCDC's jurisdiction (outside of the 100-foot-long shoreline band of BCDC jurisdiction). Construction materials would be removed following construction, and the Project area would be returned to its previous condition. The Project would require a BCDC permit, which would include conditions to meet the policies of the McAteer-Petris Act and the San Francisco Bay Plan.

Construction of a Class I Bay Trail on the Petaluma River Bridge is not included in the scope of work for this Project because the purpose of the Project is rehabilitation

of identified condition deficiencies of the bridge, including the deteriorated bridge deck and damaged railings. Implementing specific improvements to the proposed sections of the Bay Trail across the bridge would require widening of the bridge to accommodate 8-foot shoulders, which is not included in the Project scope. The evaluation of non-motorized transportation access in the SR 37 corridor, including the Bay Trail, is being done as part of the SR 37 Planning and Environmental Linkages process. The proposed Project does not diminish the current ability for non-motorized access and would not preclude future implementation of the Bay Trail.

In summary, the Project would be consistent with the Marin County General Plan, the Sonoma County General Plan, the San Francisco Bay Plan and other local, regional, and state policies. The impact would be less than significant.

3.3.12 Mineral Resources

Would the project:

Question	CEQA Determination
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?	No Impact
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?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR MINERAL RESOURCES

a-b) No Impact

The Project would be located within an area identified by the California Department of Conservation as being within a Classification of Aggregate Resource Areas: North San Francisco Bay Production-Consumption Region (California Department of Conservation 2022). The Project would not result in the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site because SR 37 through the Project limits lies on engineered (artificial) fill. Therefore, no impacts on mineral resources would result from the Project.

3.3.13 Noise

Would the project result in:

Question	CEQA Determination
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?	Less than Significant Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact

CEQA Significance Determinations for Noise

The surrounding land uses, adjacent to the Project on either side of SR 37, primarily consist of agricultural or undeveloped land, with the nearest residences along Harbor Boulevard, to the southwest of the Project site. During construction, noise from construction activities may intermittently dominate the environment in the immediate area of construction, affecting nearby sensitive receptors (residences). Impacts to sensitive receptors and increases in noise levels would be temporary.

A noise study was determined to not be required for this Project because the proposed Project does not qualify as Type I or Type II, as defined under the 23 CFR 772 and the Caltrans Traffic Noise Analysis Protocol (Wu [Caltrans], pers. comm. 2021).

a) Less than Significant Impact

The Project would not generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project. A traffic noise study is not required for this Project; therefore, noise abatement need not be considered. AMMs Noise-1 and -2 describe noise levels and BMPs that would be implemented to reduce noise during construction to less than significant levels.

b) Less than Significant Impact

Construction activities would not generate excessive groundborne vibration or groundborne noise levels. AMM Noise-1, Specification for Controlling Noise and

Vibration, describes BMPs that would be implemented to reduce vibration during construction to less than significant levels.

c) No Impact

The Project would not be within the vicinity of a private airstrip or an airport land use plan. There would be no impact.

Avoidance and Minimization Measures

Caltrans would incorporate the following AMMs into the Project to offset or avoid potential impacts from noise.

AMM Noise-1: Specifications for Controlling Noise and Vibration. Noise from construction activities will not exceed 86 A-weighted decibel Lmax[1] at 50 feet from the Project site from 9:00 p.m. to 6:00 a.m., per 2018 Caltrans Standard Specifications, Section 14-8.02.

AMM Noise-2: Noise Levels During Construction. The following measures will be implemented during construction to reduce noise:

- Restrict the times of overly loud construction activities to between 6:00 a.m. and 9:00 p.m.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate all stationary, noise-generating, construction equipment, such as air compressors, portable power generators, or self-powered lighting systems, as far as practical from noise-sensitive receptors.
- Use quiet air compressors and other quiet equipment where such technology exists.
- As practicable, have construction equipment conform to Section 14-8.02, Noise Control, of the latest Caltrans Specifications.

[1] Lmax noise descriptor is the highest instantaneous noise level during a specified period; in the noise analysis, that is 1 hour.

3.3.14 Population and Housing

Would the project:

Question	CEQA Determination
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)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

CEQA Significance Determinations for Population and Housing

a, b) No Impact

The Project would not induce substantial, unplanned, population growth either directly or indirectly because it does not increase the capacity of SR 37, remove barriers to future growth, or increase population or housing growth (or demand for new housing, utilities, or public services). The Project would not displace existing people or housing or necessitate the construction of replacement housing elsewhere. There would be no impact to population and housing.

3.3.15 Public Services

Question	CEQA Determination
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:	
Fire protection?	No Impact
Police protection?	No Impact
Schools?	No Impact
Parks?	No Impact
Other public facilities?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR PUBLIC SERVICES

a) No Impact

The proposed Project would not result in substantial alteration of government facilities, such as fire and police protection, schools, parks, or other public facilities, in the Project area. Additionally, the proposed Project would not trigger the need for new government facilities or alter the demand for public services. There would be no impact.

The Project is in Marin and Sonoma counties (Figure 1-2). The Project would primarily fall under the jurisdiction of the Novato Police Department, located at 909 Machin Avenue in Novato. The closest fire station to the Project area would be the Novato Fire District Station 62, at 450 Atherton Road in Novato. Within Sonoma County, the Project would fall under the jurisdiction of the Sonoma County Sheriff's Office, located at 2796 Ventura Avenue in Santa Rosa. The Sonoma County Fire District would provide fire protection services in the Project area.

Traffic delays could result from the need for one lane closure during construction. A TMP would be prepared that would provide accommodation for police, fire, emergency, and medical services in the local area during construction (see AMM TRANS-1 in the Transportation and Traffic section).

3.3.16 Recreation

Question	CEQA Determination
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?	Less than Significant Impact
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?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR RECREATION

The Black Point Boat Launch, a public recreation facility, is located within the proposed Project footprint at the Petaluma River. Stone Tree Golf Club is a private club located adjacent to SR 37 west of the Project limit. Deer Island Preserve and Open Space is a public park, located 2 miles west of the proposed Project limits. Rush Creek Open Space Preserve is located 2 miles northwest of the Project limits. Vince Mulroy County Park is located 0.4 mile south of the Project limits. The San Pablo Bay National Wildlife Refuge is located adjacent to SR 37, north and south of the proposed Project limits on the east side of the bridge. Recreational facilities in the proposed Project area are shown on Figure 3-3.

The Project is located on a segment of a planned Bay Trail (MTC 2022a), which runs along the shoulder of SR 37 and crosses the Petaluma River Bridge. Additionally, the Project site includes Harbor Drive, which provides direct access to the Water Trail (MTC 2022b) from the Black Point Boat Launch. The Water Trail provides access for fishing and other water recreation (including, kayaks, canoes, and other watercraft). The proposed Bay Trail segment within the Project limits is shown on Figure 3-3.

a) Less than Significant Impact

The Black Point Boat Launch and parking area would be temporarily used during Project construction for barge river access, including loading and staging. However, access to the boat launch by the public would be maintained throughout construction when barge-loading activities were not actively occurring. The parking area (located across the street from the boat launch on Harbor Drive) would be used for construction staging and laydown, and would be closed to the public for the duration of construction. Use of the navigational channel below the Petaluma River Bridge

would be maintained throughout construction. The proposed Project would not increase the use of any existing recreational facilities.

The Project would occur within and alongside the existing SR 37 Caltrans ROW. There would be no adverse effects on the activities, features, or attributes of any existing recreational or open space resources in or near the Project footprint, or in the Project vicinity. The shoulder of SR 37 is within the footprint of the proposed Bay Trail (Section 3.3.11, Land Use). The proposed Project would widen the outer shoulder of the Petaluma River Bridge, by restriping, thereby accommodating bicycles; however, the Project would not include improvements to accommodate the features of the proposed Class 1 Bay Trail on the Petaluma River Bridge. The proposed Project would not diminish the current ability for non-motorized access and would not preclude future implementation of the Bay Trail.

During construction, there would be temporary traffic delays and lane closures on SR 37, which could result in temporary effects on public access to recreational resources near the Project. These delays would be temporary, and are unlikely to result in indirect or direct, adverse impacts to park and recreational access. Recreational users (such as users of power boats, kayakers, and canoes) of the Black Point Boat Launch on the Petaluma River would be temporarily impacted by the Project, but these delays would be short and intermittent; appropriate public notification would be include in the development of the TMP. There would be no permanent impacts to recreational resources as a result of the proposed Project; therefore, impacts are less than significant.

b) <u>No Impact</u>

The proposed Project does not require the construction or expansion of recreational facilities. There would be no impact.

3.3.17 Transportation

Would the project:

Question	CEQA Determination
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact
d) Result in inadequate emergency access?	Less than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR TRANSPORTATION

The Project would be located at the western side of SR 37 at the Petaluma River Bridge, within Marin and Sonoma counties. Within the proposed Project limits, SR 37 is a conventional highway with two lanes of travel in each direction. SR 37 at the proposed Project area is currently listed as being eligible for State Scenic Highway designation. There are no dedicated bicycle, pedestrian, or bus stop facilities along SR 37 within the proposed Project limits; however, bicycles are allowed to use the shoulder of the Petaluma River Bridge.

The MTC, which functions as both the state-designated Regional Transportation Planning Agency and federally designated Metropolitan Planning Organization, is responsible for regional transportation planning. MTC's Plan Bay Area 2050, serves as the San Francisco Bay Area's Regional Transportation Plan and Sustainable Communities Strategy (ABAG/MTC 2021).

Local transportation planning agencies includes the TAM, which is designated as both the Congestion Management Agency and the Transportation Sales Tax Authority for Marin County and SCTA . The *Sonoma County Comprehensive Transportation Plan 2050* (SCTA 2021) is the local transportation plan of the Sonoma County Transportation Authority.

a) <u>No Impact</u>

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities

including the TAM Congestion Management Program (TAM 2019), and the Sonoma County Comprehensive Transportation Plan 2050 (SCTA 2021). The Project would maintain and improve existing SR 37, but not increase the capacity of the highway. The Project would maintain all existing highway features and would not permanently alter the circulation system.

As discussed in AMM TRANS-1, a TMP would be developed to minimize potential effects from construction to all users. The TMP would include elements, such as haul routes, one-way traffic control, flaggers, and phasing, to reduce impacts to local residents and emergency and medical service providers. The TMP would also ensure access to businesses in the local area is maintained. Therefore, there would be no permanent impact to components of the transportation system.

b) No Impact

The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The Project would have no permanent impact on vehicle miles traveled. Under Section 15064.3, subdivision b, transportation projects that have no impact on vehicle miles traveled should be presumed to cause no impact on transportation.

c) No Impact

The Project would not increase hazards because of a geometric design feature. The Project would not include any design features or construction elements (such as sharp curves or dangerous intersections) that would substantially increase hazards. There would be no impact.

d) Less than Significant Impact

The Project would not result in inadequate emergency access. The Project could cause short-term, localized, traffic congestion and delays, resulting from temporary closures of one lane of SR 37 on the bridge. One-way traffic control would be required during construction but detours are not anticipated.

Under the TMP (see AMM TRANS-1), medical and emergency vehicles would be able to continue to use routes along the Project corridor to serve fire, medical, and law enforcement purposes. Flaggers would give priority to emergency vehicles. The impact would be less than significant.

Avoidance and Minimization Measure

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 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. Lane closures will be planned in coordination with Caltrans, Marin County, and Sonoma County; planning will include notices to emergency service providers, and the public in advance.

3.3.18 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:

Question	CEQA Determination
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	No Impact
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.	No Impact

CEQA Significance Determinations for Tribal Cultural Resources

Cultural resource evaluations prepared for this Project include the memorandum, *Revised Office of Cultural Resource Studies (OCRS) Section 106 Closeout Memo for the Petaluma River Bridge Project at Post Mile 14.5, on State Route 37, in Marin County* (Caltrans 2022e). Refer to Section 3.3.5, Cultural Resources, for a discussion of Caltrans coordination with the Native American Heritage Commission, as well as 11 Native American individuals, representing the 8 tribes summarized in the memorandum.

a-b) No Impact

The Project would not cause a substantial, adverse change in the significance of a tribal cultural resource. In 2021 and 2022, Section 106 Closeout Memos (Caltrans 2022e) were prepared to identify historic properties in the APE developed by Caltrans. No tribal cultural resources were reported in record searches or in consultation with Native American groups and individuals. Based on this report, there would be no impact.

Project features CULT-1 and -2, discussed under Cultural Resources, would be implemented if cultural resources or human remains are discovered during Project construction.

3.3.19 Utilities and Service Systems

Would the project:

Question	CEQA Determination
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
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?	No Impact
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?	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR UTILITIES AND SERVICE SYSTEMS

High-voltage transmission towers and lines parallel SR 37 north of the alignment and bridge, crossing the Petaluma River. Wooden utility poles with overhead lines run adjacent to the unpaved shoulder near the Project limits. An existing electrical conduit runs along the toe of the existing railing of the bridge. No other utilities have been identified within the Project limits.

a) Less than Significant Impact

The proposed Project would not result in the construction of new or expanded utilities. Further utility verification would be conducted during later Project phases.

Existing utilities would be located and protected from possible damage during construction. Relocation of the existing electrical system is expected on the westbound (northern) side of the bridge where an existing electrical conduit runs along the toe of the existing railing.

Caltrans would coordinate with the appropriate utility provider; therefore, the impact would be less than significant.

b, c, d, e) <u>No Impact</u>

The proposed Project would not generate a demand for potable water supplies or the services of a wastewater treatment provider. Therefore, there would be no impact.

The proposed Project would not result in any substantial demands for solid waste disposal and would comply with federal, state, and local statutes regarding the disposal of solid waste. Implementation of Project Features UTI-1 and UTI-2 would require the proper disposal of construction trash. There would be no impact.

Project Features

Caltrans would incorporate its standard measures into the Project to offset or avoid potential impacts to utilities and service systems. These features include those described in the following paragraphs.

Project Feature UTI-1: Trash Management. All food-related trash items, such as wrappers, cans, bottles, and food scraps, would be disposed of in closed containers and removed by the contractor at least once daily from the Project limits. A trash reduction system would also be developed by the contractor, approved by Caltrans, and implemented per Caltrans Statewide National Pollution Discharge Elimination System Permit and San Francisco RWQCB Cease and Desist Order.

Project Feature UTI-2: Treated Wood Waste. Wood removed from metal beam guardrails and the fender system would be considered treated wood waste and be disposed of by the contractor pursuant to Caltrans standard specifications.

3.3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less than Significant Impact
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?	No Impact
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?	No Impact
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?	No Impact

CEQA Significance Determinations for Wildfire

Within Marin County, the Project would be located within a State Responsibility Areas for wildfire prevention and suppression, within a high fire hazard severity zone (CalFire 2007a). Within Sonoma County, the Project would be within a Local Responsibility Area – Unincorporated and is not within a fire hazard severity zone (CalFire 2007b).

a) Less than Significant Impact

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. During later Project phases, a TMP (see AMM TRANS-1 in the Transportation and Traffic section) would be developed that would identify traffic diversion, staging, and alternative routes. Emergency response times would not be anticipated to change during construction because the TMP would provide measures to ensure priority for emergency vehicles during one-way traffic control. The TMP would provide instructions for response and evacuation in an emergency. In addition, the Project would not conflict with any other emergency response or evacuation plan. The impact would be less than significant.

b, c, d) No Impact

The Project would not exacerbate wildfire risks, require the installation or maintenance of infrastructure that may exacerbate wildfire risk, or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. Caltrans proposes to rehabilitate existing facilities on SR 37 at the bridge over and in the Petaluma River; therefore, the Project would not involve occupation or habitable structures, and would not include the installation of associated infrastructure that would exacerbate wildfire risk. There would be no impact.

3.3.21 Mandatory Findings of Significance

Question	CEQA Determination
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 history or prehistory?	Less than Significant Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Less than Significant Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less than Significant Impact

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less than Significant Impact

The Project would not 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, or substantially reduce the number of or restrict the range of a rare or endangered plant or animal.

The Project would result in temporary, minor, and construction-related impacts; however, with the implementation of the Project features, AMMs, and mitigation measures (Section 3 and Appendix B), these potentially significant impacts would be reduced to less than significant levels.

b) Less than Significant Impact

The Project involves the replacement of existing infrastructure on SR 37 and at the bridge in the Petaluma River. Current or future SHOPP projects, located on SR 37 in the Project vicinity, are listed in Table 3-3.

Table 3-3. SHOPP Program Projects along SR 37 in the Project Vicinity

Project Name	Location	Characteristics	Status
SR 37 Flood Reduction Project and SR 37 Resilience Project	SR 37 from PMs 0.0 to 3.9 and 11.2 to 14.6	Raise SR 37 on embankment, replace Novato Creek Bridge, and modify Simonds Slough, Atherton Undercrossing, and Petaluma River Bridge.	Under Environmental Review Phase
SR 37 Capital Preventive Maintenance Project	SR 37 from Ramp 11.2 to PM 14.6	Repair existing asphalt concrete, settlement correction, replace bridge railings, and upgrade curb ramps.	Under Environmental Review Phase
Reconstruct Intersection of SR 37 and SR 121	SR 37 from PMs 3.8 to 4.0	Reconstruct intersection reconstruction.	Under Environmental Review Phase
SR 37 Lane Extension and Railroad Crossing at Tolay Creek	SR 37 from PMs 3.8 to 4.0 and 3.9 to 4.1	Widen SR 37, widen Tolay Creek Bridge, and extend the existing median barrier.	Under Environmental Review Phase
SR 37 Traffic Congestion Relief Project	SR 37 from PMs 3.9 to 6.2 and 0.0 to 7.4	Widen SR 37 and upgrade roadway.	Under Environmental Review Phase
SR 37 Pedestrian Enhancements at Wilson Avenue and Fairgrounds Drive	Various	Complete pedestrian enhancement project.	Under Environmental Review Phase
Fairgrounds Drive Interchange Improvements	SR 37 from PMs 10.6 to 11.2	Improve roadway along portion of Fairgrounds Drive.	Under Environmental Review Phase
SR 37 Corridor Sea Level Rise and Complete Streets (U.S. 101 to SR 29)	SR 37 from PMs 11.2 to 14.6, 0.0 to 6.2 and 0.0 to Ramp 9.6	Address sea-level rise and recurring flooding, while including complete streets features to address multi-modal bicycle and pedestrian use.	Under Environmental Review Phase

Analysis of the proposed Project's potential cumulative environmental effects determines which resources would be significantly impacted by the Project and whether there could be a detrimental condition or deterioration of health in a resource within the context of impacts from past, present, and other reasonably foreseeable

future actions. The analysis determines whether, collectively, the Project and the foreseeable condition combine to result in a cumulative impact.

The Project would involve the rehabilitation of existing infrastructure along a transportation corridor. The Project would occur primarily within the Caltrans ROW with the additional use of TCEs during construction for staging and barge river access for loading and unloading activities. The Project would not convert lands to new or different uses, increase highway capacity, induce growth, or otherwise change land use patterns. The Project would not result in long-term, adverse environmental effects, and so would not contribute to cumulative environmental impacts. The analysis presented in this IS/MND identifies temporary construction-related impacts on aesthetics, air quality, biological resources, energy, geology/soils, GHG emissions, hazards/hazardous materials, hydrology/water quality, noise, transportation/traffic, utilities/service systems, and wildfire. These impacts are anticipated to be minor and incremental in nature, and not cumulatively considerable across the entire SR 37 corridor and region.

Other planned highway improvement projects along SR 37 (Table 3-3) are anticipated to occur within a similar timeframe. These projects could interact and contribute to a need to develop a comprehensive TMP. Caltrans routinely coordinates with regional transportation managers and local agencies to minimize impacts in the region resulting from construction of multiple planned projects. The short duration and limited scope of this Project would not contribute to substantial cumulative environmental impacts; and Project-related impacts to resources would be reduced with the proper implementation of Project features, AMMs, and mitigation measures. Therefore, the impact would be less than significant.

c) Less than Significant Impact

This Project would not adversely affect human beings, either directly or indirectly. Project impacts are anticipated to be minor and result mostly from construction-related delays and traffic management. Intermittent night work would occur. Daytime work would occur with the potential to impact vehicles travelling through the Project area; however, implementation of Project features and AMMs would address dust-, noise-, and traffic-related impacts. Temporary construction-related activities would result in less than significant environmental impacts to human beings.

Chapter 4 Comments and Coordination

To date, public and agency coordination consists of the following:

4.1 Community Outreach

The document, maps, Project information, and supporting technical studies are available for review and download at http://www.sr37corridorprojects.com/. Additionally, the document will be made available at the Novato Library, 1720 Novato Boulevard, the South Novato Library, 931 C Street, in Novato, and the Vallejo John F. Kennedy Library, 505 Santa Clara Street, in Vallejo. The deadline for submission of comments on the IS/MND is August 5, 2022.

4.2 Consultation and Coordination with Public Agencies

Consultation with several agencies occurred during the environmental evaluation process. A list of coordination activities and contacts is provided in Table 4-1.

Table 4-1. Agency Coordination Meetings and Contacts

Organizations	Date	Topic
Native American Heritage Commission	March 1, 2021	Requested a search of Sacred Lands File
Native American Heritage Commission	March 15, 2021	The Native American Heritage Commission responded with list of Native American parties
Native American Consultation	March 18, 2021	Emails sent to Dry Creek Rancheria, Lytton Rancheria, Middletown Rancheria of Pomo Indians, Mishewal-Wappo Tribe of Alexander Valley, Cloverdale Rancheria of Pomo Indians, and Pinoleville Pomo Nation, Federated Indians of Graton Rancheria and the Guidiville Indian Rancheria
Native American Consultation	March 19, 2021	Lynn Laub, Executive Assistant at Dry Creek Rancheria emailed stating the Project was outside of their tribal territory
Native American Consultation	March 19, 2021	Brenda Tomaras, responded for Chairperson Marjorie Mejia of the Lytton Rancheria of California via email that the Lytton Rancheria is not seeking any further consultation on this Project

Organizations	Date	Topic
Sonoma County Transportation Authority	January 6, 2022, October 7, 2021, and June 6, 2021	SR 37 Policy Committee meetings including discussion of Highway 37 Caltrans SHOPP projects
NMFS	March 15, 2022	Caltrans biologist contacted NMFS via phone to discuss southern DPS green sturgeon and CCC DPS steelhead presence and potential impact to the Petaluma River
USFWS	April 6, 2022	Caltrans biologist emailed Brian Hansen at USFWS with a request for technical assistance of the Project and its timeline

Chapter 5 List of Preparers

The primary people responsible for contributing to, preparing, and reviewing this report are listed in Table 5-1.

Table 5-1. List of Preparers and Reviewers

Organization Name	Role
Caltrans	
Melanie Brent	Deputy District Director, Environmental Planning and Engineering
Prakash Sivagnanasundarama	Project Management – North (Marin)
Helen Blackmore	Branch Chief, Architectural History
Robert Blizard	Branch Chief, Office of Biological Sciences and Permits
Jason Phoen	Project Engineer, Design
Siria Che Wu	Transportation Engineer, Air Quality and Noise Branch
Arnica MacCarthy	Branch Chief, Office of Environmental Analysis
Kathleen Reilly	Office of Hydraulic Engineering
Chris Risden	Branch Chief, Geology Services Branch B
Kathryn Rose	Branch Chief, Archaeology
Shilpa Mareddy	Branch Chief, Air Quality and Noise
Mojgan Oosoli	Branch Chief, Stormwater Design
Joaquin Pedrin	Branch Chief, Office of Landscape Architecture
Ingrid Pena	Environmental Planner Architectural History
Diana Pink	Landscape Associate
Chris Risden	Branch Chief, Office of Geotechnical Design
Stewart Lee	Project Engineer, Design
Britt Schlosshardt	Environmental Planner, Office of Cultural Resources
Jessica Thaggard	Biologist, Biological Sciences and Permits
Scott M. Williams	Acting Office Chief, Office of Environmental Analysis
Chris Wilson	Branch Chief, Office of Environmental Engineering
Jacobs	
Lynne Hosley	Program Manager
David Carlson	Senior Environmental Reviewer

Organization Name	Role
Loretta Meyer	Environmental Planner
Julie Petersen	Environmental Planner
Erik Lauritzen	Environmental Planner
Hannah Minderhout	Environmental Planner
Misha Seguin	Biologist
Stephanie Owens	Biologist
Karen Dolan	Geographic Information System
Ed Moon	Geographic Information System
Clarice Ericsson	Publishing Technician
Austen Sandifer	Editor

Chapter 6 Distribution List

The IS with proposed MND will be circulated by July 6, 2022, to the following agencies and government officials.

Agencies

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

State Water Resources Control Board

North Coast Regional Water Quality Control Board

San Francisco Bay Regional Water Quality Control Board

California Department of Fish and Wildlife

California Department of Parks and Recreation

San Francisco Bay Conservation and Development Commission

Governor's Office of Planning and Research

Transportation Authority of Marin

Sonoma County Transportation Authority

Office of Planning and Research

Elected Officials

Senator Dianne Feinstein

Senator Alex Padilla

Senator Mike McGuire

Congressman Jared Huffman

Assembly Member Marc Levine

Supervisor Judy Arnold, Marin County District 5

Supervisor David Rabbit, Sonoma County District 2

Marin County Sheriff Robert T. Doyle

Sonoma County Sheriff Mark Essick

Mayor Eric Lucan, City of Novato

Appendix A Title VI Policy Statement

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

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

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, Minimization, and Mitigation Measures

Project Features

Project Feature AQ-1: Control Measures for Construction Emissions of Fugitive Dust. Dust control measures would be implemented to minimize airborne dust and soil particles generated from construction. For disturbed soil areas, the use of tackifier to control dust emissions would be included in the construction contract. Any material stockpiles would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

Project Feature BIO-1: Documentation at Project Site. A permit compliance binder would be maintained at the construction site at all times and presented to resource agency (USACE, NMFS, USFWS, RWQCB, BCDC, USCG, CDFW and/or SLC) personnel upon request. The permit compliance binder would include a copy of all original permits and agreements, and any extensions and amendments to the permits and agreements.

Project Feature BIO-2: Work According to Documents. Except as they are contradicted by measures within the issued permits and agreements, all work would be conducted in conformance with the project description in the contract plans, specifications, Project features, and AMMs included in the environmental clearance.

Project Feature BIO-3: In-Channel Work Period. With the exception of non-ground disturbing vegetation removal (to avoid impacts to nesting birds), in-channel work and any dewatering necessary within the Petaluma River would be scheduled between June 1 and October 31. Modifications to the work windows would be implemented based on conditions stated in the permits.

Project Feature BIO-4: Work Period in Dry Weather Only. Work in the bed, bank, channel of the Petaluma River, and any associated riparian habitat would only be conducted during periods of dry weather. Work during precipitation events would adhere to the applicable permit conditions.

Project Feature BIO-5: Worker Environmental Awareness Training. Prior to the start of construction, a biologist would provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later would receive the same training before beginning work. Upon completion of the education program, employees would sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the Project limits, descriptions of ESAs within the Project site, and notes of key avoidance measures, as well as employee guidance would be given to each person who completes the training program. These forms would be made available to the resource agencies upon request.

Project Feature BIO-6: Mark Environmentally Sensitive Areas. Before construction begins, ESAs would be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking would remain in place throughout construction. It may be removed during the wet season (winter suspension), and subsequently re-installed prior to the following construction season. The final Project plans would depict all locations where ESA markings would be installed and how they would be installed. The bid solicitation package special provisions would clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings would be maintained in good repair throughout the Project site.

Project Feature BIO-7: Wildlife Exclusion Fencing (WEF). Before starting construction, WEF would be installed where wildlife could enter the Project site. Locations of the WEF would be determined in coordination with the Project biologist. WEF installation locations would be identified during the plans, specifications, and estimates phase of the Project; the final plans would depict the locations where WEF would be installed and how it would be assembled/constructed. The special provisions in the bid solicitation package would clearly describe acceptable WEF material and proper WEF installation and maintenance. The WEF would remain in place throughout the Project construction duration, and would be fully maintained and regularly inspected for stranded animals. The WEF would be removed following completion of construction activities or when construction is completed at that location, at the discretion of the Project biologist.

Project Feature BIO-8: Nesting Bird Surveys. If Project activities occur between February 1 and September 30, a pre-construction survey(s) would be conducted for nesting birds no more than 3 days before any vegetation removal, staging, and/or construction. If active nests are found, then an appropriate buffer would be established and the nest would be monitored for compliance with the Migratory Bird Treaty Act and California Fish and Game Code Section 3503.

Project Feature BIO-9: Active Nest Buffers. If an active bird nest is found during construction activities, then the following ESA buffers would be established: if an active raptor nest is observed, a 300-foot-wide ESA buffer would be implemented to avoid impacting the young until they have fledged; if an active nest of non-raptor birds is observed, a 50-foot-wide ESA buffer would be implemented to protect the young until they have fledged, or as otherwise determined by consultation with USFWS and CDFW regarding appropriate action to comply with the Migratory Bird Treaty Act (16 U.S. Code, Section 703-712) and California Fish and Game Code, Section 3503.

Project Feature BIO-10: Construction Site Management Practices. The following site restrictions would be implemented to avoid or minimize potential impacts on sensitive biological resources:

- Enforce a speed limit of 15 miles per hour for project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.
- Locate construction access, staging, storage, and parking areas within the Caltrans ROW and outside of any designated ESA to the extent practicable. Limit access routes, staging and storage areas, and contractor parking to the minimum necessary to construct the proposed Project. Clearly mark routes and boundaries of roadwork before initiating construction.
- Certify, to the maximum extent practicable, borrow material is non-toxic and weed free.
- Enclose food and food-related trash items in sealed trash containers and remove them from the site at the end of each day.
- Prohibit pets from entering the Project area during construction.
- Prohibit firearms within the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

Project Feature BIO-11: Invasive Weed Control. To reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order 13112. If noxious weeds are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these noxious weeds and dispose of them in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance would be replanted with fast growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the Project footprint would be covered to the extent practicable with heavy black plastic solarization material until the end of the Project.

If work occurs in sensitive habitat, vehicles and equipment would be thoroughly cleaned before arriving on the Project site to prevent the spread of noxious weeds from other locations.

Project Feature BIO-12: Vegetation and Tree Removal. Vegetation would be cleared only where necessary and would be cut above soil level, except in areas that would be permanently affected or excavated. This would allow plants that reproduce vegetatively to resprout after construction.

Project Feature BIO-13: Restore Disturbed Areas. Temporarily disturbed areas would be restored to the maximum extent practicable. Exposed slopes and bare ground would be reseeded with native vegetation or other methods to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species would be replanted, based on the local species composition.

Project Feature BIO-14: Bat Protection. A habitat assessment would be conducted for potentially suitable bat roosting habitat prior to construction activities. If the habitat assessment reveals any structures are suitable roosting habitat for bats, then the appropriate exclusionary measures would be implemented prior to construction during the periods between March 1 and April 15 or August 31 and October 15. Potential avoidance could include exclusionary blocking or filling potential cavities with foam, visual monitoring and/or staging Project work to avoid bats. If bats are known to use the structures, then exclusion netting would not be used. Bats would not be disturbed without specific notice to, and consultation with, CDFW.

Project Feature BIO-15: Prevent Inadvertent Entrapment. To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1 foot deep would be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earthen fill or wooden planks at an angle no greater than 30 degrees. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project footprint overnight would be inspected before they are subsequently moved, capped, or buried.

Project Feature BIO-16: Night Lighting. Nighttime work would be avoided to the maximum extent practicable. For unavoidable nighttime work, all lighting would be shielded and directed downwards, toward the active construction area to avoid exposing nocturnal wildlife to excessive glare.

Project Feature BIO-17: Agency-Approved Biologist. A biologist approved by USFWS and/or NMFS, and CDFW would conduct pre-construction surveys for federally and state-listed species. The biologist would be present during construction activities, including vegetation clearing and grubbing, as required by the resource agencies. If, at any point, any listed species is discovered within the Project limits, the agency-approved biologist, through the Resident Engineer or his/her designee, would halt all work within 50 feet of the animal and contact the corresponding agency (USFWS or CDFW) to determine how to proceed.

Project Feature BIO-18: Construction Noise. Construction noise limitations, as they relate to listed species, would be determined through consultation with state and federal agencies and implemented during construction.

Project Feature BIO-19: Stop Work Authority. Through the Resident Engineer or their designee, the Project biologist(s) would have the authority to stop Project activities to minimize take of listed species or if any permit requirements are not fully implemented. Caltrans would provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

Project Feature BIO-20: Discovery of Injured or Dead Special-Status Species. If discovery occurs of any dead, injured, or entrapped special-status species regulated by USFWS, NMFS, or CDFW, Caltrans would provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

Project Feature BIO-21: Wildlife Species Relocation. When listed wildlife species (that do not have state fully protected status) are present and it is determined that they could be injured or killed by construction activities, the Project biologist, in coordination with the appropriate state and federal wildlife agencies, and as outlined within the applicable permits, would identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected.

Project Feature BIO-22: Wetland Protection. The following measures would be implemented in and adjacent to delineated wetland ESAs in the Project footprint:

- Work in and adjacent to delineated wetlands where flooding has potential to occur would be scheduled outside of the wet-weather season.

- In-water work requiring dewatering in tidal waters would be scheduled to occur between June 1 and October 31. Other work below MHHW mark, where no surface water is present, (excluding impact pile driving) may be done year-round.

- Work in and adjacent to delineated tidal wetlands would not occur within 2 hours before or after extreme high tide events (6.5 feet above mean lower low water elevation or greater, as determined from the National Oceanic and Atmospheric Administration tidal gauge station nearest to the activity) when the marsh plain is inundated.

Project Feature CULT-1: Discovery of Cultural Resources. If previously unidentified cultural resources are unearthed during construction, work would be halted in that area until a qualified archaeologist can assess the significance of the discovery.

Project Feature CULT-2: Discovery of Human Remains. If remains are discovered, all work within 60 feet of the discovery would halt and Caltrans Cultural Resource Studies Office would be called. Caltrans Cultural Resources Studies Office staff would assess the remains and, if they are determined to be human, would contact the County Coroner, per Public Resources Code, 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, then the coroner would contact the Native American Heritage Commission, which would assign a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of Public Resources Code, Section 5097.98 would be followed as applicable.

Project Feature 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 limit idling of vehicles and equipment; use solar power as a power source, if feasible; ensure regular maintenance of construction vehicles and equipment; and if feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite.

Project Feature GHG-1: Control Measures for Greenhouse Gases. Measures would be determined during later Project phases and implemented during construction to ensure regular maintenance of construction vehicle and equipment; limit idling of vehicles and equipment on site; recycle nonhazardous waste and excess material if practicable; and use solar-powered signal boards, if feasible.

Project Feature WQ-1: Water Quality Best Management Practices: This Project will require a 401 permit from the San Francisco RWQCB. It is anticipated that the RWQCB permit would require a stormwater pollution prevention plan, which would provide guidance on erosion control BMPs to be implemented to minimize wind- or water-related erosion. These BMPs would also be implemented via language in the *Construction Site Best Management Practices (BMPs) Manual* (Caltrans 2017), which provides guidance for including provisions in all construction contracts to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges.

Project Feature WQ-2: Job Site Management: This non-stormwater discharge and waste management practice would include considerations for operations, illicit discharge detention and reporting, vehicle and equipment cleaning, vehicle and equipment fueling, and material use.

Project Feature WQ-3: Sediment Control Practices: Sediment control practices would include, but not be limited to, the following:

- Silt fence
- Sediment/distilling basin
- Check dam
- Fiber rolls (A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers, rolled or bound into a tight tube shape and placed on the toe and face of

slopes to intercept runoff, reduce the runoff's flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff.)

- Street sweeping and vacuuming

Project Feature WQ-4: Tracking Control Practices. Tracking control practices would include:

- Temporary (stabilized) construction entrance (exit)
- Temporary construction roadway
- Entrance/outlet tire wash
- Street sweeping and vacuuming

Project Feature WQ-5: Waste Management and Materials Pollution Control. Waste management and materials pollution control measures would be as follows:

- Stockpile management: This practice is needed to reduce or eliminate air and stormwater pollution from stockpiles of soil and paving materials.
- Concrete waste management: The concrete quantity has not been determined at this phase of the Project. However, it is imperative to confirm that procedures and practices are in place to eliminate or minimize the discharge of concrete slurry to the storm drain system. These measures would include, but not be limited to, the following:
    - Concrete slurry waste-handling procedures
    - Onsite concrete washout facility
    - Transit truck washout procedures
    - Procedures for removal of temporary concrete washout facilities
- Material delivery and storage
- Spill prevention control
- Solid waste management
- Hazardous waste and contaminated soil management
- Sanitary/septic and liquid waste management

Project Feature WQ-6: Non-stormwater Management. Non-stormwater management practices would include the following:

- Dewatering Operations: At this phase of the Project, no water table data or log of test boring have been provided. There is a bridge fender system upgrade involved in the Project scope and de-watering operation may prove to be a necessity on this Project. Dewatering effluent that would be discharged from the construction site to a storm drain or receiving water would be subject to requirements of the applicable National Pollutant Discharge Elimination System permit but would most often be regulated under a 401 certification or waste discharge requirements administered by RWQCB. An Active treatment system may be necessary to meet the effluent limits of the construction general permit for turbidity and pH in the stormwater.

- Pile-driving operations: Proper control and use of equipment, materials, and waste products generated by the pile-driving operations would reduce the discharge of potential pollutants to the storm drain system or receiving water bodies.

- Concrete curing: This BMP consists of procedures that would minimize pollution of stormwater runoff during concrete curing.

- Concrete finishing: This BMP consists of procedures that would minimize the impact concrete finishing methods may have on stormwater runoff. These methods would include sand blasting, lead shot blasting, grinding, or high-pressure water blasting.

- Water conservation practices

- Potable water/irrigation

- Vehicle and equipment operations (fueling, cleaning, and maintenance)

- Material and equipment use

Project Feature WQ-7: Soil Stabilization. Soil stabilization would include preservation of existing vegetation, slope protection, slope interrupter devices, and channelized flow.

Project Feature WQ-8: Wind Erosion Controls. Wind erosion controls would include hydraulic mulch and temporary covers.

Project Feature WQ-9: Turbidity Control. During the fender replacement work, and at other locations where ground disturbance would be conducted below MHHW, a silt-curtain, sheet pile, or gravel-bag cofferdam or other equivalent means would be installed as needed to minimize the generation of turbidity plumes in nearby tidal waters. Such cofferdams would be installed when there is no surface water present (that is, at low tide). This requirement does not apply to in-water pile driving.

Project Feature UTI-1: Trash Management. All food-related trash items, such as wrappers, cans, bottles, and food scraps, would be disposed of in closed containers and removed by the contractor at least once daily from the Project limits. A trash reduction system would also be developed by the contractor, approved by Caltrans, and implemented per Caltrans Statewide National Pollution Discharge Elimination System Permit and San Francisco RWQCB Cease and Desist Order.

Project Feature UTI-2: Treated Wood Waste. Wood removed from metal beam guardrails and the fender system would be considered treated wood waste and be disposed of by the contractor pursuant to Caltrans standard specifications.

Avoidance and Minimization Measures

AMM AES-1: Revegetate disturbed soil areas and disturbed portions of the riparian corridor with native and climatically appropriate species.

AMM AES-2: Design planned RSP with material of an appropriate size, scale, and color such that it reduces visual contrast and enhances visual character.

AMM AES-3: Reduce glare from the concrete portions of the bridge, concrete bridge rails, and concrete anchor blocks, by using a combination of roughening surface texture and coloring concrete to make the concrete appear to be aged.

AMM AES-4: Screen appearance of construction equipment and staging areas.

AMM AES-5: Use staging areas that do not damage existing vegetation or require vegetation or tree removal.

AMM AES-6: If nightwork is included, limit light trespass to residences with the use of directional lighting, shielding, and other measures as needed.

AMM BIO-24: Hydroacoustic Minimization and Monitoring Plan. Depending on the results of a hydroacoustic analysis of the proposed construction methods

(including pile size, number of piles per day and the number of strikes per pile), and in coordination with NMFS, a Hydroacoustic Minimization and Monitoring Plan will be developed and will include measures such as the following:

1. **Hydroacoustic Monitoring.** During all impact pile driving events, Caltrans will monitor in-water sound pressure levels relative to the 187-dB cumulative SEL and 206-dB peak pressure level. Vibratory pile driving will not be monitored.

2. **In-Water Impact Pile Driving Work Window.** All in-water impact pile driving in water depths greater than 2 feet at any time during work will use an underwater sound pressure attenuation system (e.g., a dewatered cofferdam or a bubble curtain system).

3. **Soft Start.** Prolonged, soft-start procedures will be implemented when impact pile driving is required for piles greater than 20 inches in diameter in waters that provide habitat for federally listed anadromous fish species. Soft-starts will include pile driving at 40- to 60-percent reduced energy for at least 15 seconds, followed by a 1-minute waiting period. This procedure will be repeated at least two times before commencing full-energy impact pile driving.

4. **Vibratory Pile Driving.**
    a. All sheet piles will be installed with a vibratory driver or direct-push methods.
    b. Impact pile driving below the MHHW must take place after the sheet pile cofferdams have been installed, and the area has been dewatered.
    c. Where temporary piles cannot be extracted, they will be cut 3-feet below existing mudline.

5. **In-Water Sheet Pile Fish Entrapment Avoidance.** When sheet piles are installed below the MHHW mark, they will be installed in a way that avoids fish entrapment (e.g., by closing off pile walls during low tide). An agency-approved (USFWS/NMFS/CDFW) Project biologist will be present during any sheet pile installation below the MHHW mark.

AMM BIO-25: California Red-Legged Frog Habitat Work Window. These work windows are applicable only to those portions of the Project area where suitable California red-legged frog habitat occurs. Areas that are not considered habitat (including paved surfaces and other hardscape) are accessible for construction work year-round (unless other seasonal restrictions are outlined in a federal or state permit).

Initial ground disturbance (that is, areas that have not been previously disturbed in such a way that removes or destroys access to burrows and migratory habitat, or areas that have not previously been enclosed with WEF) in upland dispersal habitat for the California red-legged frog, as identified by a USFWS-approved Project biologist, will be timed to occur between April 15 and October 31.

AMM BIO-26: California Red-Legged Frog Pre-Construction Surveys. Pre-construction surveys for the California red-legged frog will be conducted by the Project biologist within 14 calendar days of the initiation of Project activities in suitable upland habitat prior to ground-disturbing activities, vegetation removal, and WEF installation. Surveys will be conducted as outlined in the 2005 USFWS species survey guidelines for California red-legged frog. Access to habitat during surveys may be limited by appropriate safety measures and protocols available at: https://www.fws.gov/ventura/docs/species/protocols/crlf/caredleggedfrog_survey-guidelines.pdf. Pre-construction surveys will include:

- Foot surveys will be conducted of potential frog habitat within the Project limits and accessible adjacent areas (within at least 50 feet of Project limits).
- Investigation will occur of potential cover sites (burrows, rocks, soil cracks, vegetation, and other potential refuge habitat) and any areas of disturbed soil for signs of California red-legged frog.

Native vertebrates found in cover sites within the Project limits will be documented and, if handling is allowed, relocated to an adequate cover site in the vicinity. Species that cannot be relocated because of their special protection status will be addressed in coordination with the appropriate agency (USFWS and/or CDFW) with jurisdiction.

AMM BIO-27: California Red-Legged Frog Monitoring Protocols. During construction in and near potential California red-legged habitat, the following protocols will be observed by the Project biologist during construction monitoring:

- Within 24 hours prior to initial ground-disturbing activities, portions of the Project footprint where potential California red-legged frog habitat has been identified will be surveyed by a Project biologist(s) to clear the site of frogs moving above ground or taking refuge in burrow openings or under materials that could provide cover.

- A Project biologist(s) will be present during all initial ground-disturbing activities and vegetation removal in suitable refugia habitats for the California red-legged frogs to monitor the removal of the top 12 inches of topsoil.
- If potential aestivation burrows are discovered, the burrows will be flagged for avoidance.
- After a rain event, and prior to construction activities resuming, the Project biologist(s) will inspect the work area and all equipment/materials for the presence of California red-legged frogs.
- Upon discovery of a California red-legged frog in an active construction area, all work will cease within a 50-foot radius of the frog. The frog will be allowed to leave the site on its own; or if the frog(s) does not leave on its own, it will be relocated as close to the Project site as feasible and with permission from the property owner, and placed in a natural burrow by a Project biologist with the appropriate USFWS 10(a)1(A) handling permit.

The USFWS will be notified by phone and email within oneworking day of any California red legged frog discovery in the Project area.

AMM BIO-28: California Ridgway's Rail and California Black Rail Pre-Construction Survey. If California Ridgway's rail or California black rail habitat is present within 700 feet of the immediate Project area and work is to occur during the rail nesting season (February 1 through August 31), a pre- construction survey by a USFWS 10(a)1(A) permit holder for California Ridgway's rail will be conducted to determine whether the species are present. Survey requirements and timing will be determined in consultation with USFWS and CDFW.

If California Ridgway's rail and/or California black rail are detected during pre-construction surveys, then Project activities will not occur within 700 feet of an identified detection (or smaller distance if approved by USFWS and CDFW) during the rail nesting season. If rail activity is detected within the 700-foot buffer, immediate consultation with USFWS and CDFW will be required.

AMM BIO-29: California Ridgway's Rail and California Black Rail Monitoring. The following monitoring protocols for California Ridgway's rail and California black rail are typically required by USFWS and CDFW. Conditions in the final

biological opinion and as agreed upon with CDFW will supersede these monitoring protocols:

- A USFWS- and CDFW-approved biological monitor will be present on site to monitor for California Ridgway's rail and California black rail during the operation of large equipment within 300 feet of salt marsh areas.
- The Project biologist will be on site during construction. A Project biologist will periodically inspect the site to verify that habitat protection measures remain effective.

AMM BIO-30: Western Burrowing Owl Pre-Construction Surveys. Pre-construction surveys will be conducted where western burrowing owl nesting habitat has potential to occur within 500 feet of work. Survey protocol will include:

- Conduct 4 survey visits.
- Note that an initial visit must occur between February 15 and April 15.
- Conduct a minimum of three subsequent surveys, with at least 3 weeks between visits, with at least one visit to occur after June 15.
- Conduct an additional take avoidance survey no less than 14 days prior to initiating ground-disturbing activities where work will occur.

AMM BIO-31: Western Burrowing Owl Nest Avoidance. If a western burrowing owl active nest is discovered during pre-construction surveys or biological monitoring, the following initial buffers will be implemented:

- From April 1 through October 15, establish a 660-foot-wide (200-meter-wide) no-work buffer from the active nest site.
- From October 16 through March 31, establish a 164-foot-wide (50-meter-wide) no-work buffer from the active nest site.
- Buffers and minimization measures (such as., blinds and screens) may be adjusted or implemented after coordination with CDFW.

AMM BIO-32: Marine Mammal Protection. Measures to avoid harassment will be developed in consultation with NMFS. Examples of measures that may be implemented include performing biological monitoring and stopping work if marine

mammals are within a specified distance; using soft start techniques for impact pile driving; using pile cushions; and/or using bubble curtains to attenuate sound.

AMM Noise-1: Specifications for Controlling Noise and Vibration. Noise from construction activities will not exceed 86 A-weighted decibel Lmax[2] at 50 feet from the Project site from 9:00 p.m. to 6:00 a.m., per 2018 Caltrans Standard Specifications, Section 14-8.02.

AMM Noise-2: Noise Levels During Construction. The following measures will be implemented during construction to reduce noise:

- Restrict the times of overly loud construction activities to between 6:00 a.m. and 9:00 p.m.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate all stationary, noise-generating, construction equipment, such as air compressors, portable power generators, or self-powered lighting systems, as far as practical from noise-sensitive receptors.
- Use quiet air compressors and other quiet equipment where such technology exists.
- As practicable, have construction equipment conform to Section 14-8.02, Noise Control, of the latest Caltrans Specifications.

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 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. Lane closures will be planned in coordination with Caltrans, Marin County, and Sonoma

[2] Lmax noise descriptor is the highest instantaneous noise level during a specified period; in the noise analysis, that is 1 hour.

County; planning will include notices to emergency service providers, and the public in advance.

Mitigation Measure

Mitigation Measure BIO-1: Caltrans would address the need for compensatory mitigation during the permitting and design phases and in coordination with agencies, including, but not limited to, USACE, RWQCB, USFWS, CDFW, and NMFS. Potential compensation will be based on the estimate of impacts to wetlands, waters, and other suitable habitat within the range of listed species. Caltrans would discuss in-lieu compensation options, with state and federal agencies through onsite restoration, funding of a restoration project that would create or enhance habitat in the Bay Area as appropriate with Project impacts, or the purchase of credits at an approved mitigation bank. The final acreage value of compensatory mitigation will be determined in coordination with regulatory agencies.

Appendix C Species Lists

From: Seguin, Misha
To: "nmfs.wcrca.specieslist@noaa.gov"
Subject: Caltrans EA 04-SQ500 - SR 37 Petaluma River Bridge; MRN-37-PM 14.50
Date: Wednesday, September 15, 2021 9:44:00 AM
Attachments: image001.png

Federal agency name and address: Caltrans; Robert Blizzard, Branch Chief, North Counties; Office of Biological Sciences and Permitting, District 04, Oakland California
Point-of-contact name, email address, and phone number: Misha Seguin, Jacobs Engineering, misha.seguin@jacobs.com; 510-520-9787

Quad Name **Novato**
Quad Number **38122-A5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - **X**
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) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat - **X**
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - **X**
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

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 - X

Coastal Pelagics EFH - X

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Quad Name **Petaluma Point**

Quad Number **38122-A4**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - X

SRWR Chinook Salmon ESU (E) - X

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) - X

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - X

Eulachon (T) -

sDPS Green Sturgeon (T) - X

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 - X

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat - X

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - X

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 - **X**
Coastal Pelagics EFH - **X**
Highly Migratory Species EFH -

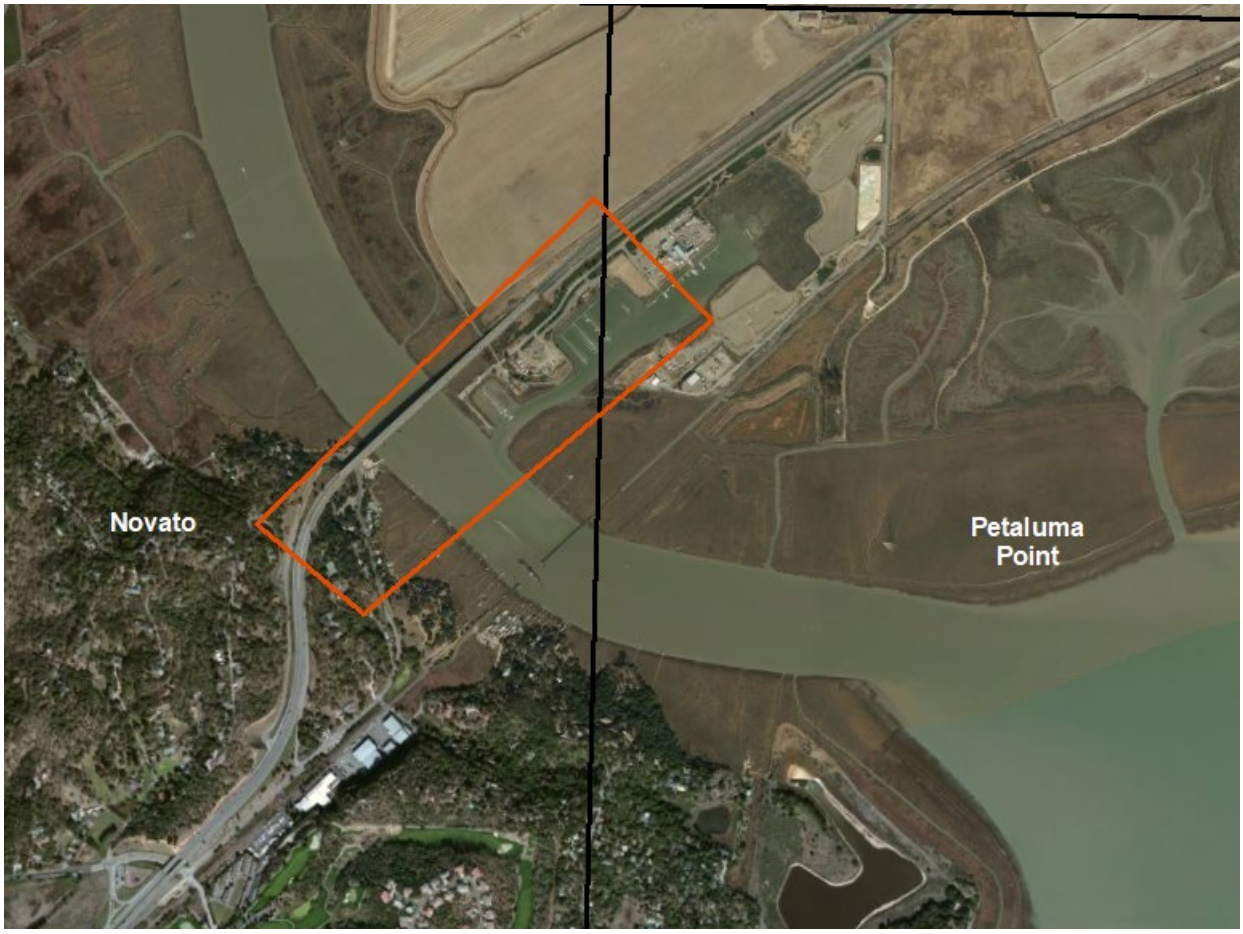
MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -
MMPA Pinnipeds - **X**

Approximate Project Boundary:



Misha Seguin | Biologist | mob. 510.520.9787 | misha.seguin@jacobs.com |

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: January 11, 2022
Consultation Code: 08ESMF00-2022-SLI-0792
Event Code: 08ESMF00-2022-E-02415
Project Name: Petaluma River Bridge MRN-37-PM 14.50 EA 04-2Q500

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, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) 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 Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

San Francisco Bay-Delta Fish And Wildlife
650 Capitol Mall
Suite 8-300
Sacramento, CA 95814
(916) 930-5603

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0792
Event Code: Some(08ESMF00-2022-E-02415)
Project Name: Petaluma River Bridge MRN-37-PM 14.50 EA 04-2Q500
Project Type: BRIDGE CONSTRUCTION / MAINTENANCE
Project Description: The Project is located in Marin and Sonoma Counties, California, on State Route (SR) 37 at post mile 14.5 from Harbor Drive to near Sears Point Road on SR 37. Caltrans is proposing rehabilitation of the bridge deck, replacement of the bridge fender system, bridge scour mitigation, and upgrading the bridge railings to meet current safety standards and maintain the structure in a reliable and serviceable condition.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.11603925,-122.50340769308255,14z

Counties: Marin and Sonoma counties, California

Endangered Species Act Species

There is a total of 12 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

Birds

NAME	STATUS
California Clapper Rail *Rallus longirostris obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	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
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

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
California Freshwater Shrimp *Syncaris pacifica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7903	Endangered

Flowering Plants

NAME	STATUS
Marin Dwarf-flax *Hesperolinon congestum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5363	Threatened

Critical habitats

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
San Francisco Bay-Delta Fish And Wildlife
650 Capitol Mall
Suite 8-300
Sacramento, CA 95814
Phone: (916) 930-5603 Fax: (916) 930-5654
http://kim_squires@fws.gov

In Reply Refer To: January 11, 2022
Consultation Code: 08FBDT00-2022-SLI-0075
Event Code: 08FBDT00-2022-E-00187
Project Name: Petaluma River Bridge MRN-37-PM 14.50 EA 04-2Q500

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)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

San Francisco Bay-Delta Fish And Wildlife
650 Capitol Mall
Suite 8-300
Sacramento, CA 95814
(916) 930-5603

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

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

Project Summary

Consultation Code: 08FBDT00-2022-SLI-0075
Event Code: Some(08FBDT00-2022-E-00187)
Project Name: Petaluma River Bridge MRN-37-PM 14.50 EA 04-2Q500
Project Type: BRIDGE CONSTRUCTION / MAINTENANCE
Project Description: The Project is located in Marin and Sonoma Counties, California, on State Route (SR) 37 at post mile 14.5 from Harbor Drive to near Sears Point Road on SR 37. Caltrans is proposing rehabilitation of the bridge deck, replacement of the bridge fender system, bridge scour mitigation, and upgrading the bridge railings to meet current safety standards and maintain the structure in a reliable and serviceable condition.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.11603925,-122.50340769308255,14z

Counties: Marin and Sonoma counties, California

Endangered Species Act Species

There is a total of 12 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

Birds

NAME	STATUS
California Clapper Rail *Rallus longirostris obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	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
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

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
California Freshwater Shrimp *Syncaris pacifica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7903	Endangered

Flowering Plants

NAME	STATUS
Marin Dwarf-flax *Hesperolinon congestum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5363	Threatened

Critical habitats

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

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Petaluma River (3812225) OR Petaluma Point (3812214) OR Sears Point (3812224) OR Novato (3812215))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Adela oplerella Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Allium peninsulare var. franciscanum Franciscan onion	PMLIL021R1	None	None	G5T2	S2	1B.2
Ambystoma californiense pop. 3 California tiger salamander - Sonoma County DPS	AAAAA01183	Endangered	Threatened	G2G3	S2	WL
Amorpha californica var. napensis Napa false indigo	PDFAB08012	None	None	G4T2	S2	1B.2
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Andrena blennospermatis Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Arctostaphylos montana ssp. montana Mt. Tamalpais manzanita	PDERI040J5	None	None	G3T3	S3	1B.3
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Blennosperma bakeri Sonoma sunshine	PDAST1A010	Endangered	Endangered	G1	S1	1B.1
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calicina diminua Marin blind harvestman	ILARAU8040	None	None	G1	S1	
Centromadia parryi ssp. parryi pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Chloropyron molle ssp. molle soft salty bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1	1B.2
Chorizanthe valida Sonoma spineflower	PDPGN040V0	Endangered	Endangered	G1	S1	1B.1
Coastal Brackish Marsh Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eriogonum luteolum var. caninum Tiburon buckwheat	PDPGN083S1	None	None	G5T2	S2	1B.2
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	PDAST4R065	None	None	G5T2	S2	1B.2
Hesperolinon congestum Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lessingia micradenia var. micradenia Tamalpais lessingia	PDAST5S063	None	None	G2T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lilium pardalinum ssp. pitkinense Pitkin Marsh lily	PMLIL1A0H3	Endangered	Endangered	G5T1	S1	1B.1
Melospiza melodia samuelis San Pablo song sparrow	ABPBXA301W	None	None	G5T2	S2	SSC
Navarretia leucocephala ssp. bakeri Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Northern Vernal Pool Northern Vernal Pool	CTT44100CA	None	None	G2	S2.1	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Plagiobothrys mollis var. vestitus Petaluma popcornflower	PDBOR0V0Q2	None	None	G4?TX	SX	1A
Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020	None	None	GNR	S3	SSC
Polygonum marinense Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S1	FP
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sidalcea calycosa ssp. rhizomata Point Reyes checkerbloom	PDMAL11012	None	None	G5T2	S2	1B.2
Sorex ornatus sinuosus Suisun shrew	AMABA01103	None	None	G5T1T2Q	S1S2	SSC
Speyeria zerene sonomensis Sonoma zerene fritillary	IILEPJ6083	None	None	G5T1	S1	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Streptanthus anomalus Mount Burdell jewelflower	PDBRA2G520	None	None	G1	S1	1B.1
Streptanthus glandulosus ssp. pulchellus Mt. Tamalpais bristly jewelflower	PDBRA2G0J2	None	None	G4T2	S2	1B.2
Talanites ubicki Ubick's gnaphosid spider	ILARA98030	None	None	G1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Taricha rivularis red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Trifolium polyodon Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
Vespericola marinensis Marin hesperian	IMGASA4140	None	None	G2	S2	

Record Count: 67

Search Results

39 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3812225:3812214:3812224:3812215**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
Allium peninsulare var. *franciscanum*	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G5T2	S2	1B.2
Amorpha californica var. *napensis*	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	None	None	G4T2	S2	1B.2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	None	None	G4	S4	4.3
Arctostaphylos montana ssp. *montana*	Mt. Tamalpais manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	None	None	G3T3	S3	1B.3
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1
Calochortus umbellatus	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3?	S3?	4.2
Castilleja ambigua var. *ambigua*	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2
Chloropyron maritimum ssp. *palustre*	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2
Chloropyron molle ssp. *molle*	soft salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	FE	CR	G2T1	S1	1B.2
Chorizanthe valida	Sonoma spineflower	Polygonaceae	annual herb	Jun-Aug	FE	CE	G1	S1	1B.1
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2
Eleocharis parvula	small spikerush	Cyperaceae	perennial herb	(Apr)Jun-Aug(Sep)	None	None	G5	S3	4.3
Elymus californicus	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	None	None	G4	S4	4.3
Erigeron biolettii	streamside daisy	Asteraceae	perennial herb	Jun-Oct	None	None	G3?	S3?	3
Eriogonum luteolum var. *caninum*	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	None	None	G5T2	S2	1B.2
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2
Hemizonia congesta ssp *congesta*	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2

ssp. *congesta*	hayfield tarplant								
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3
Lessingia micradenia var. *micradenia*	Tamalpais lessingia	Asteraceae	annual herb	(Jun)Jul-Oct	None	None	G2T2	S2	1B.2
Lilium pardalinum ssp. *pitkinense*	Pitkin Marsh lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	FE	CE	G5T1	S1	1B.1
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	None	None	G3G4	S3S4	3.2
Navarretia cotulifolia	cotula navarretia	Polemoniaceae	annual herb	May-Jun	None	None	G4	S4	4.2
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1
Plagiobothrys mollis var. *vestitus*	Petaluma popcornflower	Boraginaceae	perennial herb	Jun-Jul	None	None	G4?TX	SX	1A
Polygonum marinense	Marin knotweed	Polygonaceae	annual herb	(Apr)May-Aug(Oct)	None	None	G2Q	S2	3.1
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2
Sidalcea calycosa ssp. *rhizomata*	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Sep	None	None	G5T2	S2	1B.2
Streptanthus anomalus	Mount Burdell jewelflower	Brassicaceae	annual herb	May-Jun	None	None	G1	S1	1B.1
Streptanthus glandulosus ssp. *pulchellus*	Mt. Tamalpais bristly jewelflower	Brassicaceae	annual herb	May-Jul(Aug)	None	None	G4T2	S2	1B.2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2
Trifolium polyodon	Pacific Grove clover	Fabaceae	annual herb	Apr-Jun(Jul)	None	CR	G1	S1	1B.1
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3?	2B.3

Showing 1 to 39 of 39 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2022. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.0). Website https://www.rareplants.cnps.org [accessed 14 January 2022].

Appendix D List of Acronyms

Acronym	Definition
AC	asphalt concrete
AES	aesthetics
AMM	avoidance and minimization measure
APE	area of potential effects
AQ	air quality
BCDC	San Francisco Bay Conservation and Development Commission
BIO	biology
BMP	best management practice
BSA	biological study area
Caltrans	California Department of Transportation
CCC	central California coast
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	*Code of Federal Regulations*
CH_4	methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent

Acronym	Definition
CULT	cultural
DPS	distinct population segment
EFH	essential fish habitat
ESA	environmentally sensitive area
EIR	environmental impact report
FHWA	Federal Highway Administration
GHG	greenhouse gas
LUST	leaking underground storage tank
MBGR	metal beam guard rail
MGS	Midwest guardrail system
MHHW	mean higher high water
MMPA	Marine Mammal Protection Act
MTC	Metropolitan Transportation Commission
N_2O	nitrous oxide
NES	Natural Environment Study
PA	programmatic agreement
PCS	pavement condition survey
PM	post mile
ROW	right of way
RWQCB	Regional Water Quality Control Board
SEL	sound exposure level

Acronym	Definition
SHOPP	State Highway Operation and Protection Program
SR	State Route
SSC	species of special concern
TAM	Transportation Authority of Marin
TCE	temporary construction easement
TMP	Traffic Management Plan
TRANS	transportation and traffic
TTY	text telephone
USACE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
VIA	visual impact assessment
WEF	wildlife exclusion fencing
WOTUS	waters of the United States
WQ	water quality

Appendix E List of Technical Studies and References

AECOM. 2021. *SR 37 Segment A PIR Sea Level Rise and Flooding Risk Assessment and Shoreline Evaluation*. March 11.

Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2021. *Final Bay Area Plan 2050*. https://www.planbayarea.org/finalplan2050. October.

CAL FIRE. 2007a. Marin County Fire Hazard Severity Zones in SRA. https://osfm.fire.ca.gov/media/6707/fhszs_map21.pdf. November 7.

CAL FIRE. 2007b. Sonoma County Fire Hazard Severity Zones in SRA. https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf. November 6.

California Department of Conservation. 2022. Mineral Lands Classification. Accessed February 2022. https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc.

California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Database (CNDDB). RareFind 5. Wildlife and Habitat Data Analysis Branch. Sacramento, California. Accessed on October 5, 2021. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

California Department of Fish and Wildlife (CDFW). 2009. Longfin Smelt Fact Sheet. Available online at: https://www.dfg.ca.gov/delta/data/longfinsmelt/documents/LongfinsmeltFactSheet_July09.pdf

California Department of Transportation (Caltrans). 2022a. Draft *Natural Environment Study for the Petaluma River Bridge Project*. District 4 Office of Biological Sciences and Permits. Oakland, CA. January.

California Department of Transportation (Caltrans). 2022b. *Geologic and Palaeontologic Analysis for Bridge Rehabilitation*. District 4 Office of Geotechnical Design - West. Oakland, CA. January 7.

California Department of Transportation (Caltrans). 2022c. *Energy Analysis Report*. District 4 Air Quality and Noise Branch. February 22.

California Department of Transportation (Caltrans). 2022d. *Construction-Related Greenhouse Gas (GHG) Emissions Analysis*. District 4, Office of Environmental Engineering Air Quality and Noise Branch. Oakland, CA. March 22.

California Department of Transportation (Caltrans). 2022e. *Technical Memorandum: Revised Office of Cultural Resource Studies (OCRS) Section 106 Closeout Memo for the Petaluma River Bridge Project at Post Mile 14.5, on State Route 37, in Marin County.* District 4 Office of Cultural Resources Studies. Oakland, CA. February 24.

California Department of Transportation (Caltrans). 2021a. *Visual Impact Assessment*. District 4 Office of Landscape Architecture. Oakland, CA. October 6.

California Department of Transportation (Caltrans). 2021b. *Location Hydraulic Study/Floodplain Analysis*. District 4 Office of Hydraulic Engineering. Oakland, CA. September 20.

California Department of Transportation (Caltrans). 2021c. *Water Quality Study*. District 4 Office of Water Quality. October.

California Department of Transportation (Caltrans). 2017. *Construction Site Best Management Practices (BMPs) Manual*. https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/csbmp-may-2017-final.pdf. May.

California Native Plant Society (CNPS). 2021. *Inventory of Rare and Endangered Plants* (Online Edition, v7-08d). California Native Plant Society. Sacramento, CA. Accessed August 30, 2021. http://www.cnps.org/inventory.

Chapman, E., Miller, E., Singer, G., Hearn, A., Thomas, M., Brostoff, W., LaCivita, P., Klimley, A. 2019. "Spatiotemporal Occurrence of Green Sturgeon at Dredging and Placement Sites in the San Francisco Estuary. *Environmental Biology of Fishes*." 102. 1-14. 10.1007/s10641-018-0837-9.

California Ocean Protection Council. 2018. *State of California Sea-Level Rise Guidance, 2018 Update*. http://www.opc.ca.gov/updating-californias-sea-level-rise-guidance/.

Federal Highway Administration (FHWA). 1981. Visual Impact Assessments for Highway Projects. Publication No. FHWA-HI-88-054. http://www.dot.ca.gov/ser/downloads/visual/FHWAVisualImpactAssmt.pdf.

Feyrer, F., T.R. Sommer, and R. Baxter. 2005. "Spatial-temporal Distribution and Habitat Associations of Age-0 Splittail in the Lower San Francisco Estuary Watershed." *Copeia*.

Fisheries Hydroacoustic Working Group. 2008. *Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving*. Memorandum. NOAA Fisheries, U.S. Fish and Wildlife Service, Caltrans, Oregon Department of Transportation, Washington Department of Transportation, U.S. Federal Highway Administration. http://www.dot.ca.gov/hq/env/bio/files/fhwgcriteria_agree.pdf.

Golden Gate National Parks Conservancy (GGNPC). 2021. Dataset: Marin County Fine Scale Vegetation Map. Version September 30, 2021. Tamalpais Lands Collaborative (One Tam), Tukman Geospatial LLC, Aerial Information Systems. https://vegmap.press/marin_vegmap.

Leidy, R.A., G.S. Becker, B.N. Harvey. 2005. *Historical Distribution and Current Status of Steelhead/Rainbow Trout (*Oncorhynchus mykiss*) in Streams of the San Francisco Estuary, California*. Center for Ecosystem Management and Restoration, Oakland, CA.

Lindley, S.T., M.L. Moser, D.L. Erickson, M. Belchik, D.W. Welch, E.L. Rechisky, J.T. Kelly, J. Heublein, and A.P. Klimley. 2008. "Marine Migration of North American Green Sturgeon." *Transactions of the American Fisheries Society* 137:182-194.

Marin County. 2007. Marin Countywide Plan. http://www.marincounty.org/depts/cd/divisions/planning/2007-marin-countywide-plan/countywide-plan.

Metropolitan Transportation Commission (MTC). 2022a. San Francisco Bay Trail. https://mtc.ca.gov/operations/regional-trails-parks/san-francisco-bay-trail. Accessed May 2022.

Metropolitan Transportation Commission (MTC). 2022b. San Francisco Water Trail. https://mtc.ca.gov/operations/regional-trails-parks/sf-bay-water-trail. Accessed May 2022.

Morrison, A., Bobier, K., Keimel, B. 2014. Petaluma Watershed Steelhead Monitoring Report— 2013-2014 Spawning Surveys. National Marine Fisheries Service. December.

Moyle, P.B., R.D. Baxter, T. Sommer, T.C. Foin and S. A. Matern. 2004. "Biology and Population Dynamics of Sacramento Splittail (*Pogonichthys macrolepidotus*) in the San Francisco Estuary: A Review." *San Francisco Estuary and Watershed Science*. http://repositories.cdlib.org/jmie/sfews.

Natural Resources Conservation Service (NRCS). 2022. "Web Soil Survey". United States Department of Agriculture. Accessed January 2022. http://websoilsurvey.nrcs.usda.gov/.

NOAA Fisheries. 2021. California Species List Tool. Queried for endangered and threatened species within Novato and Petaluma Point USGS 7.5-minute topographic quadrangles.

Saldi-Caromile, K., K. Bates, P. Skidmore, J. Barenti, D. Pineo. 2004. *Stream Habitat Restoration Guidelines: Final Draft.* Co-published by the Washington Departments of Fish and Wildlife and Ecology and the U.S. Fish and Wildlife Service. Olympia, Washington.

San Francisco Bay Conservation and Development Commission (BCDC). 2022. San Francisco Bay Plan. Accessed May 2022. https://bcdc.ca.gov/plans/sfbay_plan.html.

Sonoma County. 2017. Sonoma Veg Map, Sonoma County Agricultural Preservation and Open Space District. Dataset: Sonoma County Fine Scale Vegetation and Habitat Map. http://sonomavegmap.org/data-downloads.

Sonoma County. 2020. Sonoma County General Plan. https://sonomacounty.ca.gov/prmd/long-range-plans/general-plan/.

Sonoma County Transportation Authority (SCTA). 2021. Sonoma County Comprehensive Transportation Plan 2050. https://scta.ca.gov/wp-content/uploads/2021/09/SCTA-CTP21_v8.pdf. September.

State Water Resources Control Board (SWRCB). 2022. Geotracker Database Search Novato, California. Accessed January 4, 2022. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Novato.

Transportation Authority of Marin (TAM). 2018. *Final State Route 37 – Segment A Sea Level Rise Corridor Improvement Study*. Prepared by HNTB SFEI Aquatic Science Center. June 18.

Transportation Authority of Marin (TAM). 2019. Draft 2019 CMP Update. https://2b0kd44aw6tb3js4ja3jprp6-wpengine.netdna-ssl.com/wp-content/uploads/2019/10/10c-2019-DRAFT-CMP-9-20-19-Copy.pdf. October.

U.S. Fish and Wildlife Service (USFWS). 2013. *Recovery Plan for Tidal marsh Ecosystems of Northern and Central California*. Sacramento, CA. https://www.fws.gov/sfbaydelta/documents/tidal_marsh_recovery_plan_v1.pdf.

U.S. Fish and Wildlife Service (USFWS). 2021a. Information for Planning and Consultation (IPaC) System. Accessed September 10, 2021, and November January 11, 2022. https://ecos.fws.gov/ipac/.

U.S. Fish and Wildlife Service (USFWS). 2021b. National Wetlands Inventory. http://www.fws.gov/wetlands.

United States Geological Survey (USGS). 2022. U.S. Quaternary Faults. https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=.

Western Regional Climate Center (WRCC). 2021. *Period of Record Monthly Climate Summary at Petaluma AP, California* (046826). http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6826.

Wilson, Chris, District Branch Chief, District 4 Hazardous Waste Branch Office of Environmental Engineering, California Department of Transportation (Caltrans). 2021. Personal communication (email) with Julie Petersen, Jacobs. District 4 Office of Design SHOPP. Oakland, CA. August 27.

Wu, Siria Che, Transportation Engineer, Office of Environmental Engineering, Air Quality and Noise Branch, District 4, California Department of Transportation (Caltrans). 2021. Personal communication (email) with Julie Petersen, Jacobs. September 2.