JACK PETERS CREEK BRIDGE PROJECT

MENDOCINO COUNTY, CALIFORNIA
DISTRICT 1 – MEN – 1 (Post Miles 51.3 to 52.1)
01-43484 / 0117000133

INITIAL STUDY

with Proposed Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

Caltrans®

December 2021

General Information about this Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of a proposed project on State Route 1 in Mendocino County. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document.
- Additional copies of this document are available for review on weekdays between 8:00 a.m. to 5:00 p.m. at the Caltrans District Office at 1656 Union Street, Eureka, CA 95501. Due to COVID-19 concerns, please call (707) 441-5930 beforehand to make arrangements for document review under social distancing protocols.
- This document may also be downloaded at the following website:

  https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs/d3-mendocino-county

- Paper copies of this document and related technical studies are available upon request. Please contact Liza Walker at (707) 441-5930 or by e-mail at jackpeterscreekbridge@dot.ca.gov.
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments via U.S. mail to Caltrans by the deadline.
  - Please send comments via U.S. mail to:
    California Department of Transportation
    Attention: Liza Walker
    North Region Environmental–District 1
    1656 Union Street
    Eureka, CA 95501
  - Send comments via e-mail to: jackpeterscreekbridge@dot.ca.gov

- Be sure to send comments by the deadline: **January 09, 2022**

What happens after this?

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could complete the design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Liza Walker, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 441-5930 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

JACK PETERS CREEK BRIDGE PROJECT

Bridge widening and rail replacement on State Route 1
in Mendocino County from post miles 51.3 to 52.1

INITIAL STUDY WITH

PROPOSED MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA

Department of Transportation

12/08/21
Date of Approval

Brandon Larsen
Brandon Larsen, Office Chief
North Region Environmental-District 1
California Department of Transportation
CEQA Lead Agency

The following person(s) may be contacted for more information about this document:

Liza Walker, North Region Environmental-District 1
1656 Union Street, Eureka, CA 95501
(707) 441-5930
or use the California Relay Service TTY number, 711 or 1-800-735-2929.

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to upgrade the bridge rails on and widen the structure of Jack Peters Creek Bridge on State Route 1 between post miles (PM) 51.3 and 52.1 in Mendocino County.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent 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 Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant impact on the environment for the following reasons:

The project would have *No Impact* on agriculture and forest resources, air quality, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

The project would have *Less than Significant Impacts* to aesthetics and greenhouse gas emissions.

With the following mitigation measures incorporated, the project would have *less than significant* impacts to biological resources:

- Onsite revegetation and enhancement: In addition to restoring disturbed areas, Caltrans would revegetate additional acreage with plants that are co-dominant within bishop pine forest. This may involve removing invasive plant species, such as Monterey cypress and Monterey pine.

- Offsite restoration or preservation: Restoration or preservation would be conducted offsite, at a location within the same region as the project.

_____ _____

Brandon Larsen, Office Chief
North Region Environmental-District 1
California Department of Transportation

Date

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List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
ARB	Air Resources Board
BMPs	Best Management Practices
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CARB	California Air Resource Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH_4	methane
CIA	Cumulative Impact Analysis
CIDH	cast-in-drilled-hole
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CRPR	California Rare Plant Rank
CSP	corrugated steel pipe
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
dbh	diameter at breast height
DI	drainage inlet
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
ESL	Environmental Study Limits
ESHA	Environmentally Sensitive Habitat Area
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FHWG	Fisheries Hydroacoustic Working Group
FMP	Fishery Management Plan

Abbreviation	Description
GHG	greenhouse gas
HFC	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
LBB	lotis blue butterfly
LCFS	low carbon fuel standard
LEDPA	least environmentally damaging practicable alternative
LSAA	Lake or Streambed Alteration Agreement
MBGR	metal beam guardrail
MGS	Midwest guardrail system
MLD	Most Likely Descendent
MMTC0_2e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation Management Act
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NC	Northern California
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRLF	Northern red-legged frog
OHWM	Ordinary High Water Mark
PCBR	Pacific Coast Bike Route
PCE	primary constituent element
PDT	Project Development Team
PM	post mile
PRC	Public Resources Code
RMS	root of mean square
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SEL	sound exposure level
SF_6	sulfur hexafluoride

Abbreviation	Description
SHPO	State Historic Preservation Officer
SLR	Sea Level Rise
SNC	Sensitive Natural Community
SR	State Route
SRA	State Responsibility Area
SSC	species of special concern
STRAIN	Structure Replacements and Improvement Needs Report
STV	Sonoma tree vole
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
THVF	Temporary High Visibility Fencing
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
U.S. or US	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Program
WRCC	Western Region Climate Center

Chapter 1. Proposed Project

1.1. Project History

Work on Jack Peters Creek Bridge was originally scoped in 2011 as part of the Four Bridges Project, along with Little River Bridge, Pudding Creek Bridge, and Russian Gulch Bridge. This project was subsequently amended several times: in 2017, to remove Russian Gulch; in 2019, to remove Little River Bridge; and in 2020, to split Pudding Creek Bridge and Jack Peters Creek Bridge. This document was prepared solely for the Jack Peters Creek Bridge; the project proposes to upgrade bridge railing and widen the structure. The existing structure spanning Jack Peters Creek was built in 1939 and seismically retrofitted in 1996.

1.2. Project Description

The California Department of Transportation (Caltrans) proposes to upgrade the bridge railing and widen the bridge structure of the Jack Peters Creek Bridge (Bridge No. 10-0150) located on State Route (SR) 1 between post miles (PM) 51.3 and 52.1 in Mendocino County (Figure 1).

Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

Project Objective (Purpose and Need)

The purpose of the Jack Peters Creek Bridge Project is to bring the bridge up to current design standards by upgrading bridge rails and widening the existing structure. The structure is on the list of bridges eligible for rail upgrades and is identified in the Structure Replacements and Improvement Needs Report (STRAIN); the rails have been identified as deficient, with concrete spalls and exposed and corroded rebar. In addition, the existing shoulder widths do not provide adequate room for disabled vehicles or for collision-avoidance maneuvers and cannot accommodate bicycle traffic or pedestrians.

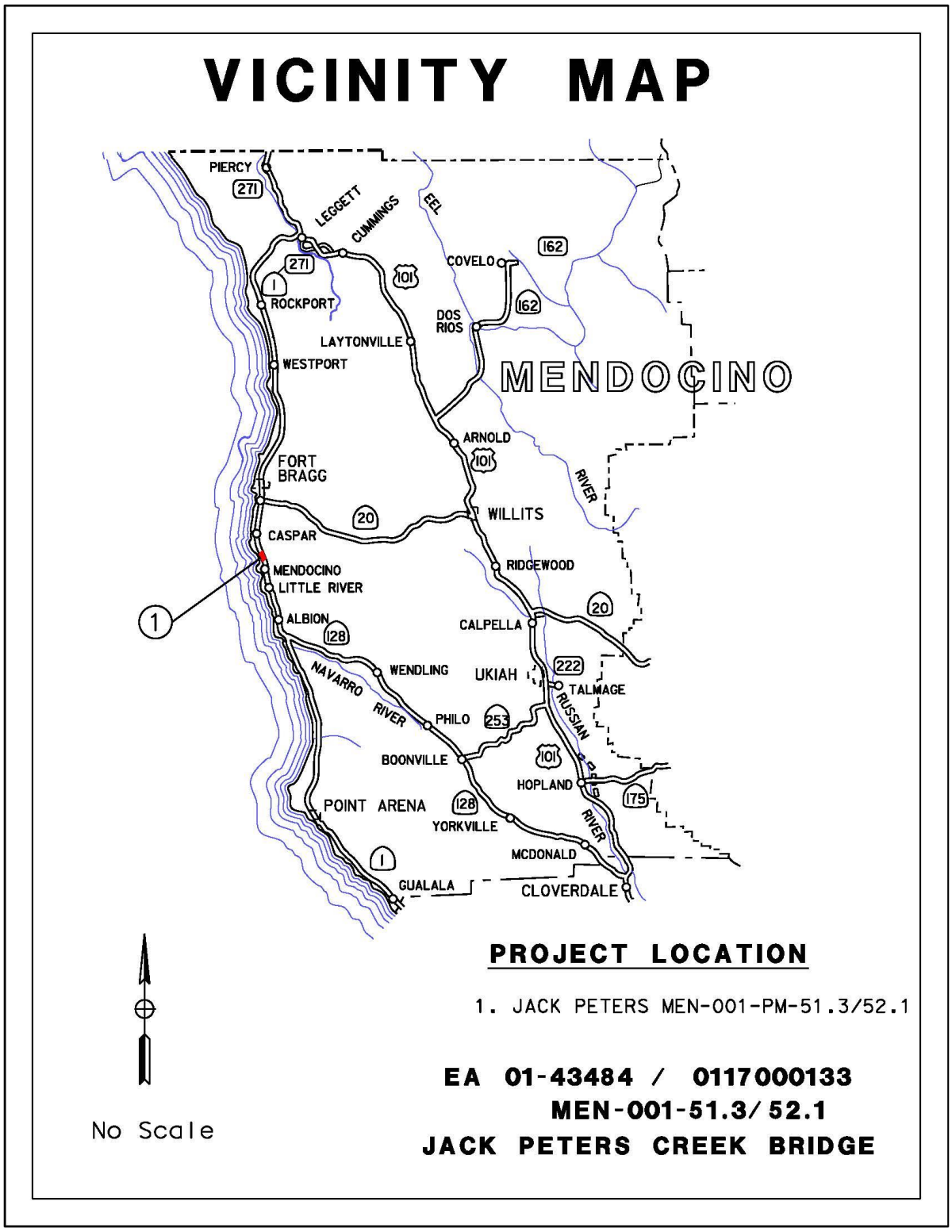

Figure 1. Project Vicinity

Proposed Project

Caltrans proposes to widen Jack Peters Creek Bridge and upgrade its railing on SR 1 in Mendocino County. See Figure 2 for the existing structure, and Figure 3 for a simulation of the proposed structure. Project layouts are included in Appendix A. Work would entail the following:

- **Bridge Length:** Maintaining the existing bridge length of approximately 223 feet.
- **Bridge Width:** Widening the existing bridge by approximately 17 feet to the east, from approximately 30 feet wide to 47 feet wide.
- **Bridge Lanes:** Maintaining bridge lanes widths of approximately 12 feet.
- **Bridge Shoulders:** Widening bridge shoulders from one foot to six feet.
- **Pedestrian Walkway:** Adding a separated 6-foot wide pedestrian walkway on the west side of the bridge.
- **Railing:** Upgrading the existing bridge rails to meet current standards and replacing the existing metal beam guardrail (MBGR) that transitions from the bridge with Midwest guardrail system (MGS) and extending the guardrail on the southwest corner of the structure to Lansing Street.
- **Centerline:** Shifting the centerline of SR 1 approximately 12 feet east to match the centerline of the widened bridge.
- **Roadway Widening:** Widening and shifting the roadway to the east to meet the new centerline, with two 12-foot lanes and 6-foot shoulders on the bridge that would taper into existing roadway shoulder widths.
- **Excavation:** Excavating the slope to the east of the road to accommodate the shifted and widened alignment.

Construction on the bridge would be conducted in two stages, taking two seasons to complete. These stages and other project activities, such as vegetation removal, are described in more detail below.

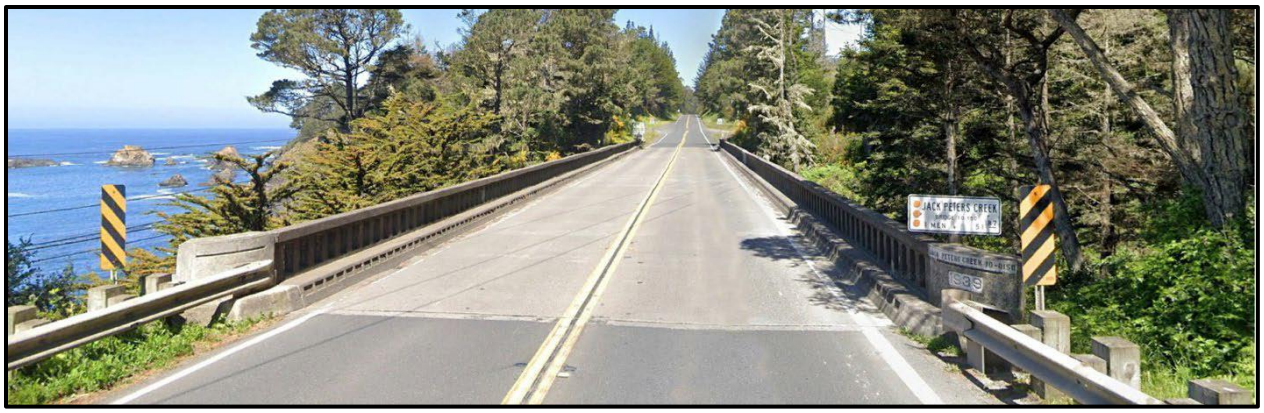

Figure 2. Existing Jack Peters Creek Bridge

Figure 3. Proposed Jack Peters Creek Bridge Simulation

Stage 1

This stage involves removing the barrier rail and overhang on the eastern side of the bridge, and widening the structure.

Bridge Rail Demolition – East Side

A debris catchment system would be installed, and the existing eastern bridge rail and overhang would be removed. Tools for removal could include saw cutters, excavator-mounted chipping hammers, and a truck-mounted bridge inspection platform. This work may be conducted at night, during extended road closures to ensure room for equipment maneuvering.

Temporary Trestle and Falsework

A temporary trestle and falsework would be constructed parallel to the existing bridge to support bridge widening. Access to these features would be constructed adjacent to the southeast and northeast corners of the bridge. An informal public access trail on the south side of the bridge would be improved for foot access, and to prevent erosion.

The temporary trestle would facilitate safe and efficient movement of people and equipment across the creek and serve as a work platform. The trestle is assumed to be at least 20 to 40 feet away from the bridge to allow for free movement of equipment. The trestle would remain in place until bridge construction is complete.

The temporary trestle would be approximately 25 feet wide and may extend the length of the existing bridge. It would be constructed of timber decking on steel stringer beams, supported by bents approximately every 25 feet (with approximately 10 bents total). Most bents for the temporary trestle would have supports notched into the canyon wall, with one support anticipated to be below the ordinary high water mark (OHWM) of the creek, but outside the wetted channel. The supports may be built in a mixture of two ways, depending on the specific location and as determined by the contractor:

- On timber or precast concrete spread footings. Each footing would require excavation of a level surface that would be approximately 25 feet by 6 feet.

- On driven or drilled steel piles. Each steel pile support would consist of 5 to 10 piles per bent. Piles would require excavation of a small bench to facilitate work.

Falsework would be installed to support the construction of the widened bridge section. It would be approximately 25 feet wide and extend the length of the bridge (i.e., 223 feet). Falsework construction would mirror the construction of the temporary trestle, including bent supports in the canyon wall and one below the OHWM, with approximately 10 bents anticipated for construction. If piles are used, approximately 5 to 6 piles would be needed per bent.

As mentioned above, one temporary trestle and one falsework bent support are anticipated to be below the OHWM of the creek, but outside of the wetted channel. Work would only be allowed below the OHWM between June 15 and October 15, and support structures would be designed to handle high water flows. Timber or precast concrete spread footings would be anchored to bedrock; if the bedrock is not adequate for spread footings, drilled or driven piles would be used.

Any material excavated from excavation in the canyon wall would be hauled out of the canyon.

Bridge Foundations: Piers and Abutments

Widening of the bridge would require extending the two bridge abutments and two piers. The expanded abutment foundations would be spread footings, which would require the use of vertical ground anchors. The expanded foundations for the piers would be cast-in-drilled-hole (CIDH) piles connected by a reinforced pile cap at the piers. The CIDH piles are anticipated to be at least 24 inches in diameter, and installation is conservatively anticipated to take up to 30 days, though active drilling time would be less.

The foundations would be accessed from the temporary trestle, or from cranes located on either of the abutments. Excavation for the foundations would be conducted using hoe rams mounted on excavators. Impact hammer activity, such as hoe ramming, would only occur during the day, and no other impact hammer activity would occur simultaneously. The duration of this activity is expected to be between two to four days, but no more than eight days total. Temporary soil nail walls or other type of retaining walls may be needed to safely excavate the canyon wall to access pier foundations.

The pier and abutment footings would be constructed using typical timber forms and reinforced concrete, and pier and abutment walls would be constructed using timber and/or steel forms guyed off to the existing canyon walls for stability. Concrete for both the footings and walls would likely be poured using truck-mounted concrete pumps stationed on the abutments or the temporary trestle. Full nighttime closures of SR 1 may be required for this work.

Bridge Structure Construction

After the falsework and expanded piers are in place, the bridge superstructure would be constructed, which includes the bridge deck and rails. This work would be conducted from the temporary trestle and the abutments. Full nighttime closures of SR 1 would be required for this work.

Closure Pour

After the new deck is placed and the superstructure stressed, the closure pour would be constructed to connect the newly widened bridge deck to the existing bridge deck. Approach slabs would be placed on each side of the bridge, and MGS installed.

Stage 2

This stage would require replacement of the barrier rail on the west side of the bridge. Work in this stage would be conducted from the existing deck.

Bridge Rail Demolition and Construction – West Side

A debris catchment system would be installed, and the existing eastern bridge rail would be removed. A new pedestrian rail would be constructed along the edge of the deck, and a Type 85 concrete bridge barrier would be constructed six feet in from the pedestrian rail (between the pedestrian walkway and vehicular traffic). MGS would be installed at the western corners of the bridge.

Other Project Activities and Information

Vegetation Removal

Clearing and grubbing of vegetation and trees would be required for access and bridge and roadway widening. Existing vegetation would be preserved as much as possible within the work area. Typical equipment associated with this work includes excavators, cranes, dozers, and mulchers. Construction spoils and debris would be removed and disposed of at a permitted disposal site. All disturbed soil areas would be restored to pre-construction conditions after the completion the work.

Staging

Construction staging would take place on the east side of the widened roadway from approximately 650 feet north of County Road 5000 south to the bridge, and at the northwest corner of the intersection of SR 1 and Lansing Street. In addition, there are two potential staging areas within the unincorporated community of Mendocino, approximately 0.32 mile south of the project, with a three acre parcel off of Lansing Street and a two acre parcel off of Palette Drive (and adjacent to SR 1).

Traffic Control

Construction on the bridge would require reducing the number of lanes open to traffic, and implementation of signalized one-way reversing traffic control. In the first stage, the eastern lane would be closed, and traffic would be directed to the western bridge lane. During the second stage of construction, this would be reversed; the western lane would be closed, and traffic directed to the eastern bridge lane. Pedestrian and bicycle traffic would be accommodated over the bridge during all stages of construction.

Construction activities, such as removing the bridge overhang and rails and placing the precast girder, may require full closures of the bridge.

An informal public access trail that begins at the southwest corner of the bridge and meanders down to the creek would be closed during construction activities and reopened once work is complete.

Overhead Utility Relocation

An overhead powerline would be temporarily raised to a minimum of 100 feet above the bridge deck to provide adequate clearance for the contractor to work and operate equipment. It is anticipated that the existing utility poles (one to the southwest of the bridge, and one to the northeast) would be removed, and temporary poles installed nearby. When construction is complete, the temporary poles would be removed, and the permanent poles installed at their original locations.

Roadway Construction

The roadway leading to the bridge would be widened to the east to meet the new bridge centerline. From approximately 1,000 feet south of the bridge to 200 feet north of the bridge, the road would have 12-foot lanes and 6-foot shoulders. Shoulders would then taper to match the existing shoulder widths. Widening would require vegetation removal, including trees, and the excavation of slopes. Excavation would be to the east, from approximately 1,000 feet south of the bridge to 1,200 feet to the north.

The beginning and end sections of pavement, as well as the entrance onto County Road 5000, would be cold-planed to provide a smooth transition between existing and new pavement. Pavement delineation, such as striping and round, raised pavement markers, would be installed.

Guardrail

The existing MBGR at the corners of the structure would be upgraded to MGS. The guardrail on the southwest corner would be extended to Lansing Street.

Drainage

Drainage patterns in the project area would be perpetuated to the extent feasible. Drainage work would include:

- **Bridge Drains:** Existing scuppers would be removed. Instead, deck drains would be installed to capture runoff, which would be discharged onto the existing side slopes before flowing into Jack Peters Creek.

- **Drainage Inlets**: Existing drainage inlets (DIs) on the east side of SR 1 would be extended and replaced due to the widened shoulders. Replacements would perpetuate existing drainage patterns. A new DI would be installed approximately 200 feet south of the inlet at PM 51.50, and an alternative pipe culvert would convey flow from the new DI to the replaced DI at PM 51.50.

- **Culvert**: A culvert across a private driveway to the north of the bridge would be replaced.

- **Drainage Ditches:** Drainage ditches would be realigned due to widened shoulders. Rock energy dissipators may be installed on drainages leading to Jack Peters Creek, above the top of bank.

- **Wetland Ditches:** Wetland soils would be removed and stockpiled during work on the ditches and replaced when the drainage features are reconstructed

- **Bioswales:** Bioswales may be constructed adjacent to the roadway for stormwater treatment. Bioswales may be placed at the southern corner of Lansing Street near SR 1, and/or near the northern limits of the project area, near PM 51.95, east of the highway.

Right of Way

Most project work would be conducted within Caltrans' right of way. However, temporary construction easements would be required for the construction staging off of Lansing Street and Palette Drive.

Post-construction Activities

A Revegetation Plan would be developed for this project which would include replanting disturbed areas. In addition, it is anticipated that additional areas of revegetation would be needed. Anticipated work may include the removal of invasive plant species, such as Monterey cypress (*Hesperocyparis macrocarpa*), and replanting areas with native species. These activities would be conducted within the right of way within the project vicinity.

Anticipated Schedule

Construction is anticipated to last approximately 305 days over two seasons. The tentative schedule does not account for excessive weather delays, potential mechanical breakdowns, or harder than anticipated soil conditions for pile installation and demolition activities. Due to tight environmental work windows, any such delays could result in a temporary suspension of work, extending the project.

All work below the OHWM would be restricted to the period between June 15 and October 15. Because the work on the bridge would extend over two summer seasons, the trestle and falsework would remain in place over the winter (i.e., wet season).

No-Build Alternative

The No-Build alternative would maintain the facility in its current condition and would not meet the purpose and need of the project. For each potential impact area discussed in Chapter 2, the No-Build alternative has been determined to have no impact. Under the No-Build alternative, there would be no alterations to the existing conditions and the proposed improvements would not be implemented. This alternative is not discussed further in this document.

General Plan Description, Zoning, and Surrounding Land Uses

The project area and surrounding lands are within Mendocino County. The main project area is north of the unincorporated Town of Mendocino, and subject to the County of Mendocino General Plan (County of Mendocino 2009). The land use and zoning of the properties adjacent to the highway are either Open Space or Rural Residential. Potential staging areas are within the Town of Mendocino, and under the Mendocino Town Plan (County of Mendocino 2017). The parcels are undeveloped and designated as either Mendocino Suburban Residential or Mendocino Public Facility. The project would not change land use or zoning designations.

The project area is within the Coastal Zone, under both the local and state jurisdiction; however, the project has been consolidated, and a Coastal Development Permit would only be obtained from the California Coastal Commission.

1.3. Permits and Approvals Needed

Table 1. Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	California Fish and Game Code Section 1602: Lake and Streambed Alteration Agreement	Permit application would be submitted after final environmental document (FED) approval
North Coast Regional Water Quality Control Board	401 Water Quality Certification	Permit application would be submitted after FED approval
U.S. Army Corps of Engineers	Section 404 Nationwide Permit and Letter of Agreement for Section 10 of the Rivers and Harbors Act	Permit and Letter of Agreement application would be submitted after FED approval
National Marine Fisheries Service	Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act (MSA) Essential Fish Habitat (EFH) Consultation	In progress
California Coastal Commission	Coastal Development Permit	Permit application would be submitted after FED approval

1.4. Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, "mitigation" is defined as avoiding, minimizing, rectifying, reducing/ eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. They are measures that typically result from laws, permits, agreements, guidelines, and resource management plans. For this reason, the measures and practices are not considered "mitigation" under CEQA; rather, they are included as part of the project description in environmental documents.

Aesthetics

AR-1: Aesthetic treatment to the bridges/guardrails/retaining walls would be included, such as tribal patterns, to address context sensitivity.

AR-2: Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.

AR-3: Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.

AR-4: Where feasible, construction lighting would be limited to within the area of work.

AR-5: Where feasible, the removal of established trees and vegetation would be minimized. Environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) installed before start of construction to demarcate areas where vegetation would be preserved and root systems of trees protected.

Biological Resources

BR-1: General

Before start of work, as required by permit or consultation conditions, a Caltrans biologist or ECL would meet with the contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report regulated species within the project areas.

BR-2: Animal Species

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

B. Pre-construction surveys for active raptor nests within one-quarter mile of the construction area would be conducted by a qualified biologist within one week prior to initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance because of construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring

of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

C. Preconstruction surveys for bats would be conducted by a qualified biologist. If day roosting bats are observed, bat exclusion measures would be installed. Installation would occur between March 1 and April 15 or between September 15 and November 15 as long as night temperatures remain above 50 degrees Fahrenheit. Exclusion devices would be designed so they would not trap or entangle bats or birds. Installation of exclusion would be monitored by a qualified biologist.

D. To prevent attracting corvids (birds of the Corvidae family which include jays, crows, and ravens), no trash or foodstuffs would be left or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife.

E. Hydroacoustic monitoring would occur during activities such as impact pile driving, hoe ramming or jackhammering, which could potentially produce impulsive sound waves that may affect listed fish species. Hydroacoustic monitoring would comply with the terms and conditions of federal and state Endangered Species Act consultations.

   The Hydroacoustic Monitoring Plan would describe the monitoring methodology, frequency of monitoring, positions that hydrophones would be deployed, techniques for gathering and analyzing data, quality control measures, and reporting protocols.

F. An Aquatic Species Relocation Plan, or equivalent, would be prepared by a qualified biologist and include provisions for pre-construction surveys and the appropriate methods or protocols to relocate any species found. If previously unidentified threatened or endangered species are encountered or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects.

G. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary, and directed specifically on

the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.

H. Surveys would be conducted for Sonoma tree vole no more than 14 days prior to tree removal. If species are discovered during construction, work would stop in the area of discovery and coordination with the appropriate resource agencies would occur.

I. A Limited Operating Period would be observed, whereby all in-stream work below ordinary high water would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species.

J. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors. The biological monitor would be present during activities such as bridge demolition, pile-driving and hoe-ramming, and drilling for bridge foundations to ensure adherence to permit conditions. In-water work restrictions would be implemented.

BR-3: Invasive Species

Invasive non-native species control would be implemented. Measures would include:

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping which would be free of noxious weed seed and propagules.

- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water.

BR-4: Plant Species, Sensitive Natural Communities, and ESHA

A. A Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan would also address measures for wetland and riparian areas temporarily impacted by the project.

B. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams, and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.

C. After completion, all superfluous construction materials would be completely removed from the site. The site would then be restored by regrading and stabilizing with a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan.

BR-5: Wetlands and Other Waters

A. In-stream work would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species (see also **BR-2l**). Construction activities restricted to this period include any work below the ordinary high water. Construction activities performed above the ordinary high water mark of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared Storm Water Pollution Prevention Plan (SWPPP), Water Pollution Control Program (WPCP),) and/or project permit requirements.

B. See **BR-4** for Temporary High Visibility Fencing (THVF) information.

Cultural Resources

CR-1: Caltrans would coordinate with the Sherwood Valley Band of Pomo and incorporate measures to protect tribal resources, including potential work windows associated with tribal ceremonies.

CR-2: An archeological monitor and Sherwood Valley Band of Pomo tribal monitor would be used during ground-disturbing activities.

CR-3: If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

CR-4: If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

Geology, Seismic/Topography, and Paleontology

GS-1: The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and Best Management Practices (BMPs). New earthen slopes would be vegetated to reduce erosion potential.

GS-2: In the unlikely event that paleontological resources (fossils) are encountered, all work within a 60-foot radius of the discovery would stop, the area would be secured, and the work would not resume until appropriate measures are taken.

Greenhouse Gas Emissions

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.

GHG-2: Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.

GHG-3: Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).

GHG-4: Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

GHG-5: All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.

GHG-6: Pedestrian and bicycle access would be maintained on State Route 1 during project activities.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (CCR Title 8, § 1532.1, the "Lead in Construction" standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

HW-2: When identified as containing hazardous levels of lead, traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision "Residue Containing Lead from Paint and Thermoplastic."

HW-3: If treated wood waste (such as removal of sign posts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification "Treated Wood Waste."

Hydrology and Floodplain

HF-1: The proposed bridge would maintain the same elevation above the ordinary high water mark (OHWM) as the existing bridge, and no new structures would be placed which would result in a substantial backflow during a flood event.

Traffic and Transportation

TT-1: Pedestrian and bicycle access would be maintained during construction.

TT-2: The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones.

TT-3: A Transportation Management Plan (TMP) would be applied to the project.

Utilities and Emergency Services

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to State Route 1 throughout the construction period.

UE-2: Caltrans would coordinate with utility providers to plan for relocation of any utilities to ensure utility customers would be notified of potential service disruptions before relocation.

Water Quality and Stormwater Runoff

WQ-1: The project would comply with the Provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ) as amended by subsequent orders, which became effective July 1, 2013, for projects that result in a land disturbance of one acre or more, and the Construction General Permit (Order 2009-0009-DWQ).

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre), that includes erosion control measures and construction waste containment measures to protect waters of the State during project construction.

The SWPPP or WPCP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include

routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Caltrans Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

The project SWPPP or WPCP would be continuously updated to adapt to changing site conditions during the construction phase.

Construction may require one or more of the following temporary construction site BMPs: (only include those relevant to the project)

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities would be removed by dewatering.
- Water generated from the dewatering operations would be discharged on-site for dust control and/or to an infiltration basin or disposed of offsite.
- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- Soil disturbing work would be limited during the rainy season.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water Management Plan*. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ) as amended by subsequent orders.

The project design may include one or more of the following:

- Vegetated surfaces would feature native plants, and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.

- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

1.5. Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the United States National Marine Fisheries Service and the United States Fish and Wildlife Service—in other words, species protected by the Federal Endangered Species Act).

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

The environmental factors noted below would be potentially affected by this project. Please see the CEQA checklist on the following pages for additional information.

Potential Impact Area	Impacted: Yes / No
Aesthetics	**Yes**
Agriculture and Forestry	No
Air Quality	No
Biological Resources	**Yes**
Cultural Resources	No
Energy	No
Geology/Soils	No
Greenhouse Gas Emissions	**Yes**
Hazards and Hazardous Materials	No
Hydrology/Water Quality	No
Land Use/Planning	No
Mineral Resources	No
Noise	No
Population/Housing	No
Public Services	No
Recreation	No
Transportation/Traffic	No
Tribal Cultural Resources	No
Utilities/Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A NO IMPACT answer in the last column of the checklist reflects this determination. The words “significant” and “significance” used throughout the checklist and

this document are only related to potential impacts pursuant to CEQA. The questions in the CEQA Checklist 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 as well as standard measures that are applied to all or most Caltrans projects (such as Best Management Practices (BMPs)) and measures included in the Standard Plans and Specifications or as Standard Special Provisions) are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA for Initial Study

CEQA broadly defines "project" to include "*the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment"* (14 CCR § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project's possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a "statement of objectives sought by the proposed project" (14 CCR § 15124(b)).

CEQA requires the identification of each potentially "significant effect on the environment" resulting from the action, and ways to mitigate each significant effect. Significance is defined as *"Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project"* (14 CCR § 15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

The legal standard for determining the significance of impacts is whether a "fair argument" can be made that a "substantial adverse change in physical conditions" would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental

professional with specific training in a particular area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt ***thresholds of significance,*** which define the level of effect above which the Lead Agency will consider impacts to be significant, and below which it will consider impacts to be less than significant. Given the size of California and it's varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing ***thresholds of significance*** on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts based on their location and the effect of the potential impact on the resource as a whole in the project area. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a "less than significant" determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered "significant."

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study. CEQA allows for a "mitigated negative declaration" in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)). Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR §

15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370).

Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation", Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. CODE § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

2.1. Aesthetics

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect on a scenic vista?	No	No	No	**Yes**
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No	No	No	**Yes**
Would the project: 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?	No	No	**Yes**	No
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No	No	No	**Yes**

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities" (CA Public Resources Code [PRC] Section 21001[b]).

Environmental Setting

State Route (SR) 1 follows the full length of the Mendocino County coastline and is eligible for designation as a State Scenic Highway. The entire corridor is considered sensitive in regard to visual and scenic resources; it is known for its views of coastal bluffs and the Pacific Ocean. The county recommends that sections of SR 1 within Mendocino County be designated as a Scenic Highway, and considers many visual elements within view of the project site to be scenic resources (such as river views, seascapes, small rural communities, urban fringe, and natural wildlife and wildlife habitats).

SR 1 is an essential lifeline for residents of the Mendocino coast, is a main street for many communities, and is a popular choice for tourists using both motorized and non-motorized travel methods. It is also part of the Pacific Coast Bike Route (PCBR), which is internationally known and travelled. In addition, the California Coastal Trail follows sections of SR 1, including along Jack Peters Creek Bridge.

Jack Peters Creek Bridge is north of the Town of Mendocino, which is a popular visitor destination and is designated as a Special Coastal Community by the county. In the project area, SR 1 is a rural two-lane conventional highway, bordered by stands of coniferous forest. The highway is within a cut, with upslope embankments from Larkin Road to the bridge. Several residences are close to the project, but vegetation and topography limit the views of buildings from the highway. The residence with the highest visibility to and from the project area is located between the bridge and County Road 5000; dying trees and invasive species somewhat buffer views. A gravel turnout south of the bridge at the Lansing Street/SR 1 intersection is commonly used as a scenic overlook. An informal trail is present as well, starting at the southwestern abutment and ending at the creek outlet. There are enduring views of the ocean, coastal bluffs, and rocky outcrop west of the bridge, and a forested gulch to the east. Power lines are within the viewshed of the bridge.

Discussion of Environmental Evaluation Question 2.4a), b), and d)—Aesthetics

"*No Impact*" determinations were made for CEQA environmental questions a), b), and d) based on the scope, description, and location of the proposed project, as well as the Visual Impact Assessment (VIA) prepared in 2021 (Caltrans 2021e). The project would not have a substantial effect on a scenic vista, damage scenic resources, or create new sources of substantial light or glare.

Discussion of Environmental Evaluation Question 2.3c)—Aesthetics

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).***

The project is within a rural area, with views from neighbors (such as residences and recreationists) and travelers (such as local traffic and tourists). A VIA was prepared to assess changes to visual resources and predict viewer response to the changes (Caltrans 2021e). Visual resources in the project area include Jack Peters Creek Bridge, the ocean, coastal bluffs, riparian forest, coniferous forest, and rural landscapes.

Short-term impacts from construction could include glare from new guardrail, contrast of new concrete bridge elements with the existing roadway, views of temporarily disturbed soil and vegetation, higher visibility of widened abutments, night lighting, and visuals of construction equipment, traffic control devices, and related materials. These impacts are anticipated to be temporary. Natural weathering would reduce glare from new guardrails and reduce the contrast of new concrete; disturbed areas would be re-vegetated, and newer features would have less visibility as vegetation matures. In addition, night lighting and visuals of construction work would end once construction is complete.

In addition to short-term impacts, long-term changes are anticipated to include the following:

- **Bridge widening:** The increased bridge width could lead to changes in visual character and quality. However, the bridge would be compatible overall with the visual character of the corridor. Any restrictions of views from the increased distance between the traveled way and the edge of the bridge would be minimal and, coupled with the proposed "see-through" railing, would lead to very low visual impacts.

- **Barrier rail upgrades:** The new "see-through" concrete railing and galvanized pedestrian rail on the west side of the bridge would be visually different from existing conditions; however, the aesthetic of the rails would be compatible with the visual character of the corridor, and enhance its visual quality. These changes are anticipated to result in low to moderate visual impacts.

- **Tree removal:** Tree removal to the east of the highway from excavation work and removal of invasive species, such as Monterey cypress trees, would lead to visual changes. The character of the corridor would change as trees would no longer be

framing the eastern side of the highway, canopy cover would decrease, and dominance of the landscape to the highway would lessen. Vividness, intactness, and unity would also decrease as a result, and therefore visual quality at the project site would decrease, with moderate to high impacts. These impacts would lessen once the replanted vegetation matures.

- **Utility lines:** Due to removal of the trees, the utility lines and poles would be more dominant in the landscape, leading to visual changes before replanted vegetation matures. Utility lines would be returned to their original location after the project is complete, and views of the ocean from the bridge would not change.

In summary, the project would lead to visual changes of the highway. The primary changes to visual resources would be from bridge widening and rail upgrades, alignment shift, and vegetation and tree removal. The amount of resource change is anticipated to be low, though viewers (both neighbors and travelers) are anticipated to be sensitive to changes in the visual environment. Overall, the project is anticipated to have moderate visual impacts. However, these changes aren't anticipated to substantially degrade the existing visual character or quality of public views of the site and its surroundings. Best Management Practices (BMPs) and standard measures incorporated into the project would minimize impacts of the visual changes. These measures are listed in Section 1.4, and include minimizing removal of trees and vegetation, restoring disturbed areas to natural contours, and revegetating with regionally appropriate native vegetation, limiting construction lighting, and including context-sensitive bridge barrier rail and pedestrian rail. It was determined that this project would have a "*Less than Significant Impact*" on the visual character and quality of the area.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.2. 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.

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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	No	No	**Yes**
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No	No	No	**Yes**
Would the project: c) Conflict with existing zoning, 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	No	No	**Yes**
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?	No	No	No	**Yes**

Would the project: 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	No	No	**Yes**

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project; the project is not located on or adjacent to agricultural land or forest resources.

2.3. Air Quality

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

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?	No	No	No	**Yes**
Would the project: 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?	No	No	No	**Yes**
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?	No	No	No	**Yes**
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Traffic Noise, Air Quality, Energy and Greenhouse Gas memo dated November 7, 2019 (Caltrans 2019a). Potential impacts to air quality are not anticipated because the proposed project would not result in changes to the traffic volume, fleet mix, speed, location of existing facility or any other factor that would cause an increase in emissions. Mendocino County is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards. Therefore, transportation conformity requirements do not apply.

2.4. Biological Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	No	No	**Yes**	No
Would the project: 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?	No	**Yes**	No	No
Would the project: 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?	No	No	**Yes**	No
Would the project: 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	No	No	**Yes**

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	No	**Yes**
Would the project: 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	No	No	**Yes**

Regulatory Setting

Natural Communities

CDFW maintains a list of sensitive natural communities (SNC). SNC are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status taxa or their habitat.

Wetlands and Other Waters

Federal

Waters of the United States (including wetlands) are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. Include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that

includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

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

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

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

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

State

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs), and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved.

Sections 1600–1607 of the California Fish and Game Code (CFGC) require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

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

Plant Species

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

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

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

Animal Species

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

Federal laws and regulations pertaining to wildlife include the following:

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

State laws and regulations pertaining to wildlife include the following:

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

Threatened and Endangered Species

The primary federal law protecting threatened and endangered species is FESA: 16 United States Code (USC) Section 1531, et seq. See also 50 CFR Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as Federal Highway Administration (FHWA) (and Caltrans, as assigned), are required to consult with the USFWS and NMFS to ensure they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence, and/or documentation of a no effect finding. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

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

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

beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Invasive Species

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

Environmental Setting

To comply with the provisions of various state and federal environmental statutes and executive orders, potential impacts to natural resources in the project area were investigated and documented. Field reviews were conducted to identify existing habitat types and natural communities, wetlands and other waters, rare species and/or factors indicating the potential for rare species (i.e., presence of suitable habitat), and sensitive water quality receptors. Information on survey dates and personnel are listed in Appendix D.

A Natural Environment Study (NES) was prepared to summarize the studies conducted for the project (Caltrans 2021d). Caltrans coordinated with fisheries biologists, hydroacoustic specialists, water quality specialists, as well as personnel from various agencies. See Section 3.1 for a summary of coordination efforts and professional contacts.

Environmental Study Limits (ESL) and a Biological Study Area (BSA) (Figure 4 and Figure 5) were established to evaluate the potential presence of SNCs, aquatic resources, and special status plants and animals. The ESL includes all areas where work is anticipated to occur, with ground disturbance from construction, equipment staging, and access. The BSA is the ESL plus a 100-foot buffer to satisfy the California Coastal Zone Conservation Act and Mendocino County local coast permit requirements to evaluate the presence of Environmentally Sensitive Habitat Areas (ESHAs). Additionally, the BSA includes the furthest points that hydroacoustic noise could affect protected fish and marine mammal species.

The project area is on a narrow coastal plateau between the Pacific Ocean and the east side of the Coastal Ranges, approximately 80-100 feet above mean sea level. The region is influenced by a mild Mediterranean climate, cold ocean currents, and a cool marine air layer that yields rainy winters and temperate summers. Annual temperatures average 50°F to 55°F, with a heavy fog layer common in the summer and winter precipitation in the form of rainfall ranging from 40 to 100 inches (Western Region Climate Center [WRCC] 2020).

Jack Peters Creek Bridge is within the Pudding Creek-Frontal Pacific Watershed. The creek itself is a 2.1-mile-long, second order perennial stream originating at 480 feet above mean sea level along the western edge of the Jackson State Demonstration Forest and terminating in the Pacific Ocean less than 200 feet west of the bridge. The rocky intertidal estuary is subject to tidal influence 200 feet upstream of the ocean shoreline. Therefore, most of the creek within the ESL is tidally influenced. During the dry season, the discharge from the creek decreases and salinity levels in the estuary increase.

Lands to the north, east, and south of the project are partially developed with semi-rural residences. The Pacific Ocean is just to the west of the study area, while the unincorporated community of Mendocino is approximately one mile south of the bridge.

Historically, the area surrounding Jack Peters Creek was used for timber harvest (County of Mendocino 2009). These practices generally led to increased surface erosion from the loss of trees, increased water temperatures from the loss of canopy cover, and scouring of the river channel from floating logs. Timber harvest has decreased significantly in the immediate area, but still occurs inland, within seven miles of the study area.

The BSA includes developed and undeveloped areas near the Jack Peters Creek Bridge. Developed areas include the highway and the bridge, highly disturbed and compacted road shoulders, residential areas, and graveled/paved staging areas, while undeveloped areas include hillslopes and rocky intertidal estuary.

Figure 4. ESL and BSA—Jack Peters Creek Bridge

Figure 5. ESL and BSA—Staging Areas

Natural Communities

Vegetation mapping was conducted according to the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018), and vegetation types identified based on the vegetation classification of *A Manual of California Vegetation, 2nd edition* (Sawyer et al., 2009). Survey dates and personnel are listed in Appendix D.

Various habitat types were present within the project area, including natural and semi-natural vegetation communities. The most common types include Monterey Cypress (*Hesperocyparis macrocarpa*) Forest, Bishop Pine (*Pinus muricata*) Forest, and ruderal vegetation. Other habitat types include Grand Fir (*Abies grandis*) Forest, Red Alder (*Alnus rubra*) Forest, Coast Range Stonecrop (*Sedum spathulifolium*) Draperies, and Coyote Brush (*Baccharis pilularis*) Shrubland (see Figure 6, Figure 7, Figure 8, and Figure 9). Much of the habitat within the project area is highly disturbed and contains non-native and invasive plant species, which are discussed in the Invasive Species section of this document.

Two sensitive natural communities (SNCs) were documented within the project area. SNCs are those natural communities that are of limited distribution, and are often vulnerable to environmental impacts of projects; natural communities are considered sensitive if they are globally (G) and/or state (S) ranked 1-3, where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. These communities may or may not contain special status taxa or their habitat. Ranks of 4 and 5 are considered apparently secure and demonstrably secure, respectively. A "?" is used where there are insufficient samples of communities, and the rank is estimated based on the best estimate from existing information.

The two documented SNCs are Grand Fir Forest (G4/S2) and Bishop Pine Forest (G3?/S3?). These communities are discussed further below. A third community, Monterey Cypress Forest, is considered rare in its natural range, the Monterey peninsula, but is an introduced, moderately invasive tree in Mendocino County. Because it is invasive, it is not considered further in this document.

In addition to SNCs, riparian habitat was present within the project area, composed of either red alder forest or arroyo willow shrubland. This habitat is discussed further below.

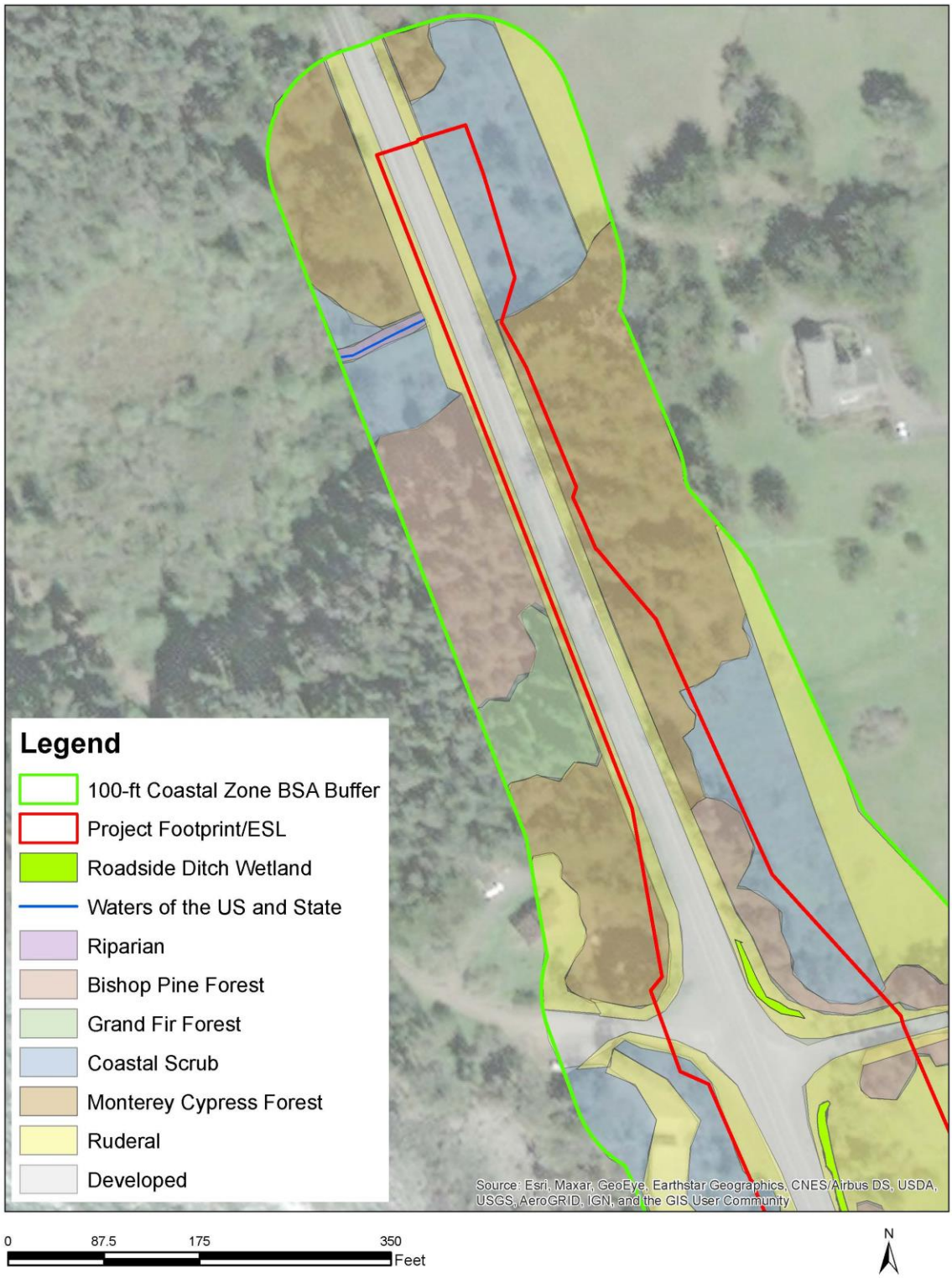

Figure 6. Habitat Types—North of County Road 5000

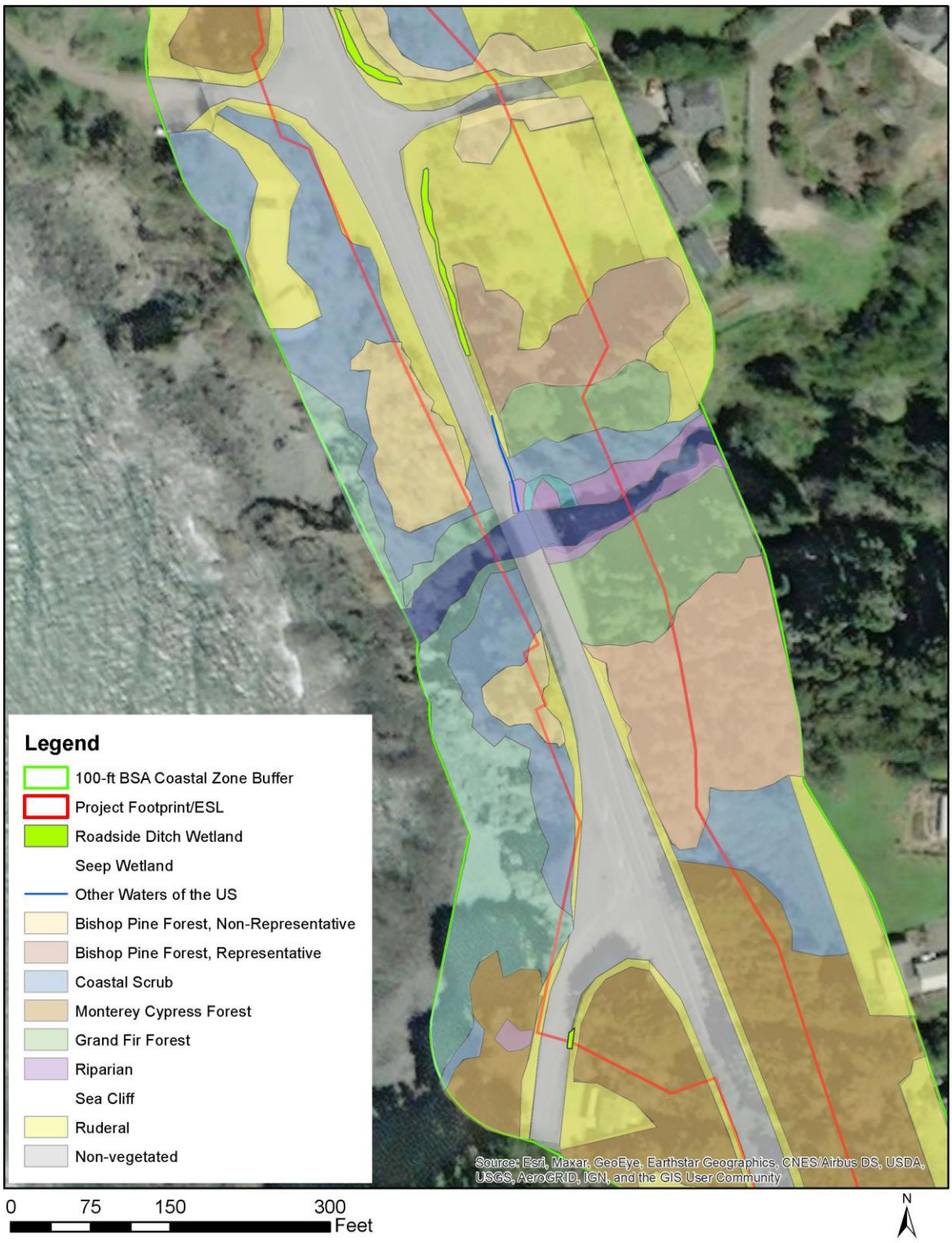

Figure 7. Habitat Types—County Road 5000 to Lansing Street

Figure 8. Habitat Types—South of Lansing Street

Figure 9. Habitat Types—Staging Area

Grand Fir Forest

Grand Fir Forest Alliance is a SNC with a global rank of G4 (apparently secure) and a state rank of S2 (imperiled). Grand fir is a highly shade-tolerant species of conifer that occurs in California from Del Norte County south to Sonoma County in maritime terraces, coastline slopes, and coastal bluffs (CNPS 2019), typically on mesic slopes above creeks and river mouths. To qualify as Grand Fir Forest, grand firs must make up at least 60% of the tree canopy; they are generally dominant or co-dominant with red alder (*Alnus rubra*), Sitka spruce (*Picea sitchensis*), bishop pine, and coast redwood (*Sequoia sempervirens*) (Sawyer et al. 2009). Grand fir forests face threats from insect infestations, thinning within timber lands, and fire before sapling maturity (Howard and Aleksoff 2000).

Several stands of grand fir forest were identified within the project BSA (Figure 6 and Figure 7) for a total of approximately 0.831 acre. Based on aerial imagery, the grand fir forest alongside Jack Peters Creek continues outside of the project area, for a fairly contiguous stand that is approximately 1.66 acres. In general, grand firs make up the majority of the tree canopy, with the red alder and bishop pine in lesser abundance. Grand fir saplings and evergreen huckleberry (*Vaccinium ovatum*) are present within the midstory, with a well-developed, dense layer of sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*) and redwood sorrel (*Oxalis oregana*) in the understory.

However, the individual stands of grand fir within the project area differed in terms of disturbance. While the stand of grand fir on the south bank of Jack Peters Creek is relatively pristine, with low non-native cover and a higher amount of larger-diameter trees, the stand on the north bank is highly disturbed by landslides and from a utility line corridor; it has lower tree cover and higher shrub cover than the other areas, and includes more red elderberry (*Sambucus racemosa*), bracken fern (*Pteridium aquilinum* var. *pubescens*), lady fern (*Athyrium filix-femina*), and wild cucumber (*Marah oregana*). In addition, the utility line corridor has smaller-diameter trees (less than 12 inches) that are recolonizing; trees are topped when they grow too tall, creating a break in the canopy, though the understory is contiguous. There is also more non-native cover present, with about 5-10% of the understory cover composed of French broom (*Genista monspessulana)*, Himalayan blackberry (*Rubus armeniacus*), and acacia (*Acacia* sp.) saplings.

All stands within the project area show signs of more recent disturbance; trees near the highway are smaller, with larger and more mature trees found further away. Areas near the highway are subject to periodic disturbance from maintenance activities, such as trimming and clearing for access within the clear recovery zone and maintenance of the utility line.

Though most natural communities within Mendocino County have not been mapped, and only legacy communities are documented in the CNDDB (CDFW 2021), the CNDDB shows a legacy 38-acre stand grand fir forest approximately 1.3 miles southeast of the project area.

Bishop Pine Forest

Bishop Pine Forest is an association within the Bishop Pine – Monterey Pine (*Pinus muricata – Pinus radiata*) Forest Alliance, and has a global rank of G3? (vulnerable) and a state rank of S3? (vulnerable). Bishop pine is a species of conifer that occurs in coastal conifer and hardwood forests, chaparral, and annual grasslands in distinct populations from southwest Oregon to Santa Barbara County; Santa Cruz and Santa Rosa islands; and in Baja California, Mexico (Cope 1993). In northwest coastal California, bishop pine is more restricted in its occurrence compared to its overall range. It occurs from Humboldt County south to Sonoma County in maritime terraces, coastal slopes, and coastal bluffs; the climate in this coastal band is characterized by summer fog, which is likely an important moisture source for the tree during the dry summer months or drought (Holland 1986). To qualify as Bishop Pine Forest, bishop pines must make up at least 15% of the tree canopy; this conifer is generally dominant or co-dominant in the tree canopy with Monterey cypress, Bolander pine (*P. contorta* var. *bolanderi*), grand fir, coast redwood, Mendocino pygmy cypress (*Hesperocyparis pigmaea*), Monterey pine, Pacific madrone (*Arbutus menziesii*), and Gowen cypress (*H. goveniana*) (Sawyer et al., 2009). Threats to this community include housing development, diseases (such as pitch pine canker and needle blight), and competition from introduced species (such as Monterey pine and Monterey cypress, which facilitate establishment of pathogens), and fire suppression (Giusti 2014).

Approximately 2.258 acres of bishop pine forest are within the BSA, located in several stands throughout the area (Figure 6 and Figure 7). However, the stands vary in size, health, species composition, and disturbance. Because of these differences, they do not equally contribute to the ecological functions of the SNC. Therefore, stands designated as bishop pine forest were broken into two categories: representative stands and non-representative stands.

Stands that are considered representative of the SNC are generally more contiguous, species composition closely aligned with the association, and trees were generally in better health. Within the BSA, approximately 1.591 acres were documented as representative. In general, the canopy cover of these stands has several openings, and the midstory is sparse, with a few grand fir and bishop pine saplings. Other conifers present within the community include Douglas-fir (*Pseudotsuga menziesii*), grand fir, Monterey pine, and Monterey cypress. The understory is well-developed and includes a dense layer of sword fern, poison oak

(*Toxicodendron diversilobum*), and pink honeysuckle (*Lonicera hispidula*). Non-native cover is generally low, though one stand is interrupted by a utility line corridor, which is approximately 30 feet wide; the area has smaller diameter trees (less than 12 inches), which are topped when they grow too tall, creating a break in the canopy, though the understory is contiguous.

Stands that are considered non-representative of the SNC are often vestigial, with relatively high invasive species cover, and/or many of the bishop pines are dead or dying. Though the composition most closely aligns with bishop pine forest, healthy mature bishop pine cover is minimal and patchy in these areas and stands do not always meet minimum mapping unit requirements. In addition, these stands also tend to have a higher level of existing habitat disturbance from adjacent private landowners and from utility corridor maintenance. Because of these factors, these stands are not effectively functioning as bishop pine forest, and therefore contributing minimally the continuation and health of the SNC. Within the BSA, approximately 0.667 acre of bishop pine forest was considered non-representative. An example of these stands includes an area southwest of the bridge, which is only 0.089 acre, and consists of a few bishop pines clustered near utility lines, making up only one third of the area and, not including deceased trees, bishop pine only makes up approximately 5% of the canopy cover. Most of the bishop pines are dead or dying with little to no recruitment, and those near utility lines are topped. The remaining area is composed of shrubs such as coyote brush and cotoneaster, with a few grand fir and Monterey cypress trees. As another example, the stands on either side of the driveway to the north of the bridge (across from County Road 5000) are predominantly composed of dead bishop pine trees. There is little to no recruitment, and the understory is composed of species such as Scotch broom, French broom, and cotoneaster.

All stands of bishop pine forest within the BSA show signs of more recent disturbance; trees near the highway are smaller, with larger and more mature trees found further away. Areas near the highway and utility line are subject to periodic disturbance from maintenance activities, such as trimming and clearing for access within the clear recovery zone and maintenance of the utility line.

Most natural communities in Mendocino County have not been mapped; only bishop pine forests occurring on low-nutrient (i.e., oligotrophic) soils have been documented (i.e., those associated with Mendocino Pygmy Forest) (CDFW 2019). However, this SNC is likely to be present where conditions are favorable along the coast and have been observed at other locations along SR 1. Based on aerial imagery, there are approximately 15.62 contiguous acres of bishop pine forest adjacent to the project area.

Riparian Habitat

Riparian areas can be defined as "*transitional between terrestrial and aquatic ecosystems, providing linkages between water bodies and adjacent uplands and include portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems*" (National Research Council 2002). Within the jurisdiction of CDFW, "riparian" refers to "*land area that encompasses the river channel and its current or potential floodplain, i.e., bed, bank, and channel up to the OHWM, or land area with the potential to influence the floodplain and river channel, i.e., habitat extending to top of bank*."

Several patches of riparian vegetation were found adjacent to drainages within the BSA (Figure 6, Figure 7, and Figure 8) for a total of approximately 0.257 acre. Based on aerial imagery, the riparian vegetation that is on the banks of Jack Peters Creek extends beyond the BSA and up the creek. The riparian vegetation is made up of different types of communities—Red Alder Forest Alliance near Jack Peters Creek and a drainage in the northern part of the project area, and Arroyo Willow (*Salix lasiolepis*) Shrubland Alliance adjacent to the other drainages within the project area.

The patches of red alder forest adjacent to the creek were dominated by red alder with an understory of thimbleberry (*Rubus parviflorus*), salmonberry (*Rubus spectabilis*), red elderberry, and California blackberry (*Rubus ursinus)*. The vegetation on the south bank is relatively pristine, with several mature red alders that are 10 to 100 feet upstream of the bridge, primarily located at the base of the steep bank. An informal public access path passes through this community on its way to the creek. The north bank of the creek is more disturbed due to landslides and wind, which has stunted tree growth. There is little forest vegetation up to 60 feet upstream of the bridge, with stunted growth seen to approximately 100 feet upstream, where the creek makes a sharp turn south. A drainage at the northern end of the project area, to the west of SR 1, is also composed of red alder forest, with an understory dominated by bracken fern and sword fern.

The other two patches of riparian vegetation within the project area were dominated by arroyo willow. These patches were adjacent to intermittent drainages, one near Lansing Street and one near Larkin Road.

Wetlands and Other Waters

Wetland delineations were conducted for potentially jurisdictional features within the BSA. Surveys followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (USACE 2010). Wetlands were then classified according to the *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee 2013). For non-wetland waters, boundaries were delineated at the Ordinary High Water Mark (OHWM) in accordance with 33 Code of Federal Regulations 328.3 and USACE Regulatory Guidance Letter 05-05 (USACE 2005). Survey dates and personnel are listed in Appendix D.

Several potentially jurisdictional features regulated by the USACE, RWQCB, CDFW, and/or CCC were found within the BSA (Figure 10, Figure 11, and Figure 12), and are summarized in Table 2 below.

Table 2. Wetlands and Other Waters within the BSA

Protected Habitat	Feature Type	Feature Name	Acreage	Cowardin Type[1]
Wetland	Wetland Ditch	JP-PW1	0.015	PEM1C
Wetland	Wetland Ditch	JP-PW2	0.029	PEM1C
Wetland	Wetland Ditch	JP-PW3	0.001	PEM1C
Wetland	Seep Wetland	N/A	0.018	PSS1
Other Waters	Perennial Stream (Jack Peters Creek)	N/A	0.261	E1UB1
Other Waters	Intermittent Drainage	JP-OW1	0.011	R4UB4
Other Waters	Intermittent Drainage	JP-OW2	0.005	R4UB4
Other Waters	Intermittent Drainage	JP-OW3	0.006	R4UB4
Other Waters	Intermittent Drainage	JP-OW4	0.004	R4SB1
Other Waters	Intermittent Drainage	JP-OW-5	0.004	R4UB4

[1] Cowardin Types:

E1UB1: Estuarine, Subtidal, Unconsolidated Bottom, Cobble-Gravel
PEM1C: Palustrine, Emergent, Persistent Seasonally Flooded
PSS1: Palustrine, Scrub-shrub, Broad-leaved Deciduous
R4SB1: Riverine, Intermittent, Streambed, Bedrock
R4UB4: Riverine, Intermittent, Unconsolidated Bottom, Organic

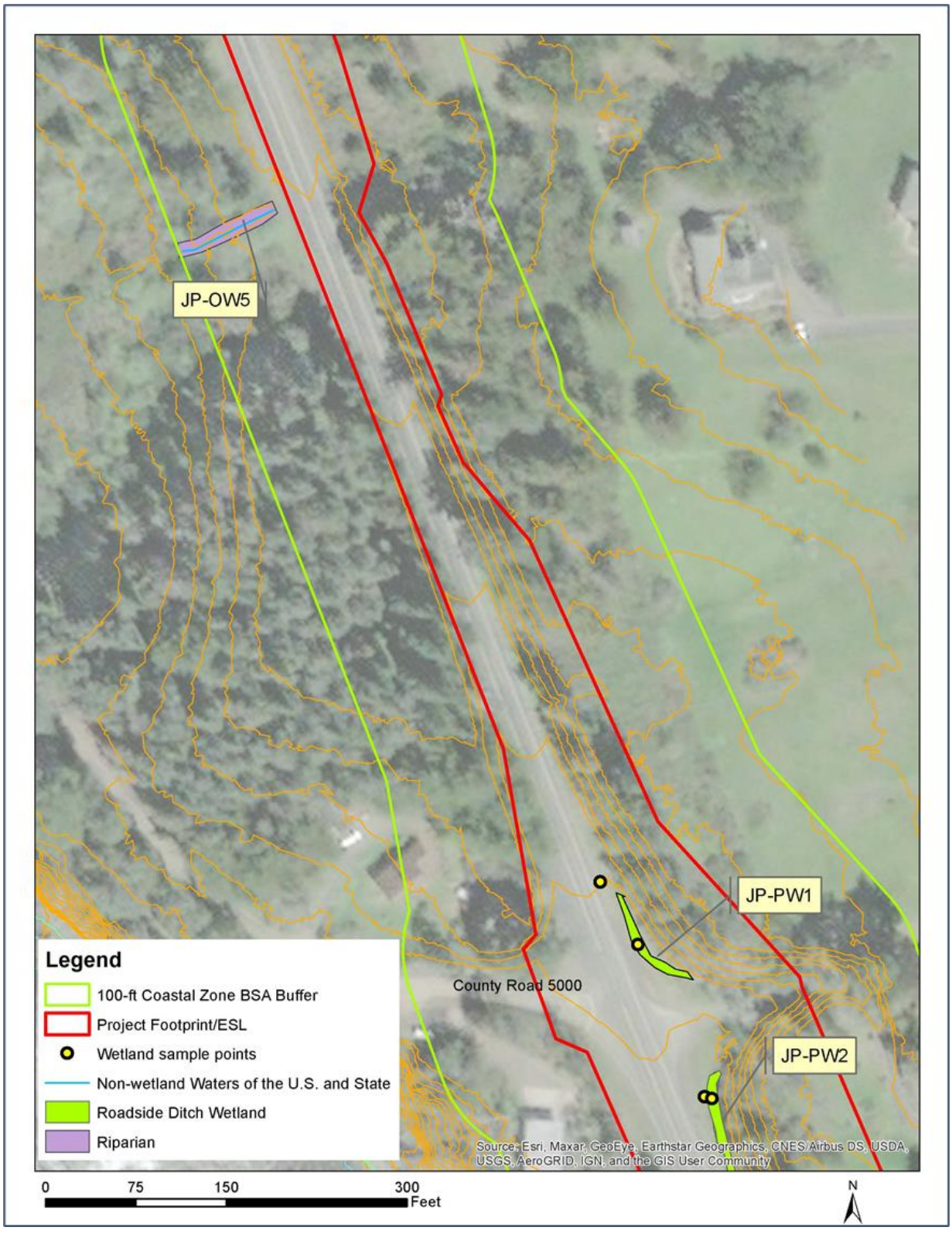

Figure 10. Potentially Jurisdictional Wetlands and Other Waters, North of County Road 5000

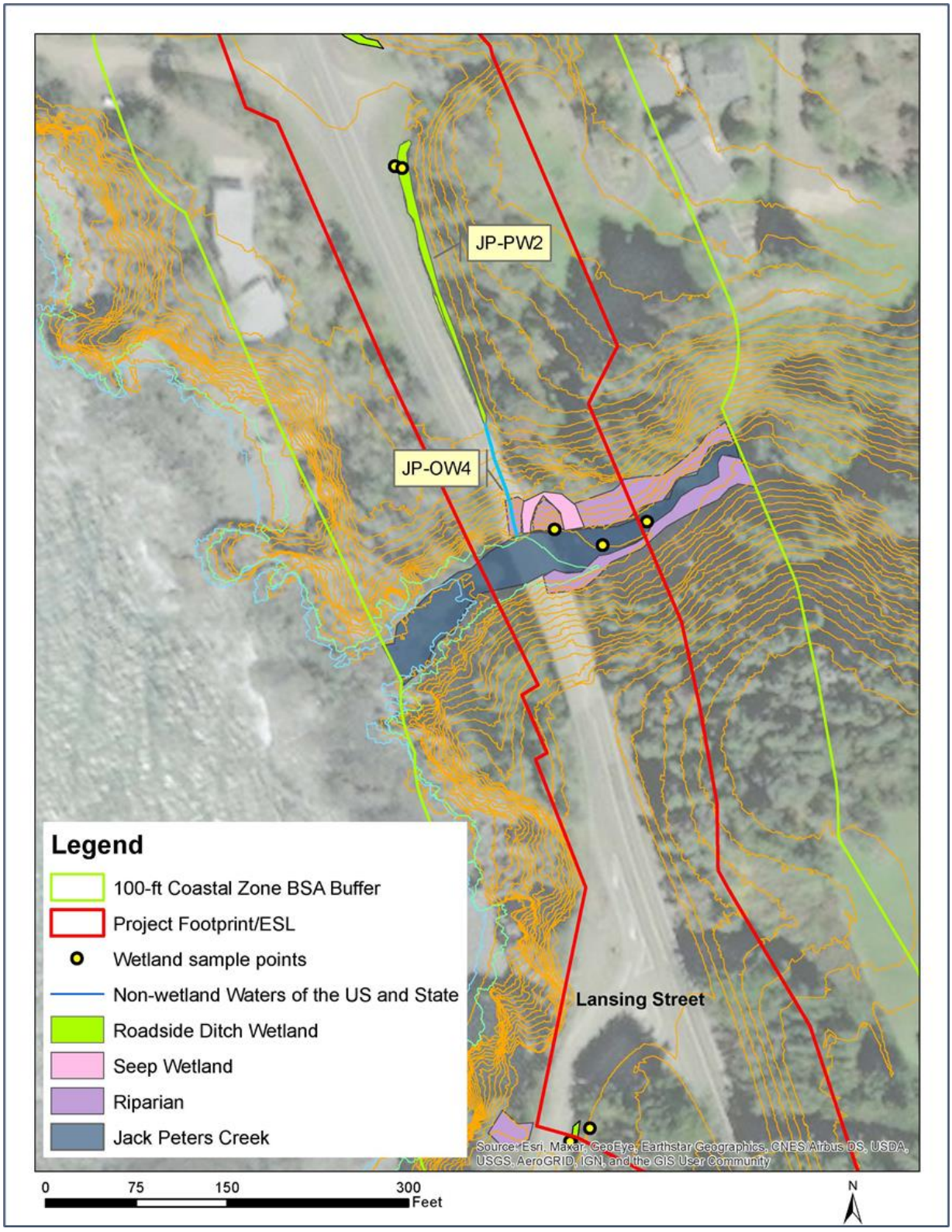

Figure 11. Potentially Jurisdictional Wetlands and Other Waters, North of Lansing Street

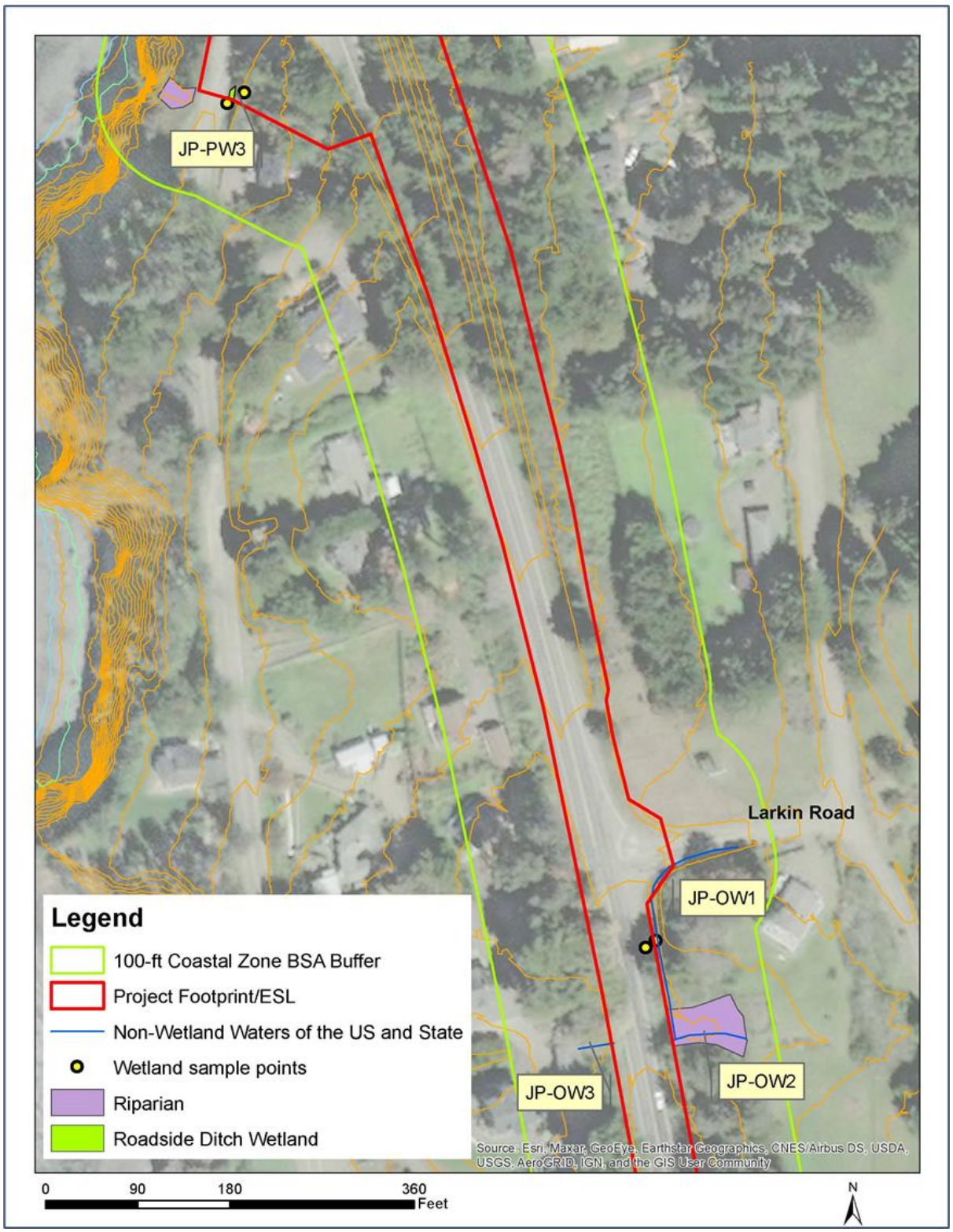

Figure 12. Potentially Jurisdictional Wetlands and Other Waters, South of Lansing Street

Wetlands

Four potential wetland features covering approximately 0.063 acre were found within the BSA; all exhibited three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The wetland features included:

- ***Wetland Ditches:*** Three potential wetland ditches (JP-PW1, JP-PW2, and JP-PW3) were found adjacent to roads within the BSA, accounting for approximately 0.045 acre. The landscape is highly modified in these areas; these ditches were originally created by Caltrans to convey stormwater runoff. Ditches are dry during the summer months. Many of the common plant species within the wetland ditches have some level of invasiveness, including sweet vernal grass (*Anthoxanthum odoratum*), creeping bentgrass (*Agrostis stolonifera*), velvet grass (*Holcus lanatus*), ryegrass (*Festuca perennis*), yellow glandweed (*Parentucellia viscosa*), and pennyroyal (*Mentha pulegium*). Other common species include common spikerush (*Eleocharis macrostachya*), soft rush (*Juncus effusus*), watercress (*Nasturtium officinale*), and slender willow herb (*Epilobium ciliatum*).

- ***Seep Wetland:*** One potential seep wetland was found flowing from bedrock into the creek on the north bank of Jack Peters Creek within the BSA, accounting for approximately 0.018 acre. The seep contains emergent vegetation in cracks of the bedrock and coastal scrub species cover the rock face. Common species in the seep include velvet grass, giant horsetail (*Equisetum telmateia* ssp. *braunii*), seep monkeyflower (*Erythranthe guttata*), English plantain (*Plantago lanceolata*), Henderson's angelica (*Angelica hendersonnii*), and cow parsnip (*Heracleum maximum*).

Other Waters of the U.S. and State

Six potential non-wetland waters of the U.S. and state were found within the project area, covering approximately 0.291 acre. These features include a perennial stream and intermittent drainages:

- ***Perennial Stream:*** One perennial stream, Jack Peters Creek, accounts for approximately 0.261 acre within the BSA. The creek, which flows under the bridge, has a deeply incised channel with patchy vegetation growing from the bedrock.

- ***Intermittent Drainages:*** Five intermittent drainages (JP-OW1, JP-OW2, JP-OW3, JP-OW4, and JP-OW-5) account for approximately 0.030 acre within the BSA.

Common species near intermittent drainages include the invasive sweet vernal grass, Himalayan blackberry, and cape ivy (*Delairea odorata*), and non-invasive species such as red elderberry, cow parsnip, arroyo willow, giant horsetail, and non-native cabbage (*Brassica oleracea*).

Plant Species

Record searches were conducted to determine whether special status plant species have the potential to occur within the BSA (Appendix F), and seasonally-appropriate floristic surveys were conducted (Appendix D) following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018) to document plant species within the BSA. A comprehensive species list is provided in Appendix E.

Though no state or federally listed plant species were found within the project area[2], two California Rare Plant Rank (CRPR) 4 plants—fringed false hellebore (*Veratrum fimbiratum*) and harlequin lotus *(Hosackia gracilis*)—were detected within the BSA. CRPR 4 plants are considered "watch list" plants—plants that have limited distribution or are infrequent throughout a broader area in California, and their vulnerability or susceptibility to threat appears low. They are not considered "rare" from a statewide perspective but are uncommon enough that their status should be monitored regularly. However, plants of this ranking may meet the definition of rare or endangered under CEQA Section 15380 in certain situations, such as if there are signs of declining trends, or if impacts may affect their overall rarity. Because there is limited data on these CRPR 4 plants, these taxa were assessed; see the sections below for more information.

Fringed False Hellebore

Fringed false hellebore has a CRPR of 4.3; it is endemic to California, occurring in Mendocino and Sonoma counties. It is found primarily in wet meadows of coastal scrub and coastal coniferous forest habitat below 350 feet in elevation (Calflora 2020b).

An occurrence of this species was detected near Jack Peters Creek during botanical surveys. The plants are outside of the project's construction footprint (ESL), but within the BSA.

[2] Both Monterey pine and Monterey cypress are considered special status species in their home ranges. However, they have become invasive in other areas of the state, including within the project area, and therefore are not discussed further in this section.

Harlequin Lotus

Harlequin lotus is a legume with a CRPR of 4.2; it is native to western North America from British Columbia to California, and is found as far south as San Luis Obispo County. In Mendocino County, this species is most commonly found in wet coastal prairie, but can also be found in closed-cone pine forest, coastal scrub, and meadows and seeps in broad-leaved, upland forest and North Coast coniferous forest (Calflora 2020a). Harlequin lotus is unique in that it is thought to be the larval food plant for the federally endangered lotis blue butterfly (*Lycaeides idas* ssp. *lotis*) (USFWS 1985).

An occurrence of harlequin lotus was detected in a coastal grassland northeast of Larkin Road. The plants are outside of the project's construction footprint (ESL), but within the BSA.

Animals

Record searches and habitat assessments were conducted to determine whether special status wildlife species have the potential to occur in the BSA. Species that were queried but do not have potential habitat in the project area are not discussed in this document as CEQA, FESA, and CESA only require analysis of species that could potentially be affected by a project. See Appendix F for a list of the species with the potential to occur and the rationale on habitat presence/absence.

Special status wildlife species with the potential to occur in the BSA are discussed further below. Species considered threatened or endangered are considered in the Threatened and Endangered Species section.

Bats

In California, CDFW considers nine species of bats to be species of special concern (SSC), with three additional species proposed as SSC. Some bats are also listed as sensitive by other agencies. In the mild northern California coastal climate, bats are present year-round (Erickson et al., 2002), and have the potential to be within the project area, as bridges and trees may be suitable for roosting. In bridges, bats may use cavities for day roosting and for bearing and rearing young (typically from May through August), and the open concrete undersides of the bridges for night roosting (Erickson et al., 2002). Bats may also use bridges for overwintering. In addition to bridges, snags, sloughed bark, and broken limbs of trees could provide openings for roosting bats (Willis and Brigham, 2004).

Overall crevice and other protective elements are lacking for night roosting on Jack Peters Creek Bridge. However, there is marginal potential for day roosting at the southern abutment where there is a 1- to 3-inch vertical gap between the abutment and the box girder structure. During a daytime visual assessment of the bridge in September 2017, one bat was observed in a gap in the southern abutment; however, additional assessments conducted in the spring and summer of 2019 detected no bats or signs of bat usage.

In addition to visual bridge assessments, a habitat assessment for trees was conducted in the areas of potential removal in July 2020, and no suitable tree roosting habitat was observed.

Migratory Birds

Migratory birds, their occupied nests, and their eggs are protected from disturbance or destruction by various laws and regulations. Suitable nesting habitat for migratory birds is present on Jack Peters Creek Bridge and within the BSA. No species-specific surveys were conducted, and no active or remnant bird nests were observed on the bridge structure. However, a diverse group of bird species is present, and there are likely nests within adjacent vegetation including arroyo willow shrubs, blackberry brambles, conifer forest, and more open ruderal or grassland habitat.

Northern Red-legged Frog and Red-bellied Newt

Coastal woodlands with waterways such as Jack Peters Creek may provide refugia and dispersal habitat for Northern-red legged frog (NRLF) *(Rana aurora*) and red-bellied newt (*Taricha rivularis*), which are both SSC that fill a similar ecological niche.

NRLF live in humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover. They are typically found in or near water but can be wide-ranging and highly terrestrial in damp woods and meadows during the non-breeding season (California Herps 2019a). They require permanent water sources such as ponds and lakes for breeding, which occurs from late November through March. Egg masses are usually attached to herbaceous vegetation in areas with little or no flow (California Herps 2019a).

The red-bellied newt is a stream or river dweller found in coastal woodlands and redwood forest along the northern California coast. Larvae of this species retreat into vegetation and under stones during the day. Breeding takes place from late February to May, peaking in March, in clean rocky streams and rivers with moderate to fast flow (California Herps 2019b). Red-bellied newts typically move and disperse at night and in the late afternoon but

are also found active in streams and on the surface in daylight during the breeding season and during rains (California Herps 2019b).

No species-specific surveys were conducted for NRLF or red-bellied newt, and neither species or associated breeding ponds were observed in the BSA, though the creek corridor may provide suitable foraging and dispersal habitat. The closest CNDDB occurrences for NRLF are along nearby rivers, approximately 0.8 and 1.3 miles away. The closest occurrence of red-bellied newt is along a river approximately 6.5 miles away.

Osprey and Purple Martin

Conifer forests, such as those found within the BSA at Jack Peters Creek, may provide nesting habitat for osprey (*Pandion haliaetus*) and purple martin (*Progne subis*). Osprey is treated as "taxa to watch" by CDFW due to their former inclusion on special concern lists; while this species has demonstrated population declines, osprey are still common and widespread in the state and are currently at low risk for extinction. On the other hand, purple martin is a SSC, with a declining population trend (International Union for Conservation of Nature 2016).

Osprey nesting habitat must include an adequate supply of accessible fish within about 12 miles of the nest. Their nests are usually built on snags, treetops, or crotches between large branches and trunks, on cliffs or human-built platforms (Zeiner et al., 1990). They are placed in open surroundings for easy approach and elevated for safety from ground predators.

The purple martin breeds in woodlands and low-elevation coniferous forest of Douglas-fir, ponderosa pine (*Pinus ponderosa*), and Monterey pine. It also occasionally nests in residential areas. This species uses cavities in both natural and man-made spaces for nesting. Nesting colonies are found in abandoned woodpecker holes in trees, and vertical drainage holes under elevated freeways and highway bridges.

No ospreys or their nests were observed within the BSA at Jack Peters Creek. However, as the area is near the coast, it would be considered suitable foraging habitat and the late-successional fir and pine forest southeast of the bridge provides marginally suitable nesting habitat. The closest occurrences are from nearby rivers, approximately 3 miles from the BSA.

No purple martin or their nests were observed within the BSA. However, snags of grand fir and bishop pine within conifer forests (such as those found within the BSA) may provide suitable nesting habitat. The closest occurrence record for purple martin is approximately 1.3 miles south of the Jack Peters Creek Bridge.

Sonoma Tree Vole

Conifer forests, such as those in the project vicinity, may provide suitable habitat for the Sonoma tree vole (*Arborimus pomo*) (STV), a California SSC. It is endemic to the state and occurs within the fog belt from Sonoma County north to the Oregon border. STVs feed almost exclusively on Douglas-fir and grand fir needles or tender tree bark, and nest in trees, with females building nests up to three feet in diameter (Zeiner et al., 1990). The typical home range of males likely includes several trees, while females often live in a single tree.

A habitat assessment and focused survey for STV was conducted in May 2021 within the area of conifer forest tree removal due to the potential for suitable nesting trees (e.g., grand fir or bishop pine with dbh > 12 inches), and the presence of an active nest northwest of the BSA in a mature bishop pine (J. Garrison [CDFW], personal communication, 2021). Surveys generally followed the methods of the *Survey Protocol for the Red Tree Vole* (Huff et. al, 2012). Suitable trees were inspected for accumulations of organic matter and resin ducts. Three accumulations were found within the project area, but no resin ducts or other signs of nesting STV were found.

Threatened and Endangered Species

Record searches and habitat assessments were conducted to determine whether threatened and endangered species have the potential to occur in the BSA. Species with no potential are not discussed. See Appendix F for a list of the species with the potential to occur and the rationale on habitat presence/absence.

Threatened and endangered species with the potential to occur in the BSA are discussed further below.

American Peregrine Falcon

Rocky cliffs, such as those within the project BSA, may provide suitable habitat for the American peregrine falcon (*Falco peregrinus anatum*), a fully protected species within California. Peregrines generally nest between late February and June and lay their eggs in shallow indentations high on cliffsides, or human-made structures, such as a buildings or bridges (Zeiner et al. 1990). Occasionally they will use old nests of other birds.

No species-specific surveys were conducted for the American peregrine falcon, and there are no CNDDB occurrence records for this species within a nine-quad search area. However, several juvenile peregrines were incidentally heard vocalizing near the coastal cliffs within the BSA in June 2019.

Bald Eagle

Due to the project's location on the coast, and the presence of coniferous forest, potentially suitable foraging and marginally suitable nesting habitat is present within the BSA for the bald eagle (*Haliaeetus leucocephalus*), a state endangered species. The bald eagle has been delisted from federal status but remains federally protected under the Bald and Golden Eagle Protection Act. Bald eagles typically nest in live trees, some with dead tops, and build a large (~1.8 m/6 foot diameter), generally flat-topped and cone-shaped nest below the tree-top within one mile of fishable waters (Jackman and Jenkins 2004). Active breeding generally occurs February through August (Buehler 2000). In Mendocino County, bald eagles are strongly tied to open water and undisturbed shorelines (Hunter et al. 2005).

No species-specific surveys were conducted for the bald eagle, and there are no CNDDB occurrence records for this species within a nine-quad search area. However, a juvenile was incidentally observed within the BSA in May 2021.

Essential Fish Habitat for Coastal Pelagic Species and Pacific Coast Groundfish

Essential Fish Habitat (EFH) is defined by the Magnuson-Stevens Fisher Conservation and Management Act (MSA) as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". Consultation with NMFS is required for activities that may adversely affect EFH.

Jack Peters Creek supports EFH for species regulated under the federal Coastal Pelagic Species Fishery Management Plan (FMP) and the Pacific Coast Groundfish FMP. EFH for Coastal Pelagic Species is defined to be all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington offshore to the limits of the Exclusive Economic Zone and above the thermocline where sea surface temperatures range between 50°F to 79°F (10°C to 26°C) (NMFS 2019a), while EFH for Pacific Coast Groundfish includes all waters from the high tide line as well as parts of estuaries to 11,485 feet (3,500 meters) in depth (NMFS 2019b)

Lotis Blue Butterfly

The project area is within the potential geographic range of the lotis blue butterfly (*Lycaeides idas* ssp. *lotis*) (LBB), a federally endangered species; no critical habitat has been designated for this species. Historically, this butterfly occurred along coastal Mendocino and northern Sonoma Counties, with possible sites in northern Marin County. The last known occupied site was north of the town of Mendocino. Lotis blue butterfly has not been observed in the wild since 1983. Due to small population sizes and limited sightings, specific details about the life history and suitable habitat characteristics for the butterfly are unknown. Suitable habitat is thought to be wet meadows or sphagnum bogs in pygmy conifer forest, and larval food plants may include lotus species.

A habitat assessment and surveys for LBB were conducted in 2014 following a the USFWS Draft Guidelines (2006) to determine if there was suitable habitat in the project area and to assess if focused surveys would be needed. Additional surveys were conducted in 2019 2020, and 2021. The survey buffer recommended in the guidelines was modified from 330 feet to 100 feet (the BSA) due to limited access, after consultation with USFWS. Harlequin lotus, a potential nectar source, was found within the BSA, but outside of the project's construction footprint (ESL).

Steelhead, Northern California DPS

Jack Peters Creek is known occupied habitat for the Northern California (NC) Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*) and is designated critical habitat (E. Meza [NMFS], personal communication, 2019). This federally threatened DPS ranges from northern Humboldt County to Sonoma County. EFH is not defined for this species because it is not commercially managed.

Suitable freshwater spawning habitat consists of fast, well-oxygenated rivers and streams with gravel substrates that do not have excessive amounts of silt. Suitable rearing habitat contains cover features such as overhanging and emergent vegetation, boulders, and woody material, and high flow velocity features such as riffles for feeding (NMFS 2016). Steelhead feed on zooplankton, aquatic and terrestrial insects, mollusks, crustaceans, and other small fish.

The population of steelhead on the Mendocino coast are winter-run, which are ocean-maturing. When the fish enter freshwater between November and April, they are already sexually mature and migrate upstream to spawn (NMFS 2016). Unlike other salmonids, steelhead are iteroparous, meaning they can spawn more than once. Once suitable spawning

habitat is found, females prepare the redd (i.e., depression in the stream bed) and lay up to 1,000 eggs. Steelhead young rear in freshwater environments for one to three years. Smolt out-migration occurs from February to June, with peak periods in April and May (NMFS 2016). During this time, smolts may use estuaries to acclimate to saline environments prior to entering the ocean.

Sources show the NC DPS of steelhead occur within Jack Peters Creek, and a single steelhead was incidentally observed in August 2019—one smolt was swimming upstream, approximately 200 feet east of the creek mouth, within the project footprint.

The portion of Jack Peters Creek within the project area is primarily a narrow, rocky, intertidal estuary. Although perennial, the creek is relatively shallow at both low and high tides. Habitat at Jack Peters Creek in the project area consists of a narrow drainage with shallow but fast-flowing estuarine waters that are on a relatively flat gradient. Submerged substrate during the dry season (June 15 to October 15) is bedrock with scattered cobble rock and a fine layer of sand and small gravel. The water depth fluctuates seasonally from a few inches to approximately five feet. Although the water levels are relatively shallow during the dry season, creek flow is continuous.

Overall, the creek within the BSA does not contain habitat suitable for spawning. However, it is a migratory corridor for out-migrating smolts and for adult salmonids emigrating to spawning habitat further upstream. Primary constituent elements (PCEs) of critical habitat within the BSA include high-flow velocity features such as riffles for juveniles to feed.

Western Bumblebee and Obscure Bumblebee

Ruderal and grassland habitat within Jack Peters Creek BSA may provide foraging habitat for Western bumblebee (*Bombus occidentalis occidentalis*) and obscure bumblebee (*Bombus calignosus*); both fill a similar ecological niche.

The Western bumblebee was recently accepted as a candidate for listing as an endangered species under CESA in June 2019. However, a supreme court case in November 2020 has brought the species eligibility into question. Nevertheless, the species is still considered rare in California and is evaluated as such. The Western bumblebee has recently declined in abundance and distribution and is no longer present across much of its historic range (Xerces Society 2012). In California, there are a few occurrences on the northern California coast (Xerces Society 2017). The Western bumblebee lives in annual colonies late February to early November that are made up of a queen, workers, and reproductive members (Hatfield et al., 2012). This species prefers meadows and grasslands with abundant floral resources for

both foraging and nesting. They nest in underground cavities such as old animal nests and in open west-southwest slopes bordered by trees.

The obscure bumblebee is considered critically imperiled in California by CDFW. It is native to the west coast of the U.S., from Washington to southern California. Nests are usually well concealed, often underground, sometimes on the surface, and occasionally 30 to 40 feet (9 to 12 meters) above ground in trees; queens emerge from hibernation in late January, followed by the first workers in early March, and the males at the end of April (Thorp et al., 1983). The colony dissolves in late October, when all the inhabitants die except the new queens.

No species-specific surveys were conducted for Western or obscure bumblebee. The closest CNDDB occurrence of these species is form 1950, approximately 2.5 miles south of the project, in Fort Bragg. There is potential foraging habitat for the bumblebee species within the BSA within ruderal and grassland habitat, which is found upslope and to the east of the intersection of SR1 and Larkin Road and at the two large staging areas to the south of the project area.

White-tailed Kite

There is potential suitable habit for white-tailed kite (*Elanus leucurus*), a fully protected species in California, within the project area. This species can be found in the Central Valley and the entire California coast in a variety of habitats. White-tailed kites build platform nests in treetops, generally in relatively large stands of riparian, redwood, and Douglas-fir trees. The nesting season for white-tailed kites in California is generally from late January until August (Dunk 1995).

White-tailed kites or their nests were not observed within the BSA. However, the stands of grand fir forest within the BSA provides marginally suitable nesting habitat. The nearest known occurrence is approximately 9.3 miles away, along the Navarro River.

Invasive Species

Invasive species are those that can spread into native ecosystems and displace or hybridize with native species, alter biological communities, or alter ecosystem processes.

Much of the project area is highly disturbed, and contains many non-native plant species, including those considered invasive by the California Invasive Plant Council (Cal-IPC). Cal-IPC defines invasive plants as plants that are not native to an environment and, once introduced, establish quickly, reproduce and spread, and cause harm to the environment,

economy, and human health (Cal-IPC, no date). Within the project area, species with the highest potential for ecological impact, as inventoried by Cal-IPC, include pampas grass (*Cortaderia jubata*), Scotch broom (*Cytisus scoparius*), French broom, English ivy (*Hedera helix*), and Himalayan blackberry. In addition, there are several species that are native in California, but have become invasive outside of their range. Within the project area, these species include Monterey cypress and Monterey pine, both of which are special status species within their natural range. See Appendix E for a list of plants identified during botanical surveys, and their Cal-IPC ratings.

Within the project area, invasive plant cover is high, particularly within ruderal vegetation and coastal scrub shrubland alongside SR 1 and in staging areas, and extending into the communities adjacent to the roads. For example, Scotch and French broom overlaps with coastal scrub, and is present within coniferous forest containing bishop pine, grand fir, and Douglas-fir. Monterey Cypress has also become established, forming its own communities.

In addition to plant species, Eurasian collard dove (*Streptopelia decaocto*) and European starling (*Sturnus vulgaris*), both invasive bird species, have been observed in the project vicinity.

Habitat Connectivity

Stream courses and their associated riparian areas like those found at Jack Peters Creek are often used as migration corridors by wildlife, including both aquatic and terrestrial species. The area also provides a rearing habitat for juvenile anadromous fish and amphibians such as frogs, newts, and salamanders, as well as habitat and/or foraging for various other species, such as black-tailed deer (*Odocoileus hemionus columbianus*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), osprey (*Pandeon haliaetus*), violet green swallow (*Tachycineta thalassina*), turkey vulture (*Cathartes aura*), and western gull (*Larus occidentalis*). The existing bridge is a single span structure and poses no barrier.

Discussion of Environmental Evaluation Question 2.4a)—Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries/NMFS?

Plant Species

Fringed False Hellebore

An occurrence of fringed false hellebore was documented within the BSA, but outside of the project footprint (ESL). Because of its location and with the implementation of standard measures, such as installing temporary high visibility fencing (THVF) along the boundaries of environmentally sensitive areas, it is anticipated that project activities would not impact the occurrence. Therefore, it was determined that the project would have "*No Impact*" on fringed false hellebore.

Harlequin Lotus

An occurrence of harlequin lotus was documented within the BSA, but outside of the project footprint (ESL). Because of its location and with the implementation of standard measures, such as installing temporary high visibility fencing (THVF) along the boundaries of environmentally sensitive areas, it is anticipated that project activities would not impact the occurrence. Therefore, it was determined that the project would have "*No Impact*" on harlequin lotus.

Animal Species

Bats

Surveys and habitat assessments found that Jack Peters Creek Bridge lacks protective elements for night roosting for bats, and there is only marginal potential for day roosting on the bridge. In addition, there was no suitable tree roosting habitat observed within the areas scoped for tree removal. However, construction activities could temporarily disturb suitable day roosting habit within the project vicinity, and temporarily inhibit foraging in the area. In addition, containment measures required for protection of water quality (such as tarps used for debris containment) could potentially entrap bats.

Standard measures would be implemented to protect bats, including surveys by a qualified biologist to determine the presence of bats if work occurs between March 1 and August 31, installation of bat exclusion devices as necessary, and directing any artificial lighting at areas actively under construction where feasible.

With the marginal potential for bat roosting habitat, the temporary nature of disturbances to roosting habitat and foraging activity, and the implementation of the Standard Measures, it was determined that the project would have a "*Less than Significant Impact*" on bats.

Migratory Birds

Construction activities could potentially result in temporary hearing loss or behavioral change to migratory birds within the project vicinity, especially from equipment or activities that makes a lot of noise, such as impact hammers. In addition, vegetation removal could take away habitat that may support nesting birds. However, any impacts are anticipated to be temporary, and birds could relocate if disturbed by project noise or activities. In addition, standard measures would be implemented to protect migratory birds and their nests, such as restricting vegetation removal to outside the nesting season or conducting nesting bird surveys within the nesting season. Because impacts to birds would be temporary, and because birds and their nests would be protected by standard measures, it was determined that the project would have a "*Less than Significant Impact*" on migratory birds.

Northern Red-legged Frog and Red-bellied Newt

Ground disturbance and vegetation removal on the banks of Jack Peters Creek could disturb NRLF and red-bellied newt using the habitat; however, habitat suitability is marginal, and therefore the exposure risk is low. In addition, impacts to these species would be avoided and minimized through the implementation of standard measures, including measures to protect water quality, establishing THVF to minimize habitat disturbance, and plans for aquatic species relocation. Because of the low suitability of habitat within the construction footprint and with the implementation of standard measures, it was determined that the project would have a "*Less than Significant Impact*" on NRLF and red-bellied newt.

Osprey and Purple Martin

Removal of suitable nest trees and visual and noise disturbance associated with bridge construction near an active nest could potentially affect osprey or purple martin within the project vicinity. However, nesting habitat within the project area is marginal, and noise and visual impacts are not anticipated to be substantial given the existing relatively high ambient noise and human activity levels in the area, the temporary nature of the project, and the

implementation of standard measures (including pre-construction nest surveys). It was therefore determined that this project would have "*No Impact*" on osprey or purple martin.

Sonoma Tree Vole

Removal of suitable nest trees may affect STV. However, nesting habitat within the project area is marginal as there are fewer old-growth trees that would support tree vole nests, and the disturbance from existing noise and human activity levels in the area are high. Because suitable habitat is marginal, and the fact that the project would be temporary and standard measures would be implemented (including focused pre-construction nesting surveys for STV), it was determined that there would be a "*Less than Significant Impact"* on STV.

Threatened and Endangered Species

American Peregrine Falcon

The American peregrine falcon is not anticipated to be affected by the project as no suitable nesting habitat would be removed, there would be no visual impacts to potential nesting habitat (cliffsides), and ocean noise near potential nesting habitat would be louder than noise generated by construction activities. In addition, standard measures would be implemented, including raptor nest surveys. Because potential nesting habitat would not be affected by the project and would be protected from noise or visual disturbance, and given the implementation of standard measures, it was determined that the project would have "*No Impact*" on the American peregrine falcon.

Bald Eagle

Removal of suitable nest trees and visual and noise disturbance associated with bridge construction near an active nest could potentially affect bald eagles within the project vicinity. However, nesting habitat within the project area is marginal, and noise and visual impacts are not anticipated to be substantial given the existing relatively high ambient noise and human activity levels in the area, the temporary nature of the project, and the implementation of standard measures (including pre-construction raptor nest surveys). It was therefore determined that this project would have "*No Impact*" on bald eagle.

Because the project is not anticipated to directly harm this state endangered species, per CESA, there would be no State "*Tak*e" of bald eagle, as defined by the CFGC.

Essential Fish Habitat for Coastal Pelagic Species and Pacific Coast Groundfish

The ground-disturbing activities associated with the project may have temporary adverse effects to EFH for coastal pelagic species and Pacific coast groundfish, and would include:

- ***Water Quality:*** Temporary impairment of water quality due to short-term and localized increases in turbidity during construction
- ***Noise and Visual Disturbance:*** Temporary impairment of water quality due to short-term and localized increases in turbidity during construction
- ***Habitat Changes:*** Minor temporal loss of vegetation that provides riparian function.

The potential for project activities to adversely affect water quality in EFH is negligible due to project activities and the implementation of standard measures and best management practices (see Section 1.4). These measures would minimize the magnitude and duration of any turbidity increases, provide for site stabilization post construction, and ensure proper handling and storage of contaminants to avoid accidental spills. Measures and project features that minimize impacts to water quality include conducting equipment-based ground disturbance outside of the wetted channel, restricting refueling and maintenance of vehicles and equipment to upland areas away from drainages and wetlands, and confining spills so they could be contained and removed prior to contaminating runoff.

Because potential effects to elements of Coastal Pelagic Species and Pacific Coast Groundfish EFH from the project are considered minor and transient, resulting in no long-term impacts, it was determined that this project would have a "*Less than Significant Impact*" on EFH.

Consultation with NMFS would be required with NMFS for EFH of Coastal Pelagic Species and Pacific Coast Groundfish species under the MSA; Caltrans anticipates the project *may adversely affect* EFH. Caltrans would initiate consultation with NMFS during circulation of this environmental document.

Lotis Blue Butterfly

The project is not anticipated to affect LBB or its preferred habitat. Though there is an occurrence of harlequin lotus, a potential larval food plant, within the BSA, it is outside of the project footprint. In addition, standard measures, such as installing THVF along the boundaries of environmentally sensitive areas, would be implemented to protect the host

plant. Because the project is not anticipated to impact LBB or its potential host plant, it was determined that this project would have "*No Impact*" on LBB.

Because the project isn't anticipated to impact this federally endangered species, it was determined that the project would have "*No Effect*", per FESA, on LBB.

Steelhead, Northern California DPS

The NC DPS of steelhead may be affected by the project in a similar manner to the EFH for Coastal Pelagic Species and Pacific Coast Groundfish, described above. Potential impacts include:

- ***Noise and Visual Disturbance:*** Minor and temporary loss of cover/shelter, foraging potential, and safe passage due to noise and visual disturbance.
- ***Water Quality:*** Temporary impairment of water quality due to short-term and localized increases in turbidity during construction.
- ***Habitat Changes:*** Minor temporal loss of riparian and/or wetland vegetation that provides cover/shelter and foraging potential, and negligible increases in shading.

Potential impacts would take place when steelhead abundance is at its lowest. In addition, the scale of these potential impacts would be small and temporary, resulting in no long-term measurable decrease in quality of rearing habitat or migration corridors for steelhead. No measurable long-term adverse changes to waters, substrates, food production and availability, and cover conditions from increased shading or vegetation removal are expected. These potential impacts are discussed in more detail below.

Noise and Visual Disturbance

Fish, such as steelhead, have swim bladders, which are often used for sensing vibration in the environment. Swim bladders tend to have dense vascular networks, making them particularly vulnerable to injury from sound-induced barotrauma (Hastings and Popper 2005); when sound waves strike the swim bladder, it rapidly compresses and decompresses (known as compressive barotrauma) (Caltrans 2015). It is therefore possible that steelhead could be injured or killed by exposure to underwater noise and vibratory forces generated by construction-related activity (i.e., hoe ramming, CIDH drilling, and pile driving) if unabated.

In addition, exposure to underwater noise and vibratory forces may reach levels generally assumed to elicit behavioral responses in fish, such as startling (in which a fish makes moves as if to escape a predator) or avoidance of the noise source. These responses may not injure

the fish but could impede or discourage free movement within the area, potentially reducing the foraging potential for the fish.

The Fisheries Hydroacoustic Working Group (FHWG) established injury thresholds for fish from impulsive sound waves (such as from impact hammers); the agreed upon thresholds for injury depends on weight: for fish weighing more than two grams, this threshold is at sound pressure levels of 206 decibels (dB) peak and cumulative sound exposure level (SEL) of 187 dB (FHWG 2008). Because steelhead weighing less than two grams are not expected to be present in the BSA during construction (they spend their earlier part of their life cycles upstream), the thresholds for fish over two grams would be used in this analysis. In addition to the criteria for injury, NMFS has identified that 150 dB root of mean square (RMS) should be used to determine if activities would have a behavioral effect on fish; impulsive sound waves below 150 dB are not anticipated to reach levels known to elicit behavioral responses. There are no acoustic thresholds for fish for non-impulsive or continuous noise sources, such as for installation of CIDH piles.

The *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish* (Caltrans 2015) was used to evaluate potential underwater noise levels generated during pile driving; this guidance provides estimated sound levels for various types of piles (e.g., H-piles, concrete piles) and methods of installation (e.g., impact driving, vibrating). In addition, a hydroacoustic assessment was prepared to evaluate underwater noise for fish (Caltrans 2021b).

Project construction activities that have the potential to produce impulsive or continuous noise include the following:

- Hoe ramming for demolition of the bases of the existing piers and abutments. These activities would be on land, outside of the OHWM of Jack Peters Creek.
- Pile driving to install a bent foundation for the temporary trestle. The bent foundation would be within the bed of Jack Peters Creek, but several feet above and outside the wetted channel; it would be placed approximately halfway between the north and south banks on a cobble bar within the creek.
- CIDH drilling for installation of piers. These activities would be on land, outside of the OHWM of Jack Peters Creek.

Due to the variability in noise conditions, it is difficult to accurately predict underwater noise levels associated with impact hammer activity. However, based on conservative inferences from previous projects, as analyzed in the hydroacoustic assessment, peak sound pressure levels would be below the 206 dB peak threshold. Because of uncertainty in the prediction of underwater noise levels, it is assumed that the cumulative 187 dB SEL would extend to the distance that single strike SEL drops below 150 dB (i.e., effective quiet), which is 115 feet. The maximum distance to the 150 dB RMS behavioral threshold may be limited upstream and downstream of the bridge due to obstructions in the creek bed and shallow water depth. However, these factors were not included in the assessment, and the extent of the behavioral effect zone is anticipated to extend 328 feet from pile driving operations (Figure 13). There are no thresholds for non-impulsive or continuous noise sources, such as for CIDH drilling, which is not expected to include activities that create impulsive noise that could reach levels of injury to fish.

Impact hammer activity would be restricted to the dry season (June 15 to October 15), would only be conducted during the day, and would only be done at one location at a time. And, because groundborne noise can be unpredictable and variable, hydroacoustic monitoring, a standard measure (see Section 1.4), would be conducted as needed during these activities (monitoring would not be needed if the creek is below 6 inches in depth, as attenuation would make effects of underwater noise on steelhead discountable) (Caltrans 2021b). In addition, the duration of the activity would be short, between two to four days in the best-case scenario and two to three weeks in the worst-case. Because these activities would not coincide with adult steelhead migration (December to May), the project would not affect upstream migration to spawning grounds or lower reproductive potential. Smolts, however, could be present in the estuary and lower reach of the behavioral response zone within Jack Peters Creek during these activities, but fish could readily relocate to nearby suitable habitat. Upon cessation of work, it is anticipated that fish movement and access would return to pre-construction conditions.

In addition to noise disturbance, visual disturbance—such as shadows from construction personnel or equipment—could also lead to behavioral changes to steelhead within the BSA. However, like the behavioral effects from noise, it is anticipated these changes would be temporary and would return to pre-construction levels upon cessation of work.

Overall, with the project features (e.g., work within the dry season) and use of standard measures, noise and visual disturbances are not anticipated to injure fish; they are expected to only have temporary effects on the behavior and distribution of fish, including minor and temporary loss of cover/shelter, foraging potential, and safe passage.

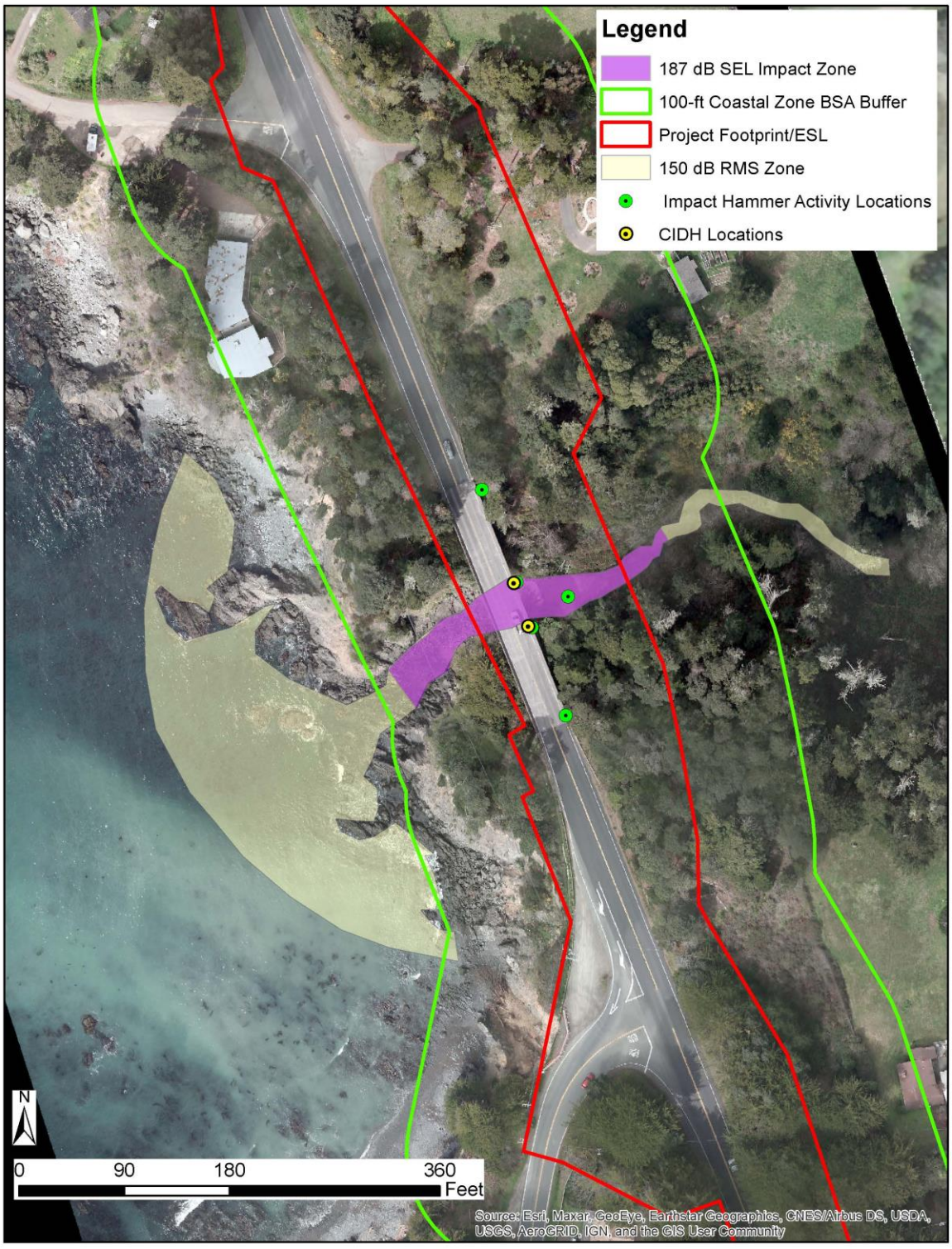

Figure 13. Noise Impact Zones for NC DPS of Steelhead

Water Quality Impacts

Project activities would temporarily disturb upland soil and soil below the OHWM of the creek (but outside of the wetted channel) of Jack Peters Creek. These activities could result in the mobilization and transport of suspended soils if stormwater is not properly contained and treated, and potentially result in increased discharges to, and turbidity in, the creek. Suspended solids and turbidity can have numerous adverse effects on steelhead, including injury or death (Bash et al. 2001). However, because the project would implement appropriate BMPs, including those listed in Section 1.4, the proposed project is not likely to result in a substantial increase of suspended solids or turbidity within the wetted channel of the creek relative to baseline conditions, and therefore would not result in impacts to steelhead.

Construction equipment may leak contaminant fluids that can then be discharged to receiving waterbodies in stormwater runoff. These materials may be directly toxic to fish and other aquatic organisms. However, as equipment would not be operated in the wetted channel and standard measures for water quality would be implemented, including provisions for the proper handling, storage, and disposal of contaminants, the potential for impact is low.

Overall, with the implementation of standard measures for water quality, effects to steelhead would be discountable. The project would not result in long-term changes to the water chemistry or physical characteristics (e.g., substrate and flow) of the watercourse after construction is complete, disturbed areas would be stabilized, and vegetation re-established.

Habitat Changes

New Impervious Surface Area

While there would be an estimated 0.41-acre net increase in impervious surface for the project, changes in peak stormwater runoff rates would be offset through permanent design measures, such as directing flows through vegetated swales. There would be no decrease in the capacity of existing drainage systems and no substantial change in existing drainage patterns or encroachment of channel flow. Any potential impacts to salmonids as a result of new impervious surface and drainage improvements would be discountable.

Wetland and Riparian Habitat Removal

Approximately 0.022 acre of soil and bedrock from a wetland seep (0.018 acre) and an intermittent drainage (0.004 acre) would be graded at Jack Peters Creek (above the OHWM) to allow for the widening of the bridge. In addition, approximately 0.067 acre of riparian

habitat would be temporarily disturbed, and approximately 0.005 acre would be permanently disturbed for construction of the temporary trestle, grading the banks near the existing bridge, and extending the piers. Removal of riparian vegetation may lead to reduced channel shading and allochthonous inputs (i.e., deposit of organic matter from vegetation) and increased water temperature. However, at Jack Peters Creek, there is already substantial shading due to the narrowly incised canyon the creek is in. In addition, most of the south bank is coniferous forest with trees tall enough (over 30 feet tall) to provide cover to the creek and maintain relatively low water temperatures (average 55ºF [13ºC]) during the dry season, and the use of the temporary trestle may temporarily increase shading. Once the widened bridge deck is completed, it would also minimally increase the shading of the creek, potentially resulting in cooler water temperatures in the immediate vicinity of the bridge.

With the implementation of standard measures, most of the disturbed wetland and riparian habitat would be restored to pre-existing conditions post construction. Given the scale of the impact and the anticipated revegetation, no measurable increase in water temperature or reduction in the amount of allochthonous input is anticipated, and there is ample vegetative cover near the project site for fish to take refuge. In addition, the increased bridge width would only minimally increase shading. Therefore, it is anticipated that removal of wetland and riparian vegetation, and the minimal increase in shading, would not result in long-term impacts to steelhead or its habitat.

Summary

Overall, the project has the potential to affect steelhead with noise and visual disturbance, water quality impacts, and habitat changes. However, the features of this project (such as no work within the wetted channel) and use of standard measures and BMPs, impacts are anticipated to be temporary and/or minimal. Therefore, it was determined that the project would have a "*Less than Significant Impact*" on the NC DPS of steelhead and its critical habitat.

Consultation with NMFS would be required pursuant to Section 7 of FESA for potential effects to this species. It is anticipated that the project would result in a determination that the project *may affect, is not likely to adversely affect* the NC DPS of steelhead and its designated critical habitat. Caltrans would initiate consultation with NMFS during circulation of this environmental document.

Western Bumblebee and Obscure Bumblebee

The project is not anticipated to affect Western or obscure bumblebees, as these species are not anticipated to be overwintering in areas that would be disturbed by the project (these

areas experience routine disturbance from road maintenance activities and have a high groundwater table). In addition, it is not anticipated that project activities would injure or kill foraging bumblebees, and the overall foraging habitat in the vicinity would remain intact. Therefore, it was determined that the project would have "*No Impact*" on Western and obscure bumblebees.

Because the project is not anticipated to directly harm Western bumblebee, a state candidate endangered species, per CESA, there would be no state "*Take*" of this species, as defined by the CFGC.

White-tailed Kite

Removal of suitable nest trees and visual and noise disturbance associated with bridge construction near an active nest could potentially affect white-tailed kites within the project vicinity. However, nesting habitat within the project area is marginal, and noise and visual impacts are not anticipated to be substantial given the existing relatively high ambient noise and human activity levels in the area, the temporary nature of the project, and the implementation of standard measures (including raptor nest surveys). It was therefore determined that this project would have "*No Impact*" on white-tailed kites.

Endangered Species Act Determinations for Species Not Discussed in Section 2.4

Various federally and state listed species were identified as potentially occurring in the project vicinity, but the project area is outside of the range of these species, or there is no suitable habitat present within the BSA. These species were therefore not discussed in Section 2.4 (see Appendix F).

Per FESA, Caltrans has determined that the project would have "*No Effect*" on the following federally listed species:

- California red-legged frog (*Rana draytonii*)
- Marbled murrelet (*Brachyramphus marmoratus*)
- Western snowy plover (*Charadrius nivosus nivosus*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- Short-tailed albatross (*Phoebastria albatrus*)
- Northern spotted owl (*Strix occidentalis caurina*)
- Green sturgeon–Southern DPS (*Acipenser medirostris*)
- Tidewater goby (*Eucyclogobius newberryi*)

- Coho salmon–Central California Coast ESU (*Oncorhynchus kisutch*)
- Chinook salmon–California Coastal ESU (*Oncorhynchus tshawytscha*)
- Behren's silverspot butterfly (*Speyeria zerene behrensii*)
- Point Arena mountain beaver (*Aplodontia rufa nigra*)
- Guadalupe fur seal (*Arctocephalus townsendi*)
- Sei whale (*Balaenoptera borealis*)
- Blue whale (*Balaenoptera musculus*)
- Fin whale (*Balaenoptera physalus*)
- North Pacific right whale (*Eubalaena japonica*)
- Humpback whale (*Megaptera novaeangliae*)
- Southern Resident killer whale (*Orcinus orca*)
- Sperm whale (*Physeter macrocephalus*)
- East Pacific green sea turtle (*Chelonia mydas*)
- Leatherback sea turtle (*Dermochelys coriacea*)
- Olive Ridley sea turtle (*Lepidochelys olivacea*)
- Howell's spineflower (*Chorizanthe howellii*)
- Menzies' wallflower (*Erysimum menziesii*)
- Burke's goldfields (*Lasthenia burkei*)
- Contra Costa goldfields (*Lasthenia conjugens*)
- Showy Indian clover (*Trifolium amoenum*)
- Monterey clover (*Triquetrella trichocalyx*)

As the project would not directly harm the following species, per CESA, Caltrans has determined the project would not result in "*Take*" of the following state-listed or state candidate species:

- Marbled murrelet (*Brachyramphus marmoratus*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- Little willow flycatcher (*Empidonax traillii*)
- Northern spotted owl (*Strix occidentalis caurina*)
- Central California Coast ESU of coho salmon (*Oncorhynchus kisutch*)
- Fisher–West Coast DPS (*Pekania pennanti*)
- Guadalupe fur seal (*Arctocephalus townsendi*)
- Humboldt County milk-vetch (*Astragalus agnicidus*)
- Howell's spineflower (*Chorizanthe howellii*)
- Menzies' wallflower (*Erysimum menziesii*)

- Roderick's fritillary (*Fritillaria roderickii*)
- Burke's goldfields (*Lasthenia burkei*)
- Monterey clover (*Triquetrella trichocalyx*)

Habitat Connectivity

While project activities may temporarily alter wildlife movement in the immediate area during construction, proposed bridge design changes would not alter passage for terrestrial or aquatic wildlife. Therefore, it has been determined that the project would have "*No Impact*" on habitat connectivity for special status species.

Discussion of Environmental Evaluation Question 2.4b)—Biological Resources

b) Would the project 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?

Natural Communities

Grand Fir Forest

This project would impact grand fir forest SNC through the removal of trees for widening of Jack Peters Creek Bridge and roadway shoulders. Approximately 0.298 acre of the stands located on either bank of Jack Peters Creek, east of the bridge, would be impacted.

Various factors were taken into consideration when determining impacts to grand fir forest, including location, ecological implications, quality of existing forest, total impacts, and standard measures included in the project.

The grand fir forest that would be impacted is adjacent to SR 1 and along a utility line corridor. The habitat is thus subject to regular disturbance by maintenance activities for the road, bridge, and utility line. In addition, the utility line, which passes through a stand of grand fir, has a clearance of approximately 30 feet, in which taller trees are topped. The highway corridor in in the project area has high amounts of invasive species, which are also present in adjacent habitats.

Potential ecological implications of grand fir forest removal could include increased visual and noise disturbance to wildlife and colonization of newly disturbed areas by invasive plant

species. However, due to the existing conditions at the project location, including high levels of ambient noise and human activity, the bishop pine stands are unlikely to support special status wildlife species, and ecological functions are not anticipated to be substantially different than existing conditions. In addition, measures would be implemented to prevent the spread of invasive species.

While the grand fir forest on the south bank is relatively pristine, the stand on the north bank is being encroached by invasive species, and is interrupted by the utility line corridor, in which trees are topped when they reach a certain height.

Though 0.298 acre of the 1.66 acre of relatively contiguous grand fir forest would be at least temporarily impacted by project activities, there are other stands of this SNC in the vicinity; for example, one occurrence is documented by the CNDDB approximately 1.3 miles from the project, and is 38 acres. With just the consideration of this one stand, project impacts would be less than 1% of the SNC in the area. There may be additional grand fir communities, but the CNDDB is not currently updating natural community occurrences (only legacy information is available), and the majority of Mendocino County has not been classified.

Standard measures would be implemented to protect bishop pine forest within the project vicinity, including preparation of a Revegetation Plan (which would include planting grand firs within and adjacent to disturbed habitat), measures to prevent the spread of invasive species, installing THVF around environmentally sensitive areas, and limiting vegetation removal to the extent necessary (see Section 1.4).

Approximately 0.210 acre of the 0.298 acre of impacted grand fir forest would be replanted in place. A total of approximately 0.088 acre would not be able to be replanted in place; 0.034 acre of this is due to restrictions on planting in the utility line corridor (where trees are currently topped), with the remaining 0.054 acre due to the widened bridge structure and the clear recovery zone. However, additional grand fir forest would be planted in areas that are currently dominated by Monterey cypress, an invasive plant species. Replacing non-native communities with native ones may provide an overall benefit to ecological functions of the forest.

Overall, because of the existing disturbance within the project area, the relatively small amounts of impacts to the SNC in the project vicinity and with the inclusion of standard measures, including replanting, it was determined that the project would have a "*Less than Significant Impact*" impact on grand fir SNC.

Though this project was determined not to have significant impacts to this SNC and therefore would not require mitigation under CEQA, regulatory agencies often require additional restoration or compensation for impacts to SNCs. Permits are required for this project and would be submitted after approval of the final environmental document. Any additional measures would be developed in coordination with regulatory agencies.

Bishop Pine Forest

This project would impact bishop pine forest SNC through the removal of trees for the widening of Jack Peters Creek Bridge and roadway shoulders. A total of approximately 0.740 acre, including approximately 0.465 acre of representative stands and approximately 0.275 acre of non-representative stands of bishop pine forest, would be impacted by project activities.

Various factors were taken into consideration when determining impacts to bishop pine forest, including the location, ecological implications, quality of existing forest (i.e., representative vs. non-representative stands), total impacts, and standard measures included in the project.

The bishop pine forest that would be impacted is adjacent to SR 1 and along a utility line corridor. The habitat is thus subject to regular disturbance by maintenance activities for the road, bridge, and utility line. In addition, the utility line has a clearance of approximately 30 feet, in which taller trees are topped. The highway corridor in the project area has high amounts of invasive species, which are also present in adjacent habitats.

Potential ecological implications of bishop pine removal could include increased visual and noise disturbance to wildlife and colonization of newly disturbed areas by invasive plant species. However, due to the existing conditions at the project location, including high levels of ambient noise and human activity, the bishop pine stands are unlikely to support special status wildlife species, and ecological functions are not anticipated to be substantially different than existing conditions. In addition, measures would be implemented to prevent the spread of invasive species.

While representative stands of bishop pine forest were generally more contiguous, had species composition aligned with the association, were in better health (i.e., not many obviously diseased or deceased), and had lower invasive species cover, non-representative stands were vestigial, with relatively high invasive species cover, and/or a predominance of dead or dying trees. For both types of stands, smaller trees are found near the highway, with larger, more mature trees further away.

For representative stands, impacts of 0.465 acre would only be a fraction (approximately 3%) of the 15.62 acres of bishop pine forest in the immediate vicinity of the project area and, if non-representative bishop pines are included (for a total of 0.740 acre), up to approximately 5% of bishop pine forest in the area would be affected.

Standard measures would be implemented to protect bishop pine forest within the project vicinity, including preparation of a Revegetation Plan, measures to prevent the spread of invasive species (including pathogens), installing THVF around environmentally sensitive areas, and limiting vegetation removal to the extent necessary (see Section 1.4).

In addition to the above, several other conditions need to be taken into consideration. Bishop pine forest is facing declining populations in Mendocino County due to various pathogens and insects. And, due to susceptibility of bishop pine in the area to diseases such as pitch pine canker, there are limitations on planting this species within the Caltrans right of way. In addition to disease, lack of fire can reduce natural recruitment of bishop pine; as bishop pine stands are aging, tree recruitment is important for the recovery of the SNC.

Overall, non-representative stands are vestigial, have high invasive cover, and, due to the high proportions of dead and dying trees, few bishop pines are anticipated to be removed. Because of their condition, these areas are not functioning as a bishop pine SNC and therefore, even with the consideration of pathogens affecting bishop pine forests, it is anticipated that impacts to these areas would have no to minimal impacts to the SNC and therefore removal of non-representative stands of bishop pine forest would have a "*Less than Significant Impact*" on the SNC. Though there are limitations on planting bishop pine, removal of non-native vegetation in these areas, including dead and dying trees, may be beneficial, as replanting efforts may actually improve habitat quality by providing higher native plant cover, and reducing invasive species. In addition, there would be the opportunity for the natural recruitment of bishop pine, which may benefit the SNC.

However, removal of vegetation within representative stands of bishop pine forest would have greater implications for the SNC. Though the acreage impacted is relatively small compared to the area of adjacent bishop pine forest (0.465 acre; approximately 3% within stands adjacent to the project), the trees are generally healthy, and have lower invasive species cover. In addition, many of the trees are younger, which is important for recovery of the SNC. And, though revegetation efforts would be implemented as part of the project, as described above, there are limitations to replanting bishop pines. Considering all of the above, it was determined that impacts to representative areas of bishop pine forest have the potential to be adverse. To reduce the impact to the SNC, Caltrans may conduct onsite or

revegetation and enchantment or offsite restoration or preservation, as described in the Mitigation Measures section at the end of the biological resources section of this document. With the inclusion of these measures, it was determined that the project would have a "*Less than Significant Impact with Mitigation*" on this SNC.

Riparian Habitat

The project would impact riparian habitat due to construction of temporary trestle and the extension of the bridge piers. Approximately 0.072 acre would be impacted on the banks of Jack Peters Creek, upstream of the bridge.

The riparian habitat that would be impacted is in close proximity to SR 1, and is subject to periodic disturbance from highway and bridge use and maintenance, and from public recreational activities (e.g., fishing and public access trail use). In addition, many of the areas adjacent to SR 1 are degraded by the encroachment of invasive species.

Approximately 0.067 acre would be subject to temporary impacts from project activities, with approximately 0.046 acre from the north bank of the creek, and 0.021 acre from the south bank. Approximately 0.005 acre on the south bank would be permanently impacted due to the extension of the bridge piers.

While no trees would be impacted on the north bank of the creek, approximately 10 to 11 mature red alders would be removed on the south bank. In addition, approximately 0.10 acre of vegetation would be shaded by the temporary trestle, while approximately 0.03 acre would be shaded by the widened bridge. However, as the creek is within a narrowly incised canyon that has substantial shading, effects from the additional bridge width are anticipated to be negligible.

Standard measures and BMPs would be implemented to protect riparian vegetation within the project area, including preparation of a Revegetation Plan (which would address the riparian areas impacted by the project), measures to address the spread of invasive species, installing THVF around environmentally sensitive areas, and limiting vegetation removal to the extent necessary (see Section 1.4).

In summary, only a small portion of riparian habitat would be impacted. The area is regularly disturbed by maintenance activities, public access, and by landslides and strong winds. Though riparian vegetation is functionally important, the impacted area does not provide ideal habitat for listed wildlife, and its removal is not anticipated to have adverse impacts to the quality or function of the adjacent creek or affect wildlife corridors. In addition, impacts would be offset by the standard measures and BMPs implemented for the

project. It was therefore determined that the project would have a "*Less than Significant Impact*" on riparian habitat.

This project was determined not to have significant impacts to riparian habitat per CEQA, and therefore mitigation under CEQA would not be required. However, permits would be required for this project; these would be submitted to the regulatory agencies after approval of the final environmental document. Regulatory agencies often require additional restoration or compensation for impacts to riparian habitat, including for temporal loss of habitat function; ratios would be determined in coordination with the agencies. Additional restoration is anticipated to be conducted onsite, or offsite within the same region.

Invasive Species

The project may promote the spread of invasive species to vegetation communities within the project area through native vegetation removal and propagule transmission through equipment and personnel access. However, all work would be done within the vicinity of SR 1, which is already highly disturbed, with high amounts of non-native and invasive plant cover. In addition, standard measures would be implemented, including limiting vegetation removal to the extent necessary, the use of erosion control that is free of noxious weeds, and cleaning of equipment prior to entering the job site. Therefore, it has been determined that that the project would have "*No Impact*" on riparian habitat or SNCs through the proliferation of invasive species.

Discussion of Environmental Evaluation Question 2.4c)—Biological Resources

c) Would the project 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?

Wetlands and Other Waters

The proposed project is anticipated to impact wetlands and other waters of the U.S. and State. Table 3 below provides a summary of impacts by feature type.

Table 3. Anticipated Impacts to Wetlands and Other Waters

Feature Type	Temporary Impact Area (acres)	Permanent Impact Area (acres)
Wetland Ditches	0.045	0
Seep Wetland	0.015	0.003
Total Impacts to Wetlands	**0.060**	**0.003**
Perennial Stream	0	0
Intermittent Drainages	0.003	0.001
Total Impact to Other Waters of the U.S. and State	**0.003**	**0.001**
Total Impacts to Wetlands and Other Waters of the U.S. And State	**0.063**	**0.004**

Wetlands

The proposed project would impact approximately 0.063 acre of wetland:

- ***Wetland Ditches:*** Approximately 0.045 acre of roadside wetland ditches would be temporarily impacted by the project, with approximately 0.044 acre of JP-PW1 and JP-PW2 impacted by the shoulder widening needed for the widened bridge, and 0.001 acre of JP-OW3 impacted to accommodate a vegetated bioswale near the intersection of SR 1 and Lansing Street.

- ***Seep Wetland:*** Approximately 0.018 acre of the seep wetland would be impacted from widening the bridge piers and forming the temporary trestle. It is anticipated

that approximately 0.003 acre of this area would be permanently impacted due to the extended northern pier.

Other Waters of the U.S. and State

The proposed project would impact approximately 0.004 acre of other waters:

- ***Intermittent Drainages:*** Approximately 0.004 acre of one intermittent drainage (JP-OW4) would be impacted. Approximately 0.003 acre of this would be temporary, due work required for the temporary trestle and falsework, and 0.001 acre would be permanent from the concrete fill of the widened pier and abutment.

The perennial stream, Jack Peters Creek, would not be impacted by the project.

Shading

Less than 0.04 acre of wetlands and other waters would be shaded by the temporary trestle. The trestle would be placed the first summer of construction, and remain through the wet season, until bridge construction is complete. The widened Jack Peters Creek Bridge is estimated to permanently shade approximately 0.02 acre of these areas. However, as the creek is within a narrowly incised canyon with substantial shading, the effects of shading are anticipated to be negligible.

Summary

Wetlands and other waters of the U.S. and State would be impacted by project activities. These features are all in close proximity to SR 1, and are subject to periodic disturbance from highway and bridge use and maintenance. In addition, many of the areas adjacent to SR 1 are degraded by the encroachment of invasive species.

The impacts to wetlands and waters would be small, and would be offset by project features, standard measures, and BMPs (see Section 1.2 and Section 1.4), including stabilizing and revegetating disturbed areas at the completion of construction to minimize erosion and restore functions and values of the habitat, preparing a Revegetation Plan (which would address the wetlands impacted by the project), installing THVF around environmentally sensitive areas, including measures to address the spread of invasive species, and implementing demolition and debris containment plans to ensure construction debris does not enter adjacent waters.

Drainage patterns in the project area would be perpetuated to the extent feasible; drainages would be realigned, and wetland ditches would be reestablished within the ditch to the

northeast of the existing bridge. The seep wetland is anticipated to reestablish over the bedrock and may expand due to the increased hydrology from the realigned ditch.

Taking all of the above into consideration, it was determined that the project would have a "*Less than Significant Impact*" on wetlands and other waters of the U.S. and State.

Though this project was determined not to have significant impacts to waters per CEQA, and therefore mitigation would not be required under CEQA, the State of California has a "no net loss" wetlands policy. Permits would be required for potential impacts to waters for this project; these would be submitted to the regulatory agencies after approval of the final environmental document. Regulatory agencies often require additional restoration or compensation for impacts to jurisdictional waters, including for temporal loss of habitat function; ratios would be determined in coordination with the agencies. Additional restoration is anticipated to be conducted onsite, or offsite within the same region.

Discussion of Environmental Evaluation Question 2.4d-f)—Biological Resources

"*No Impact*" determinations were made for CEQA environmental questions d) through f) based on the scope, description, and location of the proposed project, as well as the NES prepared in 2021 (Caltrans 2021d). The project would not alter wildlife corridors, conflict with local policies or ordinances, or conflict with any habitat conservation plans.

Mitigation Measures

Based on the determinations made in response to the questions on the CEQA Checklist, mitigation measures are not required for most biological resources in the project area, per CEQA.

However, under CEQA Checklist Question 2.4b), it was determined that there may be adverse effects to representative bishop pine forest, a sensitive natural community. Caltrans anticipates pursuing various options to offset impacts. Compensation ratios would be determined through consultation with regulatory agencies as part of the permitting process, which would be completed after approval of the environmental document. Both onsite and offsite options are being considered, and may include the following:

- Onsite revegetation and enhancement: In addition to restoring disturbed areas, Caltrans would revegetate additional acreage with plants that are co-dominant within bishop pine forest. This may involve removing invasive plant species, such as Monterey cypress and Monterey pine.

- Offsite restoration or preservation: Restoration or preservation of bishop pine forest would be conducted offsite, at a location within the same region as the project.

As discussed above, mitigation is not required for resources other than representative bishop pine forest under CEQA. Permits are required for this project and would be submitted after approval of the final environmental document. Regulatory agencies often require additional restoration or compensation for impacts to resources, including SNCs, riparian habitat, and wetlands and other waters. Any additional measures would be determined in coordination with regulatory agencies. Additional restoration is anticipated to be conducted onsite, or offsite within the same region.

2.5. Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	No	No	No	**Yes**
Would the project: b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No	No	No	**Yes**
Would the project: c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Historic Property Survey Report (HPSR) dated October 17, 2016 (Caltrans 2016) and the Supplemental HPSR dated March 2, 2020 (Caltrans 2020a). Based on the review of resources, Caltrans has determined that a "Finding of No Adverse Effect with Standard Conditions" would be appropriate for this project. Caltrans would coordinate with the Sherwood Valley Band of Pomo, and a tribal and archaeological monitor would be used for ground-disturbing activities, as outlined in the Standard Measures in Section 1.4

2.6. Energy

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	No	No	No	**Yes**
Would the project: b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the Traffic, Noise, Air Quality, Energy and Greenhouse Gas memo dated November 7, 2019 (Caltrans 2019b). Potential impacts are not anticipated because the proposed project would not increase capacity or provide congestion relief when compared to the no-build alternative. In addition, construction-related energy consumption would be temporary, primarily from the use of diesel and gasoline for operating equipment, delivering materials, and hauling debris. There would not be a permanent new source of energy demand, and demand for fuel would have no noticeable effect on peak or baseline demands for energy. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy, or conflict with a plan for renewable energy or energy efficiency.

2.7. Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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	No	No	**Yes**
ii) Strong seismic ground shaking?	No	No	No	**Yes**
iii) Seismic-related ground failure, including liquefaction?	No	No	No	**Yes**
iv) Landslides?	No	No	No	**Yes**
Would the project: b) Result in substantial soil erosion or the loss of topsoil?	No	No	No	**Yes**
Would the project: 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	No	No	**Yes**
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	No	No	No	**Yes**

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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	No	No	**Yes**
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Updated Preliminary Foundation Report for Jack Peters Creek Bridge dated October 30, 2019 (Caltrans 2019b). Though the project is within a seismically active region, the area is not mapped as active as part of the Alquist-Priolo Special Studies Zone Act, and not zoned for fault rupture by the California Geologic Survey (CGS); there is no potential for the rupture of known faults. Due to the soils underlying the site, the potential for liquefaction to occur within materials supporting or impacting the bridge is negligible. The project is not anticipated to create seismic activity, activate landslides, or result in substantial soil erosion or loss of topsoil. In addition, paleontological resources or unique geologic features are not anticipated to be impacted.

2.8. Greenhouse Gas Emissions

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No	No	**Yes**	No
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No	No	**Yes**	No

Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation

design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

Regulatory Setting

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

Federal

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

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

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

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

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

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

State

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

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

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

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

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

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

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

EO B-30-15 (April 2015): Establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[3] Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

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

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

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

regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

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

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

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

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

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

Environmental Setting

The proposed project is in a rural area, with a primarily natural-resources based agricultural and tourism economy. State Route 1 is the main transportation route to and through the area for both passenger and commercial vehicles. The Mendocino Council of Governments (MCOG) guides transportation development in the project area. The Mendocino County General Plan Resource Management Element addresses air quality and emissions standards in the project area (County of Mendocino 2009).

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG

emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

National GHG Inventory

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change (see Figure 14). The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO_2, CH_4, N_2O, HFCs, perfluorocarbons, SF_6, and nitrogen trifluoride. It also accounts for emissions of CO_2 that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO_2 (carbon sequestration). The 1990–2016 inventory found that of 6,511 $MMTCO_2e$ GHG emissions in 2016, 81% consist of CO_2, 10% are CH_4, and 6% are N_2O; the balance consists of fluorinated gases (U.S. EPA 2018). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

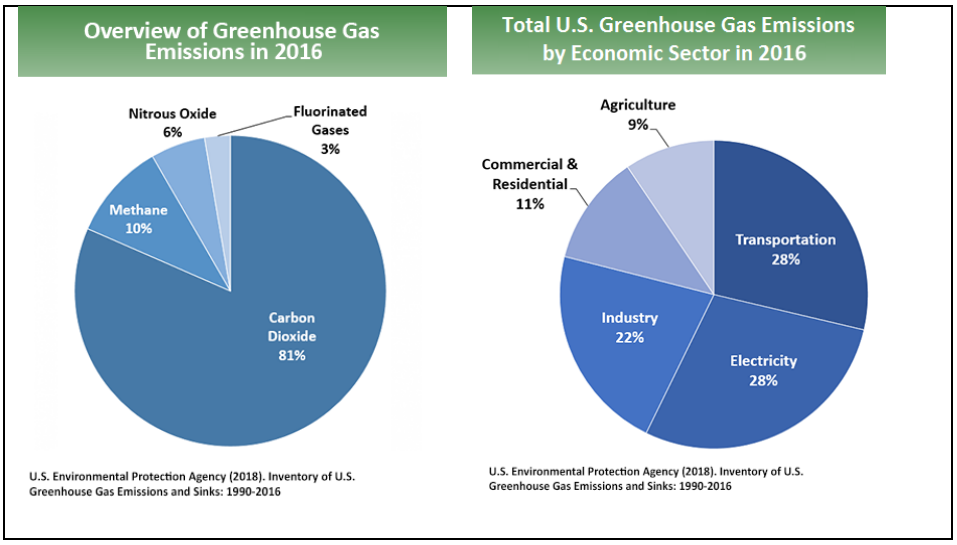

Figure 14. U.S. 2016 Greenhouse Gas Emissions

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year (see Figure 15). It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions

inventory found total California emissions of 424.1 $MMTCO_2e$ for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (see Figure 16) (ARB 2019b).

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their RTP/SCSs to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. Mendocino County is not an MPO and does have a GHG reduction goal set by ARB. The proposed project is included in the RTP for Mendocino County.

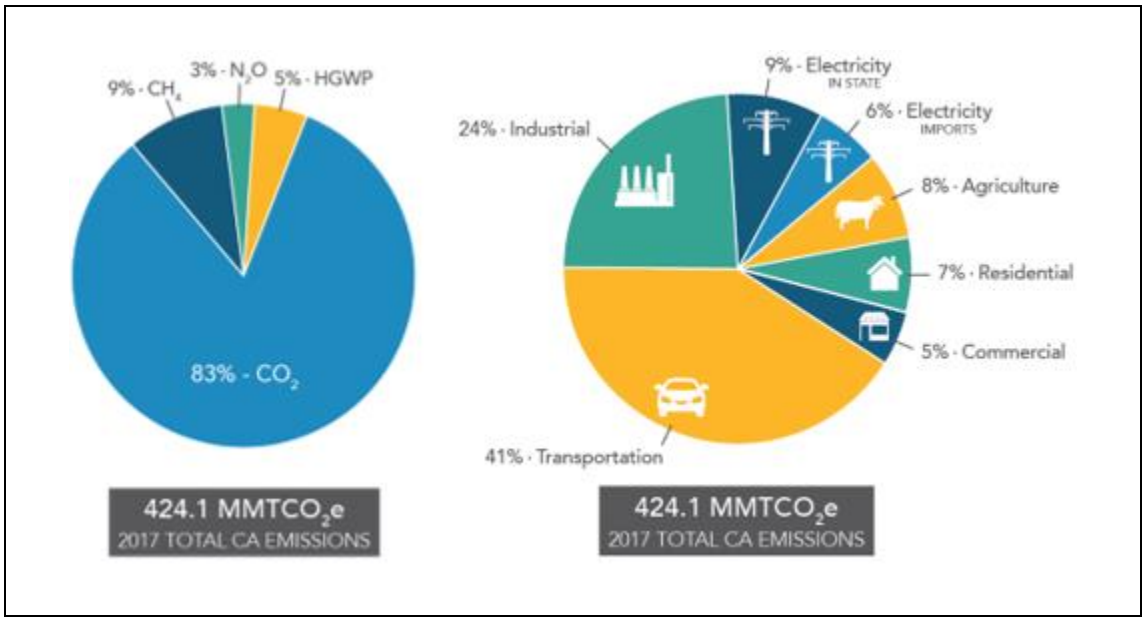

Figure 15. California 2017 GHG Emissions

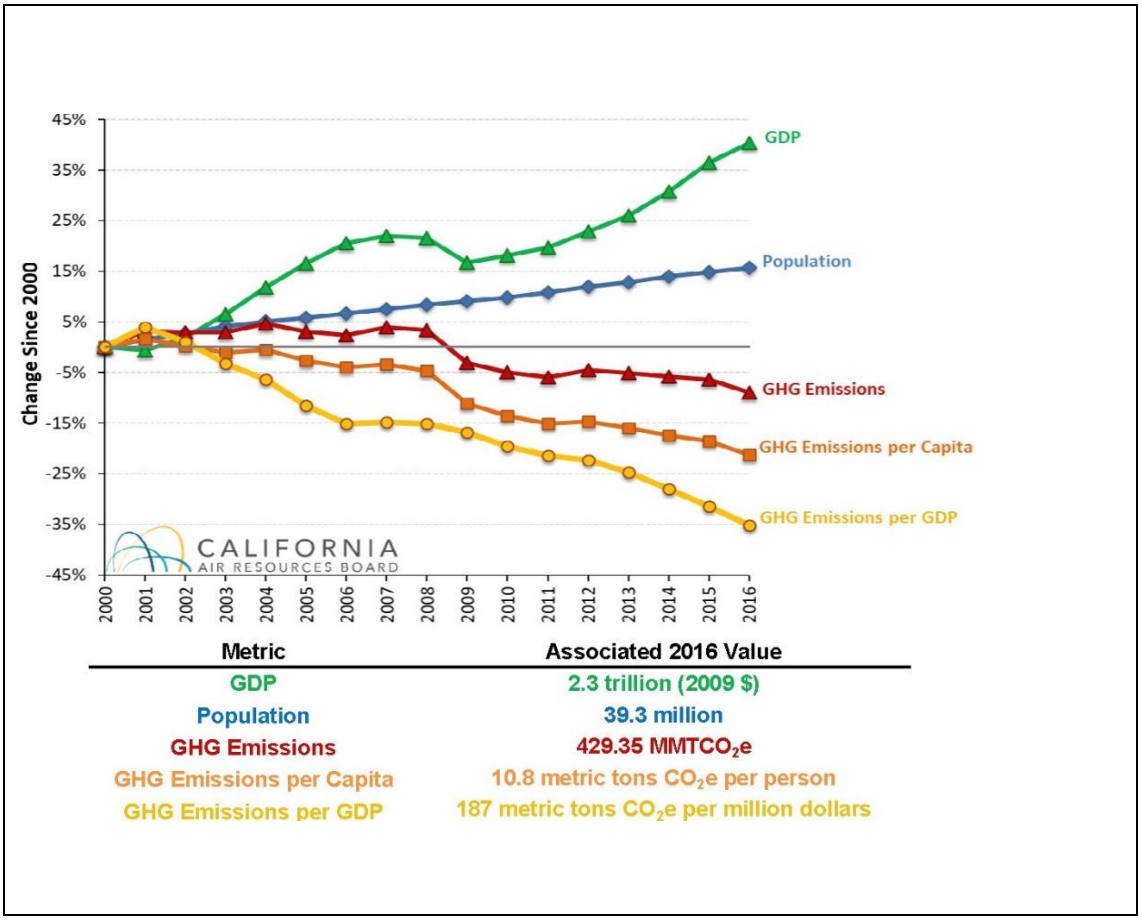

Figure 16. Change in California GDP, Population, and GHG Emissions Since 2000

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH_4 and N_2O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

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

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

Operational Emissions

The purpose of the proposed project is to widen the bridge to bring them to current design standards and improve pedestrian and bicycle facilities on the structures. This project will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR 1, no increase in vehicle miles traveled (VMT) would occur as result of project implementation. Rather, the project would improve safety and access for non-motorized travel. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

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

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

The Caltrans Construction Emission Tool (CAL-CET2018 version 1.2) was used to estimate average carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and hydrofluorocarbons (HFCs) emissions from construction activities. Table 1 summarizes estimates of GHG emissions during the construction period for the project.

Table 1. Maximum Greenhouse Gas Emissions from Construction

Construction Year 2022 Jack Peters Location	**CO_2**	**CH_4**	**N_2O**	**HFC**
Total: Tons	130	<1	<1	<1

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

CEQA Conclusion

While the proposed project would result in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation

adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the impact would be less than significant.

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

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals (see Figure 17) that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, Safeguarding California.

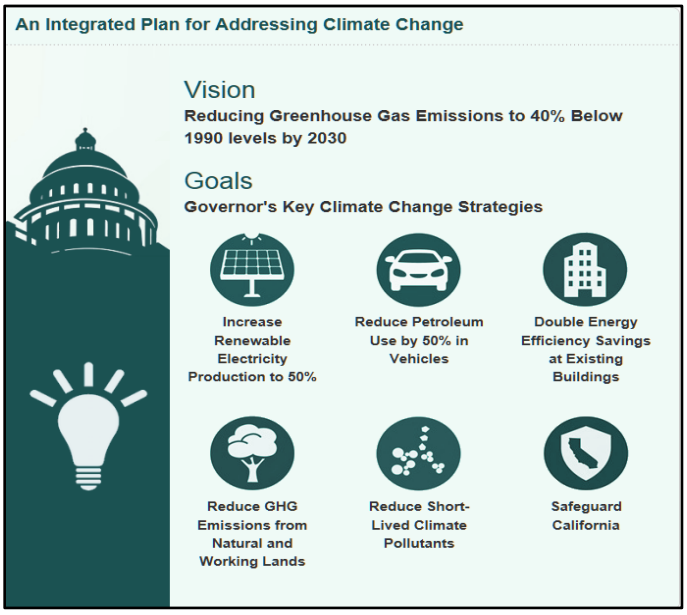

Figure 17. California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing greenhouse gas emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, SB 1386 established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

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

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the California Transportation Plan 2040, which establishes a new model for developing ground transportation systems, consistent with CO_2 reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use

patterns to help reduce greenhouse gas emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

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

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

Funding and Technical Assistance Programs

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

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

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

Operational emissions reduction measures

- All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming, and through

photosynthesis, decreases CO2. This replanting would help offset any potential CO2 emissions increase.

- Areas of disturbed vegetation would be replanted with regionally appropriate native plants. Plants absorb CO2 from the atmosphere. The revegetation plan would include on-site restoration and enhancement strategies for grand fir and bishop pine trees removed during construction. Caltrans would also conduct in-kind restoration of forest habitat beyond clear recovery zones in vegetation removal areas 25 to 75 feet from the edge of pavement as well as on land within the Caltrans ROW adjacent to these areas and in previous PG&E utility corridors.

- Improved bicycle and pedestrian facilities will support non-motorized travel within the project limits.

Construction emissions reduction measures

- Standard construction best management practices for air quality would apply. Such air-pollution control measures can also help reduce construction GHG emissions.

- Equipment will be kept in proper tune and working condition.

- The right size equipment will be used for the job.

- The project will balance earthwork quantities, using cut soil as fill soil wherever possible, which would reduce emissions from trucking and hauling trips.

- Pedestrian and bicycle access would be maintained during construction.

- A TMP would be implemented during construction to minimize traffic delays and idling emissions.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when

rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

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

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

U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions." (U.S. DOT 2011).

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

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's latest effort to "translate the state of climate

science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Adaptive capacity is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."

Exposure is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.

Resilience is the "capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.

Sensitivity is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.

Vulnerability is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factors. These factors include, but are not limited to, ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and

continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

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

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

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

Caltrans Adaptation Efforts

Vulnerability Assessments

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

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.

- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.

- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

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

Project Adaptation Analysis

Sea Level Rise

A Sea-Level Rise analysis is required for projects in the Coastal Zone that require approval of a Coastal Development Permit or amendment. This project would require such clearance under the California Coastal Act.

This project is located adjacent to, but outside of, areas expected to be affected by predicted sea-level rise. Since the construction year is scheduled for 2023, the Sea-Level Rise scenario for 2070 was analyzed. Using projections in the *State of California Sea-Level Rise Guidance 2018 Update*, the most likely (66 percent probability) range of sea-level rise by 2060 at this location, based on the nearest tide gage at North Spit, is projected to be from 1.4 feet to 2.4 feet under a high-emissions scenario (RCP 8.5). The 1-in-200 chance (4 percent) probability of sea-level rise by 2070 is 4 feet. Under the highest potential emissions scenario (H++), sea-level could rise as much as 5.6 feet by 2070.

Jack Peters Creek Bridge is approximately 100 feet inland from the shoreline, approximately 80 feet above on bluffs. Jack Peters Creek is subject to sea level rise, tidal influence, storm surge, and tsunami impacts. The existing substructure ranges from pier foots at an elevation of 22.9 ft to the abutments at an elevation of 63.9 ft in elevation with a soffit elevation of approximately 70 to 74 ft. The structure is set on vertical bedrock bluffs with an elevation of

approximately 80 feet. Hydraulics Design determined that the water surface elevation in l 00-year flood event is estimated to be 13.8 ft when modelled, using the tail-water control elevation from the estimated total water elevation of 13.8 feet. The WSE in 100-year flood event is estimated to be 10.7 ft (SLR Year 2000) when modelled in HECRAS using the tail-water control elevation of 10.7 ft.

The Jack Peters Creek channel at the bridge is within a deep coastal bluff channel, therefore an increase in flooding due to of SLR is relatively minor. Sea Level Rise does not affect the project site due to the soffit to WSE elevation difference of greater than 50 feet. The proposed construction activities are not expected to have any significant adverse floodplain impacts as no work is to be performed within the creek channel. Considering the depth of the bridge deck, the space to clear debris below the structure is greater than 50 feet in a Q 100 event in the project sea-level rise year 2100. The lowest elevation of the substructure is at the base of pier 3 and 4 are approximately 9 feet above the water surface during a Q 1 00 event in the sea-level year 2100. It is anticipated that sea-level rise will not have significant effects on the proposed structure improvements at Jack Peters Creek Bridge for the planned life of the project.

Floodplains

According to Federal Emergency Management Agency (FEMA) flood zone maps, the bridge project site is located in Flood Zone A. The Zone A designation is used for areas where there is an area with a 1% annual chance of flooding. As mentioned above, the specific bridge location is elevated and even during a 100-year flood event is not likely to experience flooding. Further, the proposed project includes new or upgraded drainage facilities and culverts and bioswales to slow and absorb stormwater runoff.

Wildfire

Based on the fire hazard severity zone maps provided by the California Department of Forestry and Fire Protection (CAL FIRE), the Jack Peters bridge site is within a Very High Fire Hazard Severity Zone. However, the proposed project would not construct any new features or induce uses that would be vulnerable to wildfire or increase risk of wildfire. Contractors would be directed to take precautions against fire. In addition, the project would not impair an emergency response plan or emergency evacuation plan or have the potential to exacerbate wildfire risks.

No Build Alternative

The existing condition would remain; therefore, per CEQA, “No Impact” would occur.

2.9. Hazards and Hazardous Materials

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No	No	No	**Yes**
Would the project: 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?	No	No	No	**Yes**
Would the project: 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	No	No	**Yes**
Would the project: 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	No	No	**Yes**
Would the project: 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	No	No	**Yes**

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	No	**Yes**
Would the project: g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the updated Initial Site Assessment dated November 12, 2021 (Caltrans 2021c). A Preliminary Site Investigation was conducted to determine the presence of Aerially Deposited Lead, and an Asbestos Containing Materials and Lead Containing Paint Survey was conducted for the bridge structure. Lead is present in the soil adjacent to the highway shoulder and may be present in existing paints on the bridge and bridge approaches. No asbestos was found within the bridge structure. Standard measures for management of lead materials, including those listed in Section 1.4, would be included in this project. The project is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and would not create a significant hazard to the public or the environment.

2.10. Hydrology and Water Quality

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	No	No	No	**No**
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	No	No	No	**No**
Would the project: 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	No	No	**No**
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No	No	No	**No**
(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	No	No	**No**

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(iv) impede or redirect flood flows?	No	No	No	**No**
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No	No	No	**No**
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No	No	No	**No**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Water Quality Assessment Memorandum dated October 2019 (Caltrans 2019c) and the Floodplain Evaluation Report Summary dated October 2021 (Caltrans 2021a). Potential impacts to hydrology and water quality are not anticipated due to incorporation of Caltrans BMPs and additional BMPs that may be incorporated into the approved project Storm Water Pollution Prevention Plan during the construction phase of the project. In addition, the project is not anticipated to have adverse floodplain impacts because bridge features are perpendicular to streamflow, and would maintain existing conditions.

2.11. Land Use and Planning

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?	No	No	No	**Yes**
Would the project: 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?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to land use and planning are not anticipated because the project does not divide an established community or conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

2.12. Mineral Resources

Question:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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	No	No	**Yes**
Would the project: 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	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to mineral resources are not anticipated as there are no known mineral resources present.

2.13. Noise

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in: 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?	No	No	No	**Yes**
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?	No	No	No	**No**
Would the project result in: 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	No	No	**No**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Traffic Noise, Air Quality, Energy and Greenhouse Gas memo dated November 7, 2019 (Caltrans 2019a). The proposed project does not construct a new highway in a new location or substantially change the vertical or horizontal alignments. Traffic volumes, composition and speeds would remain the same. Therefore, permanent noise impacts are not anticipated. Noise generated during construction would be temporary and would be minimized by Caltrans Standard Specification 14-8.02, which requires controlling and monitoring noise from work activities, and restrictions on noise levels from 9:00 p.m. to 6:00 a.m. (Caltrans 2018).

2.14. Population and Housing

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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	No	No	**Yes**
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts are not anticipated as the project does not involve activities that would directly or indirectly affect population growth or housing.

2.15. Public Services

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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	No	No	**Yes**
Police protection?	No	No	No	**Yes**
Schools?	No	No	No	**Yes**
Parks?	No	No	No	**Yes**
Other public facilities?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Although there would be temporary traffic delays during construction, all emergency response agencies in the area would be notified of the project construction schedule and would have access to SR 1 throughout construction.

2.16. Recreation

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No	No	No	**Yes**
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	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to recreation are not anticipated given the project would not increase the use of the parks and would not include adding new recreational facilities.

2.17. Transportation

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No	No	No	**Yes**
Would the project: b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No	No	No	**Yes**
Would the project: 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	No	No	**Yes**
Would the project: d) Result in inadequate emergency access?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to transportation are not anticipated because the proposed project would remain a two-lane rural highway, and the project is not likely to lead to a substantial increase in vehicle miles traveled (VMT). The project would, however, add pedestrian and bicycle facilities, which may encourage non-motorized forms of transportation, and therefore decrease VMT.

Although there would be temporary traffic delays on SR 1 during construction, there would not be any permanent changes to transportation. A Transportation Management Plan (TMP) would be developed and construction traffic would be scheduled and routed to reduce congestion. During construction, pedestrians and bicycles would be accommodated through the construction area and all emergency response agencies would have access to SR 1.

2.18. Tribal Cultural Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project cause a substant adverse change in the significance a tribal cultural resource, defined in Public Resources Code Section 210 as either a site, feature, place, cultu landscape that is geographically defined in terms of the size and sco of the landscape, sacred place, or object with cultural value to a California Native American tribe, an that is: 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	No	No	**Yes**
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	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Historic Property Survey Report (HPSR) dated October 17, 2016 (Caltrans 2016) and the Supplemental HPSR dated March 2, 2020 (Caltrans 2020a). Caltrans has been consulting with tribes since 2015 (see Section 3.2) and will continue to consult with interested tribes throughout the life of the project. It is anticipated that the project would not affect tribal resources with inclusion of the standard measures outlined in Section 1.4.

2.19. Utilities and Service Systems

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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?	No	No	No	**Yes**
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No	No	No	**Yes**
Would the project: 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	No	No	**Yes**
Would the project: 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	No	No	**Yes**
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. Utility lines near Jack Peters Creek Bridge would be temporarily raised to a minimum of 100 feet above the bridge deck to provide adequate clearance for equipment. It is anticipated that utility relocation work would be short-term and would not result in significant environmental effects. The project would not create a new source of wastewater or solid waste or create a new demand for water supplies. Therefore, impacts to utilities and service systems are not anticipated.

2.20. Wildfire

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	No	**Yes**
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	No	No	**Yes**
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	No	No	**Yes**
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	No	No	**Yes**

"*No Impact*" determinations in this section are based on the scope, description, and location of the proposed project. The project is located within a State Responsibility Area (SRA) and is within moderate or very high Fire Hazard Severity Zones (CALFIRE 2020). However, the proposed project would not construct new features or induce uses that would increase fire risks. The proposed work would not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to significant risks; therefore, potential wildfire impacts are not anticipated.

2.21. Mandatory Findings of Significance

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	No	No	No	**Yes**
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)?	No	No	No	**Yes**
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No	No	No	**Yes**

California Environmental Quality Act of 1970 (CEQA) requires preparation of an Environmental Impact Report (EIR) when certain specific impacts may result from construction or implementation of a project. The analysis indicated the potential impacts associated with this project would not require an EIR. Mandatory Findings of Significance are not required for projects where an EIR has not been prepared.

2.22. Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time (CEQA, § 15355)**.**

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "…situations where the cumulative effects are found to be significant." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. The analysis indicates the activities associated with this project do not have the potential to have significant direct, indirect, or cumulative impacts on any resource. Given this, an EIR and CIA were not required for this project.

Chapter 3. Agency and Public Coordination

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

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

3.1. Coordination with Resource Agencies

Table 4 lists agency coordination conducted for the project.

Table 4. Agency Coordination and Professional Contacts

Date	Personnel	Notes
June 25, 2015	Sean Marquis, Lori McIntosh, Keith Pelfrey, Caltrans Biologists; Greg Schmidt USFWS	Field agency meeting to discuss resources present and level of consultation.
June 30, 2015	S. Marquis, Caltrans Biologist; Darren Howe, NMFS	Caltrans requested and received a species list from NMFS for the project area.
July 9, 2015	S. Marquis, Caltrans Biologist; Sean Gallagher, CDFW	Caltrans requested information from CDFW regarding salmonids that potentially occur within the project area. This information was received on July 23, 2015, and August 10, 2015.
July 14, 2015	S. Marquis, Caltrans Biologist; D. Howe, NMFS	Field agency meeting to discuss fisheries resources present and level of consultation.
August 5, and October 8, 2015, April 27, 2016	S. Marquis, Caltrans Biologist; D. Howe, NMFS	Phone meeting to discuss the project and potential effects on listed fish.

Date	Personnel	Notes
September 4, 2015	S. Marquis, Caltrans Biologist; G. Schmidt, USFWS	S. Marquis sent email to USFWS with results of *Viola adunca* and *Hosackia gracilis* (butterfly host plant) surveys.
January 23, February 2, March 27, and June 22, 2018	Desiree Davenport, Caltrans Biologist; D. Howe, NMFS	Caltrans requested and received an updated species list from NMFS for the project area; technical assistance on Essential Fish Habitat (EFH), Southern DPS Green Sturgeon, discussion of use of the Programmatic Biological Opinion via email.
February 28, 2019	Tracy Walker, Caltrans Biologist; S. Frederickson, Senior Resource Specialist; G. Schmidt, USFWS; Jamie Jackson, CDFW; E. Meza, NMFS; Mike Kelly, NMFS; M. Warburton, Senior Biologist, ICF	Level 1 Agency meeting at USFWS Arcata Office. Presented resource agencies with overview of Jack Peters Creek Bridge project.
June 4, 2019	T. Walker, Caltrans Biologist; Stephen Umbertis, Caltrans Coordinator; E. Meza, NMFS	Field agency meeting to discuss fisheries resources present and level of consultation.
July 17, 2019	T. Walker, Caltrans Biologist; S. Umbertis, Caltrans Coordinator; J. Jackson, CDFW	Field agency meeting to discuss riparian, bats, and SNCs present and level of consultation.
July 23, 2019	T. Walker, Caltrans Biologist; J. Jackson, CDFW	Sent follow-up email to CDFW summarizing the field site review.
August 16, 2019	T. Walker, Caltrans Biologist; Shaun Thompson, CDFW	Email confirmation to CDFW to confirm presence of listed fish species, including species of special concern.
August 16, 2019	T. Walker, Caltrans Biologist; E. Meza, NMFS	Email update to NMFS on recent changes to the project ESL and potential impacts from those changes on federally listed species.
August 19, 2019	T. Walker, Caltrans Biologist; G. Schmidt, USFWS	Email update to USFWS on recent changes to the project ESL and potential impacts from those changes on federally listed species.
August 29, 2019	T. Walker, Caltrans Biologist, Christy Wagner, Caltrans Revegetation Specialist; Robert Meade, USACE Liaison	Field review of potential jurisdictional wetlands.
August 30, 2019	T. Walker, Caltrans Biologist; S. Frederickson, Senior Resource Specialist; G. Schmidt, USFWS	Meeting via phone to discuss potential habitat for northern spotted owl (NSO) and marbled murrelet (MAMU); discussed butterfly survey and consultation requirements.

Date	Personnel	Notes
September 9, 2019	T. Walker, Caltrans Biologist; G. Schmidt, USFWS	Email received from USFWS stating there is no potential for NSO or MAMU to occur within the BSA.
September 26, 2019	T. Walker, Caltrans Biologist; E. Meza, NMFS	Second phone call to NMFS to discuss species present at each drainage and confirm levels of hydroacoustic analysis.
November 8, 2019	T. Walker, Caltrans Biologist; S. Frederickson, Senior Resource Specialist; Liza Walker, Senior Caltrans Coordinator; E. Meza, NMFS	Conference call with NMFS to confirm levels of hydroacoustic analysis needed.
December 3, 2019	T. Walker, Caltrans Biologist; E. Meza, NMFS	Conference call with NMFS to confirm types of EFH required for the project.
March 17, 2020	T. Walker, Caltrans Biologist; E. Meza, NMFS	Email exchange with NMFS to confirm no effect determination for Southern DPS of green sturgeon and CC DPS of Chinook salmon.
March 19, 2020	T. Walker, Caltrans Biologist; Jennifer Olson, CDFW	Updated new CDFW staff on status of project and summarized site visit with past liaison Jamie Jackson.
March 24, 2020	T. Walker, Caltrans Biologist; J. Olson, CDFW; E. Meza, NMFS; G. Schmidt, USFWS	Email update to CDFW, NMFS, and USFWS notifying them that the two bridge sites were no longer combined into one project. Each bridge site how has its own project.
May 14, 2020	T. Walker, Caltrans Biologist; S. Frederickson, Senior Resource Specialist; L. Walker, Senior Caltrans Coordinator; G. Schmidt, USFWS	Conference call with USFWS to discuss LBB survey area requirements and conditions for determination of effect of project actions on LBB and its host plant.
August 20, 2020	T. Walker, Caltrans Biologist; J. Olson, CDFW	Field agency meeting to discuss riparian, bats, and SNC impacts and present level of consultation.
August 25, 2020	T. Walker, Caltrans Biologist; J. Olson, CDFW	CDFW acknowledged summary email from Caltrans and its details regarding resources present at Jack Peters Creek Bridge.
April 28, 2021	T. Walker, Caltrans Biologist; S. Frederickson, Senior Resource Specialist; G. Schmidt, USFWS; J. Olson, CDFW; Andrew Trent, NMFS; Mike Kelly, NMFS;	Level 1 Agency meeting at USFWS Arcata Office. Presented resource agencies with construction updates of Jack Peters Creek Bridge project.

Date	Personnel	Notes
August 30, 2021	T. Walker, Caltrans Biologist; E. Meza, NMFS	Email exchange with NMFS to confirm whether there is any change in effect determination for steelhead with new project activity within OHWM of Jack Peters Creek.
August and September 2021	T. Walker, Caltrans Biologist; S. Frederickson, Senior Resource Specialist; J. Olson, CDFW	Liaison office hours visit and email exchange regarding Bishop Pine and Grand Fir Forest.
October 27, 2021	T. Walker, Caltrans Biologist; Kellie Eldridge, Caltrans Environmental Planner; R. Meade, Senior Resource Specialist; L. McFarlane, Coastal Commission Liaison; L. Walker, Senior Environmental Planner; Coastal Commission Representatives	Meeting with the CCC to discuss ESHA.

3.2. Coordination with Tribes

Native American Consultation was initiated for Jack Peters Creek Bridge in August 2015, when it was part of the Three Bridges Project (along with Pudding Creek Bridge and Little River Bridge); letters were sent to each of the tribes listed on the Native American Heritage Commission (NAHC) contact list, including the Sherwood Valley Band of Pomo, Potter Valley Tribe, Stewarts Point Rancheria, Redwood Valley Rancheria, Pinoleville Pomo Nation, Round Valley Indian Tribes, and the Yokayo Tribe. The Sherwood Valley Band of Pomo responded that they were open to consultation; the other tribes either responded that there were no known conflicts within the project area, or no response was received. Caltrans staff conducted a field visit with a tribal representative on October 1, 2015 and met with the Sherwood Valley Band of Pomo at the Tribal Hall on May 10, 2016 to discuss the project. The tribe was re-contacted about Jack Peters Creek Bridge in July 2019; it was agreed that a tribal monitor would be present along with an archaeological monitor during ground-disturbing activities at the bridge.

3.3. Circulation

The draft document is available for public review for a 30-day comment period.

Chapter 4. List of Preparers

The following individuals performed the environmental work on the project:

4.1. California Department of Transportation, District 1

Alex Arevalo	Transportation Engineer (Water Quality)
Brandon Larsen	Supervising Environmental Planner (Environmental Office Chief)
Christian Figueroa	Engineering Geologist (Hazardous Waste)
Christy Wagner	Associate Environmental Planner (Revegetation Specialist)
Frank Demling	Senior Transportation Surveyor (Project Manager)
Jeremy Miller-Schulz	Transportation Engineer (Hydraulics)
Kellie Eldridge	Associate Environmental Planner (Coordinator)
Liza Walker	Senior Environmental Planner (Branch Chief)
Mohamed Kasem	Transportation Engineer
Phlora Barbash	Landscape Associate (Aesthetics)
Ryan Pommerenck	Transportation Engineer (Hydroacoustics)
Saeed Aazami	Transportation Engineer (Project Engineer)
Saeid Zandian	Transportation Engineer (Air, Noise, Greenhouse Gas, Energy)
Tariq Chechi	Senior Transportation Engineer (Project Manager)
Tim Keefe	Senior Environmental Planner (Archaeologist)
Tracy Walker	Associate Environmental Planner (Biologist)

Chapter 5. Distribution List

5.1. Federal and State Agencies

Andrew Trent, National Marine Fisheries Service
777 Sonoma Avenue
Santa Rosa, CA 95404

Amber Leavitt, California Coastal Commission
1385 Eighth Street, Ste. 130
Arcata, CA 95521

Dan Breen, U.S. Army Corps of Engineers
450 Golden Gate Ave, 4th Floor
P.O. Box 36152
San Francisco, CA 94102-3046

Greg Schmidt, U.S. Fish and Wildlife Service
1655 Heindon Road
Arcata, CA 95521-4573

Jen Olson, California Department of Fish and Wildlife
619 Second Street
Eureka, CA 95501

Susan Stewart, North Coast Water Quality Control Board
5550 Skylane Blvd, Ste. A
Santa Rosa, CA 95403-1072

5.2. Regional/County/Local Agencies

Julia Acker, Mendocino County Planning and Building Services—Coastal Planning
860 N Bush Street
Ukiah, CA 95482

Katrina Bartolomie, Mendocino County Clerk
501 Low Gap Road, Room 1020
Ukiah, CA 95482

Chapter 6. References

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PERSONAL COMMUNICATIONS

Jennifer Garrison, Senior Environmental Scientist, California Department of Fish and Wildlife

Elena Meza, Fisheries Biologist and Caltrans Liaison, National Marine Fisheries Service—West Coast Region

Appendix A. Project Layouts

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	01	51.87		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

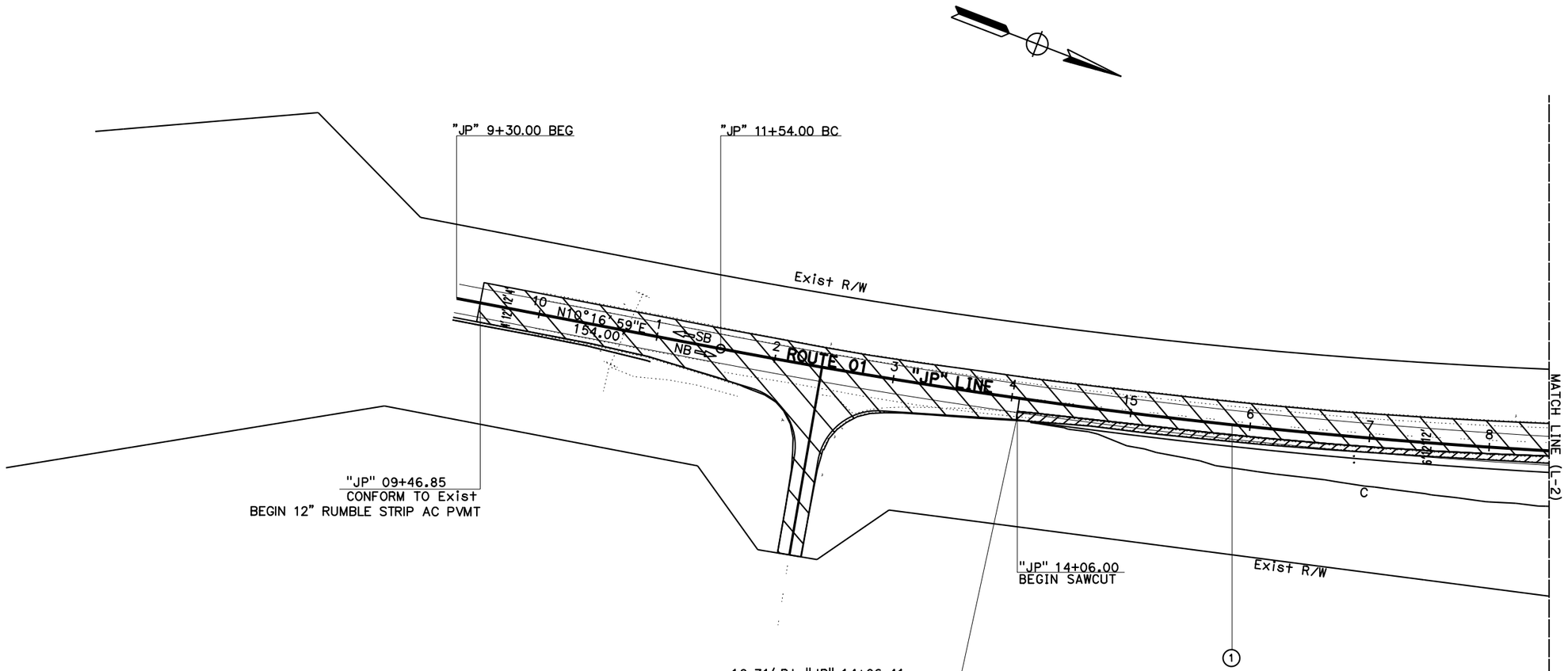
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:

COLD PLANE AC PAVEMENT (0.30'Max)

REMOVE ASPHALT CONCRETE PAVEMENT



CURVE DATA

No. #	R	Δ	T	L
1	5305.00	10°42'42"	497.35	991.79

LAYOUT

SCALE: 1" = 50'

L-1

REVISED BY | DATE REVISED

MOHAMED KASEM | SAEED AAZAMI

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

LAST REVISION | DATE PLOTTED => 2-DEC-2021 | TIME PLOTTED => 12:05

BORDER LAST REVISED 8/5/2020 | USERNAME => s146013 | DGN FILE => 0117000133ea001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0330 | PROJECT NUMBER & PHASE 01170001331

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	01	51.87		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

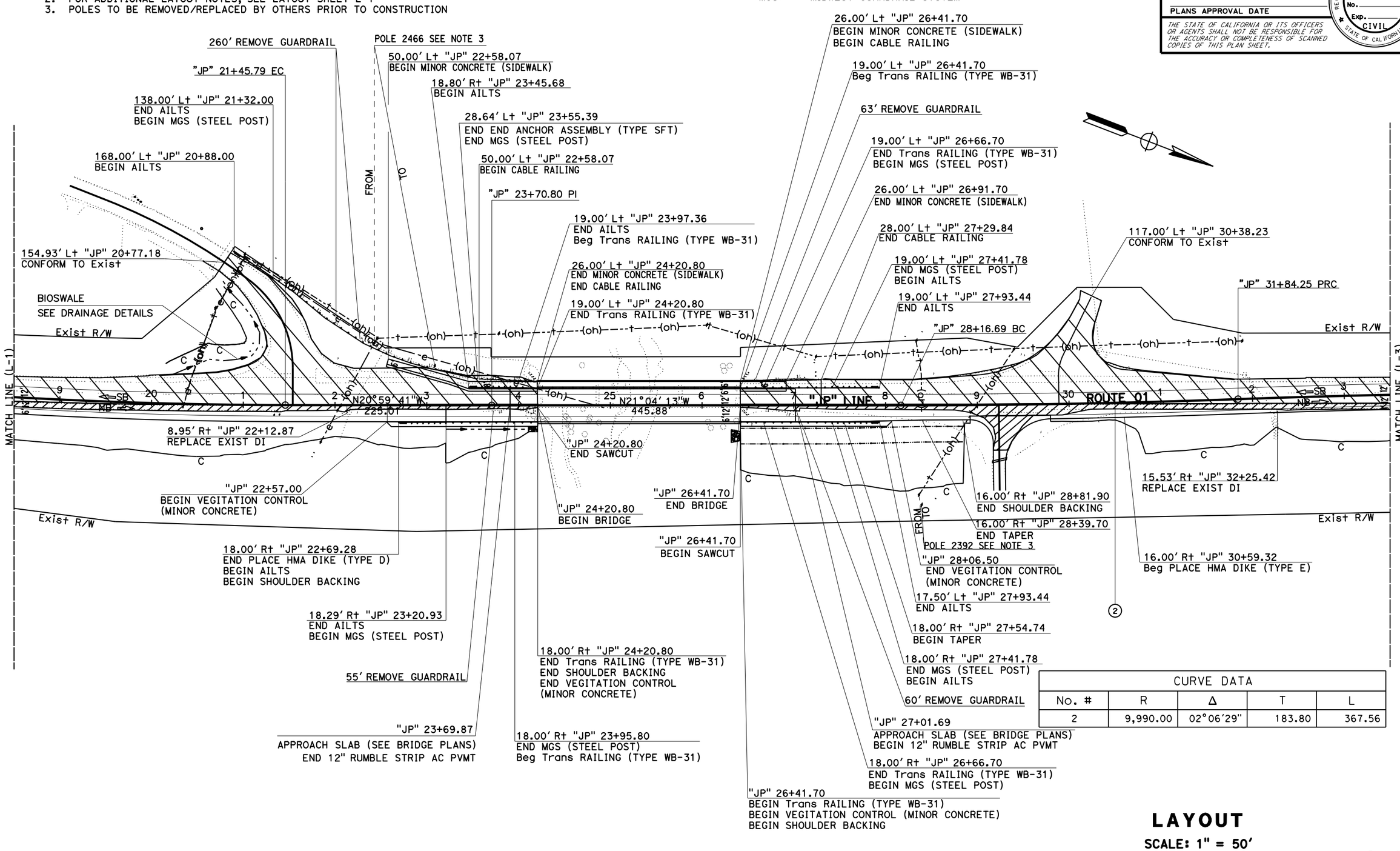
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE
2. FOR ADDITIONAL LAYOUT NOTES, SEE LAYOUT SHEET L-1
3. POLES TO BE REMOVED/REPLACED BY OTHERS PRIOR TO CONSTRUCTION

ABBREVIATION:

AILTS: ALTERNATIVE IN-LINE TERMINAL SYSTEM
MGS: MIDWEST GUARDRAIL SYSTEM



CURVE DATA				
No. #	R	Δ	T	L
2	9,990.00	02°06'29"	183.80	367.56

LAYOUT

SCALE: 1" = 50'

L-2

REVISED BY | DATE REVISED
MOHAMED KASEM | SAEED AAZAMI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
DERECK GOODWIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

DATE PLOTTED => 2-DEC-2021
TIME PLOTTED => 12:06
LAST REVISION

BORDER LAST REVISED 8/5/2020 | USERNAME => s146013 | DGN FILE => 0117000133ea002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0330 | PROJECT NUMBER & PHASE 01170001331

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	01	51.87		

REGISTERED CIVIL ENGINEER DATE

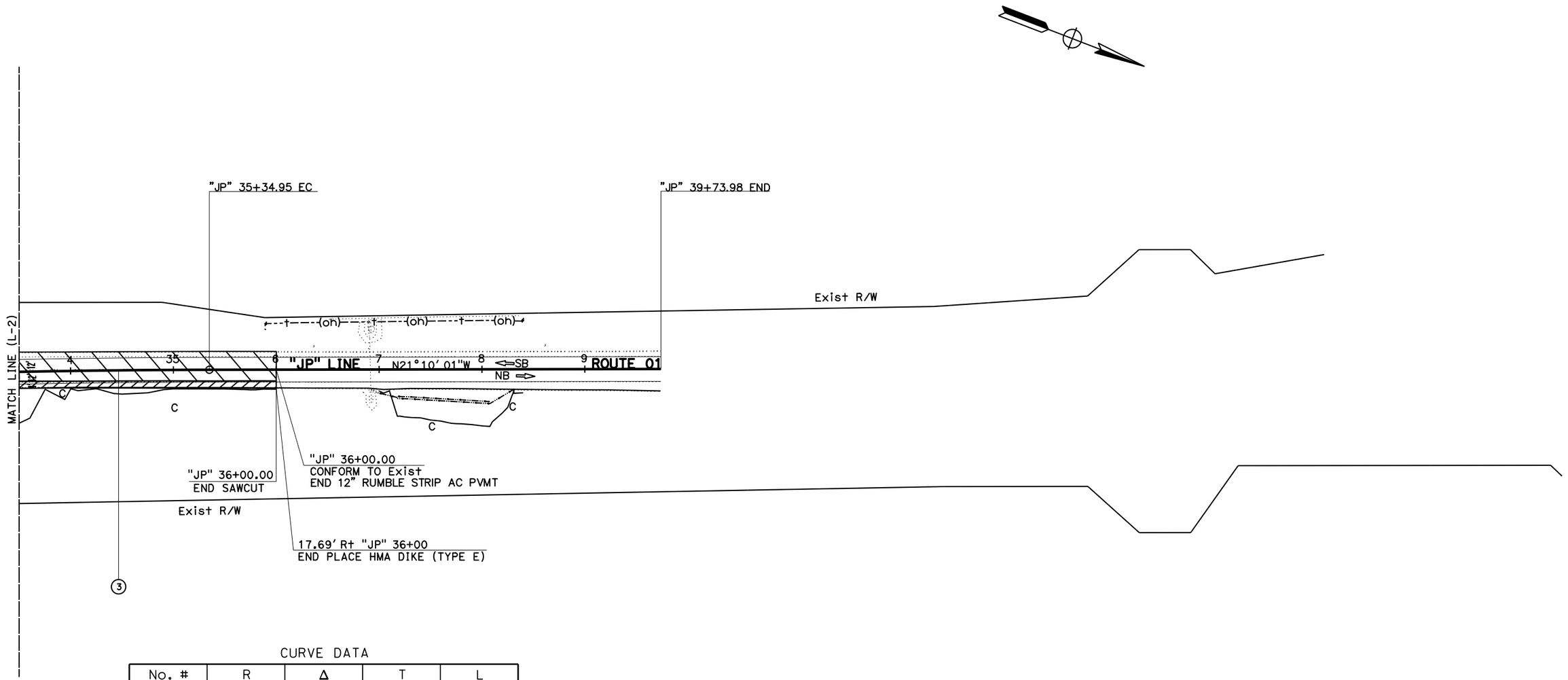
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL LAYOUT NOTES, SEE LAYOUT SHEET L-1



CURVE DATA

No. #	R	Δ	T	L
3	9,990.00	02°00'41"	175.37	350.69

LAYOUT

SCALE: 1" = 50'

L-3

CALCULATED-DESIGNED BY MOHAMED KASEM
CHECKED BY SAEED AAZAMI
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR DERECK GOODWIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
Caltrans

DATE PLOTTED => 2-DEC-2021
TIME PLOTTED => 12:06
LAST REVISION

BORDER LAST REVISED 8/5/2020
USERNAME => s146013
DGN FILE => 0117000133ea003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0330
PROJECT NUMBER & PHASE 01170001331

Appendix B. Title VI Policy Statement

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.

August 2020

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; (916) 324-8379 (TTY 711); or at <Title.VI@dot.ca.gov>.

Original signed by
Toks Omishakin
Director

Appendix C. USFWS, NMFS, CNDDB, and CNPS Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To: August 22, 2021
Consultation Code: 08EACT00-2019-SLI-0384
Event Code: 08EACT00-2021-E-01084
Project Name: Jack Peters Bridge Widening

Subject: Updated 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:

Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

Project Summary

Consultation Code: 08EACT00-2019-SLI-0384
Event Code: 08EACT00-2021-E-01084
Project Name: Jack Peters Bridge Widening
Project Type: TRANSPORTATION
Project Description: Bridge widening and utilities relocation as part of two bridge project
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.31835858435105,-123.79920277803566,14z

Counties: Mendocino County, California

Endangered Species Act Species

There is a total of 16 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
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened
Point Arena Mountain Beaver *Aplodontia rufa nigra* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7727	Endangered

Birds

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
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
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS 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/3911	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
Leatherback Sea Turtle *Dermochelys coriacea* 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/1493	Endangered

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
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
Behren's Silverspot Butterfly *Speyeria zerene behrensii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/900	Endangered
Lotis Blue Butterfly *Lycaeides argyrognomon lotis* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5174	Endangered

Flowering Plants

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Contra Costa Goldfields *Lasthenia conjugens* 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/7058	Endangered
Monterey Clover *Trifolium trichocalyx* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4282	Endangered
Showy Indian Clover *Trifolium amoenum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* https://ecos.fws.gov/ecp/species/4467#crithab	Final

From:	Walker, Tracy@DOT
To:	nmfswcrca.specieslist@noaa.gov
Subject:	Re: Request for Official Resource List for Caltrans Jack Peters Creek Bridge Widening and Bridge Rail Upgrade Project in Mendocino County EA 01-43484
Date:	Sunday, August 22, 2021 4:40:00 PM

Hello,

My name is Tracy Walker and I am a biologist with Caltrans in District 1. I am requesting confirmation of the species list generated below for the Jack Peters Creek Bridge Widening project, EA 01-43484.

Thank you.

Tracy Walker
District Biologist
North Region Environmental
1656 Union Street
Eureka, CA 95501
Cell: (707) 815-6503

Quad Name **Mendocino**

Quad Number **39123-C7**

ESA Anadromous Fish

SONCC Coho ESU (T) -

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

CC Chinook Salmon ESU (T) - **X**

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) - **X**

CCC Steelhead DPS (T) -

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 - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - X

CCC Steelhead Critical Habitat -

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) - X

Olive Ridley Sea Turtle (T/E) - X

Leatherback Sea Turtle (E) - X

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X

Fin Whale (E) - X

Humpback Whale (E) - X

Southern Resident Killer Whale (E) - X

North Pacific Right Whale (E) - X

Sei Whale (E) - X

Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X

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 - X

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 - **X**

MMPA Pinnipeds - **X**

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Mendocino (3912337) OR Fort Bragg (3912347) OR Noyo Hill (3912346) OR Albion (3912327) OR Elk (3912326) OR Mathison Peak (3912336))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alpine marsh violet *Viola palustris*	PDVIO041G0	None	None	G5	S1S2	2B.2
angel's hair lichen *Ramalina thrausta*	NLLEC3S340	None	None	G5?	S2S3	2B.1
ashy storm-petrel *Hydrobates homochroa*	ABNDC04030	None	None	G2	S2	SSC
Baker's goldfields *Lasthenia californica ssp. bakeri*	PDAST5L0C4	None	None	G3T1	S1	1B.2
Blasdale's bent grass *Agrostis blasdalei*	PMPOA04060	None	None	G2	S2	1B.2
bluff wallflower *Erysimum concinnum*	PDBRA160E3	None	None	G3	S2	1B.2
Bolander's beach pine *Pinus contorta ssp. bolanderi*	PGPIN04081	None	None	G5T2	S2	1B.2
bunchberry *Cornus canadensis*	PDCOR01040	None	None	G5	S2	2B.2
California sedge *Carex californica*	PMCYP032D0	None	None	G5	S2	2B.2
coast lily *Lilium maritimum*	PMLIL1A0C0	None	None	G2	S2	1B.1
Coastal and Valley Freshwater Marsh *Coastal and Valley Freshwater Marsh*	CTT52410CA	None	None	G3	S2.1	
coastal bluff morning-glory *Calystegia purpurata ssp. saxicola*	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
Coastal Brackish Marsh *Coastal Brackish Marsh*	CTT52200CA	None	None	G2	S2.1	
coastal triquetrella *Triquetrella californica*	NBMUS7S010	None	None	G2	S2	1B.2
coho salmon - central California coast ESU *Oncorhynchus kisutch pop. 4*	AFCHA02034	Endangered	Endangered	G5T2T3Q	S2	
congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	PDAST4R065	None	None	G5T2	S2	1B.2
dark-eyed gilia *Gilia millefoliata*	PDPLM04130	None	None	G2	S2	1B.2
deceiving sedge *Carex saliniformis*	PMCYP03BY0	None	None	G2	S2	1B.2
dwarf alkali grass *Puccinellia pumila*	PMPOA531L0	None	None	G4?	SH	2B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
foothill yellow-legged frog *Rana boylii*	AAABH01050	None	Endangered	G3	S3	SSC
globose dune beetle *Coelus globosus*	IICOL4A010	None	None	G1G2	S1S2	
Grand Fir Forest *Grand Fir Forest*	CTT82120CA	None	None	G1	S1.1	
great burnet *Sanguisorba officinalis*	PDROS1L060	None	None	G5?	S2	2B.2
hair-leaved rush *Juncus supiniformis*	PMJUN012R0	None	None	G5	S1	2B.2
Howell's spineflower *Chorizanthe howellii*	PDPGN040C0	Endangered	Threatened	G1	S1	1B.2
Humboldt Bay owl's-clover *Castilleja ambigua var. humboldtiensis*	PDSCR0D402	None	None	G4T2	S2	1B.2
Humboldt County milk-vetch *Astragalus agnicidus*	PDFAB0F080	None	Endangered	G2	S2	1B.1
lagoon sedge *Carex lenticularis var. limnophila*	PMCYP037A7	None	None	G5T5	S1	2B.2
leafy-stemmed mitrewort *Mitellastra caulescens*	PDSAX0N020	None	None	G5	S4	4.2
livid sedge *Carex livida*	PMCYP037L0	None	None	G5	SH	2A
lotis blue butterfly *Plebejus idas lotis*	IILEPG5013	Endangered	None	G5TH	SH	
Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0	None	None	G5	S3	2B.2
maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0	None	None	G3	S3	4.2
marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3	S2	
marsh pea *Lathyrus palustris*	PDFAB250P0	None	None	G5	S2	2B.2
Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0	None	None	G2	S2	1B.2
Mendocino dodder *Cuscuta pacifica var. papillata*	PDCUS011A2	None	None	G5T1	S1	1B.2
Mendocino leptonetid spider *Calileptoneta wapiti*	ILARAU6040	None	None	G1	S1	
Mendocino Pygmy Cypress Forest *Mendocino Pygmy Cypress Forest*	CTT83161CA	None	None	G2	S2.1	
Menzies' wallflower *Erysimum menziesii*	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Methuselah's beard lichen *Usnea longissima*	NLLEC5P420	None	None	G4	S4	4.2
Monterey clover *Trifolium trichocalyx*	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
Navarro roach *Lavinia symmetricus navarroensis*	AFCJB19023	None	None	G4T1T2	S2S3	SSC
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
North Coast phacelia *Phacelia insularis var. continentis*	PDHYD0C2B1	None	None	G2T2	S2	1B.2
Northern Coastal Salt Marsh *Northern Coastal Salt Marsh*	CTT52110CA	None	None	G3	S3.2	
northern goshawk *Accipiter gentilis*	ABNKC12060	None	None	G5	S3	SSC
northern microseris *Microseris borealis*	PDAST6E030	None	None	G5	S1	2B.1
northern red-legged frog *Rana aurora*	AAABH01021	None	None	G4	S3	SSC
obscure bumble bee *Bombus caliginosus*	IIHYM24380	None	None	G4?	S1S2	
Oregon coast paintbrush *Castilleja litoralis*	PDSCR0D012	None	None	G3	S3	2B.2
Oregon goldthread *Coptis laciniata*	PDRAN0A020	None	None	G4?	S3?	4.2
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6	None	None	G5T3	S2	1B.2
Pacific tailed frog *Ascaphus truei*	AAABA01010	None	None	G4	S3S4	SSC
perennial goldfields *Lasthenia californica ssp. macrantha*	PDAST5L0C5	None	None	G3T2	S2	1B.2
pink sand-verbena *Abronia umbellata var. breviflora*	PDNYC010N4	None	None	G4G5T2	S2	1B.1
Point Reyes blennosperma *Blennosperma nanum var. robustum*	PDAST1A022	None	Rare	G4T2	S2	1B.2
Point Reyes checkerbloom *Sidalcea calycosa ssp. rhizomata*	PDMAL11012	None	None	G5T2	S2	1B.2
Point Reyes horkelia *Horkelia marinensis*	PDROS0W0B0	None	None	G2	S2	1B.2
Pomo bronze shoulderband *Helminthoglypta arrosa pomoensis*	IMGASC2033	None	None	G2G3T1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
purple martin *Progne subis*	ABPAU01010	None	None	G5	S3	SSC
purple-stemmed checkerbloom *Sidalcea malviflora ssp. purpurea*	PDMAL110FL	None	None	G5T1	S1	1B.2
pygmy cypress *Hesperocyparis pygmaea*	PGCUP04032	None	None	G1	S1	1B.2
pygmy manzanita *Arctostaphylos nummularia ssp. mendocinoensis*	PDERI04280	None	None	G3?T1	S1	1B.2
red-bellied newt *Taricha rivularis*	AAAAF02020	None	None	G2	S2	SSC
round-headed Chinese-houses *Collinsia corymbosa*	PDSCR0H060	None	None	G1	S1	1B.2
running-pine *Lycopodium clavatum*	PPLYC01080	None	None	G5	S3	4.1
Santa Cruz clover *Trifolium buckwestiorum*	PDFAB402W0	None	None	G2	S2	1B.1
seacoast ragwort *Packera bolanderi var. bolanderi*	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011	None	None	G4T3	S3	1B.2
Siskiyou checkerbloom *Sidalcea malviflora ssp. patula*	PDMAL110F9	None	None	G5T2	S2	1B.2
small groundcone *Kopsiopsis hookeri*	PDORO01010	None	None	G4?	S1S2	2B.3
Sonoma tree vole *Arborimus pomo*	AMAFF23030	None	None	G3	S3	SSC
southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020	None	None	G3G4	S2S3	SSC
Sphagnum Bog *Sphagnum Bog*	CTT51110CA	None	None	G3	S1.2	
steelhead - northern California DPS *Oncorhynchus mykiss irideus pop. 16*	AFCHA0209Q	Threatened	None	G5T2T3Q	S2S3	
supple daisy *Erigeron supplex*	PDAST3M3Z0	None	None	G2	S2	1B.2
swamp harebell *Campanula californica*	PDCAM02060	None	None	G3	S3	1B.2
Ten Mile shoulderband *Noyo intersessa*	IMGASC5070	None	None	G2	S2	
Thurber's reed grass *Calamagrostis crassiglumis*	PMPOA17070	None	None	G3Q	S2	2B.1
tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered	None	G3	S3	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
tufted puffin *Fratercula cirrhata*	ABNNN12010	None	None	G5	S1S2	SSC
western bumble bee *Bombus occidentalis*	IIHYM24250	None	Candidate Endangered	G2G3	S1	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western snowy plover *Charadrius nivosus nivosus*	ABNNB03031	Threatened	None	G3T3	S2	SSC
white beaked-rush *Rhynchospora alba*	PMCYP0N010	None	None	G5	S2	2B.2
white-flowered rein orchid *Piperia candida*	PMORC1X050	None	None	G3	S3	1B.2
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP
Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	PDONA05025	None	None	G5T1	S1	1B.1

Record Count: 91

Inventory of Rare and Endangered Plants of California

CALIFORNIA NATIVE PLANT SOCIETY

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Search: Advanced

Search for species and Go

Search Results

Back

73 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3912337,3912326,3912347,3912346,3912327,3912336**]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Abronia umbellata var. *breviflora*	pink sand-verbena	Nyctaginaceae	perennial herb	Jun-Oct	None	None	G4G5T2	S2	1B.1	 ©2021 Scot Loring
Agrostis blasdalei	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	None	None	G2	S2	1B.2	No Photo Available
Angelica lucida	sea-watch	Apiaceae	perennial herb	Apr-Sep	None	None	G5	S3	4.2	No Photo Available
Arctostaphylos nummularia ssp. *mendocinoensis*	pygmy manzanita	Ericaceae	perennial evergreen shrub	Jan	None	None	G3?T1	S1	1B.2	No Photo Available
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	Apr-Sep	None	CE	G2	S2	1B.1	No Photo Available
Blennosperma nanum var. *robustum*	Point Reyes blennosperma	Asteraceae	annual herb	Feb-Apr	None	CR	G4T2	S2	1B.2	No Photo Available
Calamagrostis bolanderi	Bolander's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G4	S4	4.2	No Photo Available
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G3Q	S2	2B.1	No Photo Available
Calystegia purpurata ssp. *saxicola*	coastal bluff morning-glory	Convolvulaceae	perennial herb	(Mar)Apr-Sep	None	None	G4T2T3	S2S3	1B.2	No Photo Available
Campanula	swamp harebell	Campanulaceae	perennial	Jun-Oct	None	None	G3	S3	1B.2	

californica			rhizomatous herb						No Photo Available
Carex californica	California sedge	Cyperaceae	perennial rhizomatous herb	May-Aug	None	None	G5	S2	2B.2	No Photo Available

SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Carex lenticularis var. *limnophila*	lagoon sedge	Cyperaceae	perennial herb	Jun-Aug	None	None	G5T5	S1	2B.2	No Photo Available
Carex livida	livid sedge	Cyperaceae	perennial rhizomatous herb	Jun	None	None	G5	SH	2A	No Photo Available
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None	None	G5	S3	2B.2	No Photo Available
Carex saliniformis	deceiving sedge	Cyperaceae	perennial rhizomatous herb	Jun(Jul)	None	None	G2	S2	1B.2	No Photo Available
Castilleja ambigua var. *ambigua*	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2	No Photo Available
Castilleja ambigua var. *humboldtiensis*	Humboldt Bay owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-Aug	None	None	G4T2	S2	1B.2	No Photo Available
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun	None	None	G3	S3	2B.2	No Photo Available
Castilleja mendocinensis	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Aug	None	None	G2	S2	1B.2	No Photo Available
Ceanothus gloriosus var. *exaltatus*	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun(Aug)	None	None	G4T4	S4	4.3	No Photo Available
Ceanothus gloriosus var. *gloriosus*	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	None	None	G4T4	S4	4.3	No Photo Available
Chorizanthe howellii	Howell's spineflower	Polygonaceae	annual herb	May-Jul	FE	CT	G1	S1	1B.2	No Photo Available
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun	None	None	G5?	S3	4.3	No Photo Available
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	Onagraceae	annual herb	Jun-Aug	None	None	G5T1	S1	1B.1	No Photo Available
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	None	None	G1	S1	1B.2	No Photo

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
										Available
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	None	None	G4?	S3?	4.2	No Photo Available
Cornus canadensis	bunchberry	Cornaceae	perennial rhizomatous herb	May-Jul	None	None	G5	S2	2B.2	 © 2021 Scot Loring
Cuscuta pacifica var. *papillata*	Mendocino dodder	Convolvulaceae	annual vine (parasitic)	(Jun)Jul-Oct	None	None	G5T1	S1	1B.2	No Photo Available
Darlingtonia californica	California pitcherplant	Sarraceniaceae	perennial rhizomatous herb (carnivorous)	Apr-Aug	None	None	G4	S4	4.2	 © 2021 Scot Loring
Erigeron supplex	supple daisy	Asteraceae	perennial herb	May-Jul	None	None	G2	S2	1B.2	No Photo Available
Erysimum concinnum	bluff wallflower	Brassicaceae	annual/perennial herb	Feb-Jul	None	None	G3	S2	1B.2	No Photo Available
Erysimum menziesii	Menzies' wallflower	Brassicaceae	perennial herb	Mar-Sep	FE	CE	G1	S1	1B.1	No Photo Available
Gilia capitata ssp. *pacifica*	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	G5T3	S2	1B.2	No Photo Available
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	No Photo Available
Glehnia littoralis ssp. *leiocarpa*	American glehnia	Apiaceae	perennial herb	May-Aug	None	None	G5T5	S2S3	4.2	No Photo Available
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2	No Photo Available
Hemizonia congesta ssp. *tracyi*	Tracy's tarplant	Asteraceae	annual herb	May-Oct	None	None	G5T4	S4	4.3	No Photo Available
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2	No Photo Available
Hesperocyparis	pygmy cypress	Cupressaceae	perennial		None	None	G1	S1	1B.2	

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
pygmaea			evergreen tree							No Photo Available
Horkelia marinensis	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	None	None	G2	S2	1B.2	No Photo Available
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2	No Photo Available
Juncus supiniformis	hair-leaved rush	Juncaceae	perennial rhizomatous herb	Apr-May(Jun-Jul)	None	None	G5	S1	2B.2	No Photo Available
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3	No Photo Available
Lasthenia californica ssp. *bakeri*	Baker's goldfields	Asteraceae	perennial herb	Apr-Oct	None	None	G3T1	S1	1B.2	 ©2015 Asa Spade
Lasthenia californica ssp. *macrantha*	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	No Photo Available
Lathyrus palustris	marsh pea	Fabaceae	perennial herb	Mar-Aug	None	None	G5	S2	2B.2	No Photo Available
Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	No Photo Available
Lilium maritimum	coast lily	Liliaceae	perennial bulbiferous herb	May-Aug	None	None	G2	S2	1B.1	No Photo Available
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	None	None	G3	S3	4.2	No Photo Available
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	None	None	G5	S3	4.1	No Photo Available
Microseris borealis	northern microseris	Asteraceae	perennial herb	Jun-Sep	None	None	G5	S1	2B.1	No Photo Available
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	None	None	G5	S4	4.2	No Photo Available
Packera bolanderi var. *bolanderi*	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	None	None	G4T4	S2S3	2B.2	 © 2021 Scot

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Phacelia insularis var. *continentis*	North Coast phacelia	Hydrophyllaceae	annual herb	Mar-May	None	None	G2T2	S2	1B.2	No Photo Available
Pinus contorta ssp. *bolanderi*	Bolander's beach pine	Pinaceae	perennial evergreen tree		None	None	G5T2	S2	1B.2	No Photo Available
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	None	None	G3	S3	1B.2	No Photo Available
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	None	None	G4G5	S4	4.2	No Photo Available
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr-Aug	None	None	G4	S4	4.2	No Photo Available
Puccinellia pumila	dwarf alkali grass	Poaceae	perennial herb	Jul	None	None	G4?	SH	2B.2	No Photo Available
Ramalina thrausta	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)		None	None	G5?	S2S3	2B.1	 © 2013 Scot Loring
Rhynchospora alba	white beaked-rush	Cyperaceae	perennial rhizomatous herb	Jun-Aug	None	None	G5	S2	2B.2	 © 2021 Scot Loring
Sanguisorba officinalis	great burnet	Rosaceae	perennial rhizomatous herb	Jul-Oct	None	None	G5?	S2	2B.2	No Photo Available
Sidalcea calycosa ssp. *rhizomata*	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Sep	None	None	G5T2	S2	1B.2	No Photo Available
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	None	None	G3	S3	4.2	No Photo Available
Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	May-Aug	None	None	G5T2	S2	1B.2	No Photo Available
Sidalcea malviflora ssp. *purpurea*	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	May-Jun	None	None	G5T1	S1	1B.2	No Photo Available
Tiarella trifoliata	trifoliate	Saxifragaceae	perennial	(May)Jun-	None	None	G5T5	S2S3	3.2	

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
var. *trifoliata*	laceflower		rhizomatous herb	Aug						 © 2021 Scot Loring
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1	No Photo Available
Trifolium trichocalyx	Monterey clover	Fabaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	No Photo Available
Triquetrella californica	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2	No Photo Available
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G4	S4	4.2	 © 2021 Scot Loring
Veratrum fimbriatum	fringed false-hellebore	Melanthiaceae	perennial herb	Jul-Sep	None	None	G3	S3	4.3	No Photo Available
Viola palustris	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	None	None	G5	S1S2	2B.2	 ©2021 Scot Loring

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Appendix D. Biological Surveys—Dates and Personnel

Date	Personnel	Purpose of Survey
August 6, 2013	Sean Marquis, Caltrans Biologist; Caltrans Project Team	Initial field review.
April 27, 2014	S. Marquis and Jen Osmondson, Caltrans Biologists	Butterfly habitat assessment and *Viola adunca* / *Hosackia gracilis* survey; botanical survey.
June 14, 2014	S. Marquis and J. Osmondson, Caltrans Biologists	Botanical survey.
September 10, 2014	S. Marquis and Maureen Doyle, Caltrans Biologists	Botanical survey.
June 16-17, 2015	S. Marquis and J. Osmondson, Caltrans Biologists	Wetland and waters delineation.
June 24-25, 2015	S. Marquis and Lori McIntosh, Caltrans Biologists	Wetland and waters delineation.
November 2, 2016	L. McIntosh, Caltrans Biologist; Christy Wagner, Caltrans Revegetation Specialist	Field review to develop revegetation strategy.
September 11-12, 2017	Grant Thornton, Alexandra Laughtin, and L. McIntosh, Caltrans Biologists	Revalidation and review of wetland and ESHA boundaries
May 1, 2019	Tracy Walker, Dawn Graydon, and Jeremy Pohlman, Caltrans Biologists	Butterfly habitat assessment and *Viola adunca* / *Hosackia gracilis* survey; botanical survey.
June 25, 2019	T. Walker, Caltrans Biologist; C. Wagner, Revegetation/ Stewardship Specialist	Wetland and waters delineation.
June 26, 2019	T. Walker, Annie Allen, and Daniel Palmer, Caltrans Biologists; C. Wagner, Revegetation Specialist	Wetland and waters delineation; special status amphibian and mammal habitat assessment.
July 1-2, 2019	T. Walker and J. Pohlman, Caltrans Biologists	Vegetation and ESHA mapping; botanical survey.
July 26, 2019 July 31, 2019	Reed Crane and J. Pohlman, Caltrans Biologists	Grand Fir Forest and Bishop Pine Forest tree inventory.
May 6, 2020	T. Walker and J. Pohlman, Caltrans Biologists	Butterfly habitat assessment and host plant survey; botanical survey.
July 8, 2020	T. Walker, R. Crane, and J. Pohlman, Caltrans Biologists; Phlora Barbash, Caltrans Landscape Architect	Grand Fir Forest and Bishop Pine Forest tree inventory, wetlands and waters delineation, botanical survey.
May 4-5, 2021	T. Walker and A. Allen, Caltrans Biologists; C. Wagner, Loriel Caverly, and Jacob	Grand Fir Forest and Bishop Pine Forest tree inventory, wetlands and waters delineation, butterfly habitat assessment and host plant

Date	Personnel	Purpose of Survey
	Hilliard, Caltrans Revegetation Specialists	survey, and botanical surveys in expanded ESL and additional staging areas.
May 5 and 20, 2021	Wendell Bedell, Caltrans Environmental Construction Liaison	Focused Sonoma tree vole survey.
June 28-29 2021	C. Wagner and Loriel Caverly, Caltrans Revegetation Specialists	Botanical surveys.
July 20, 2021	T. Walker Caltrans Biologist and Jeremy Miller-Schulze	Grand Fir Forest and Bishop Pine Forest tree inventory and waters assessment.
October 10, 2021	T. Walker, Caltrans Biologist; C. Wagner, Revegetation Specialist	Proposed upland forest revegetation area assessment and reconnaissance survey of newly additional areas.

Appendix E. List of Plant Species Observed

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Abies grandis	Grand fir	Pinaceae	Tree	Native	N/A
Acacia melanoxylon	Blackwood acacia	Fabaceae	Tree	Invasive	Limited
Achillea millefolium	Common yarrow	Asteraceae	Herb	Native	N/A
Acmispon americanus var. *americanus*	Spanish lotus	Fabaceae	Herb	Native	N/A
Adiantum jordanii	California maidenhair fern	Pteridaceae	Herb	Native	N/A
Aeonium sp.	Aeonium	Crassulaceae	Herb	Domestic	N/A
Agrostis pallens	Dune bent grass	Poaceae	Herb	Native	N/A
Agrostis stolonifera	Creeping bentgrass	Poaceae	Herb	Invasive	Limited
Aira caryophyllea	Silver hari grass	Poaceae	Herb	Introduced	N/A
Alisma triviale	Northern waterplantain	Alismataceae	Herb	Native	N/A
Allium triquetrum	White flowered onion	Alliaceae	Herb	Introduced	N/A
Alnus rubra	Red alder	Betulaceae	Shrub	Native	N/A
Anagallis arvensis	Scarlet pimpernel	Myrsinaceae	Herb	Introduced	N/A
Anaphalis margaritacea	Pearly everlasting	Asteraceae	Herb	Native	N/A
Angelica hendersonii	Henderson's angelica	Apiaceae	Herb	Native	N/A
Anthoxanthum occidentale	California sweet grass	Poaceae	Herb	Native	N/A
Anthoxanthum odoratum	Sweet vernal grass	Poaceae	Herb	Invasive	Limited
Anthriscus caucalis	Bur chevril	Apiaceae	Herb	Introduced	N/A
Apocynum androsaemifolium	Bitter dogbane	Apocynaceae	Herb	Native	N/A
Aquilegia formosa	Crimson columbine	Ranunculaceae	Herb	Native	N/A
Arctotheca prostrata	Prostrate capeweed	Asteraceae	Herb	Invasive	Moderate
Artemisia douglasiana	Mugwort	Asteraceae	Herb	Native	N/A
Athyrium filix-femina var. *cyclosorum*	Lady fern	Woodsiaceae	Herb	Native	N/A
Avena barbata	Slender wild oat	Poaceae	Herb	Invasive	Moderate
Avena fatua	Wild oat grass	Poaceae	Herb	Invasive	Moderate

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Baccharis pilularis	Coyote brush	Asteraceae	Shrub	Native	N/A
Bellis perennis	English daisy	Asteraceae	Herb	Introduced	N/A
Brassica nigra	Black mustard	Brassicaceae	Herb	Invasive	Moderate
Brassica oleracea	Cabbage	Brassicaceae	Herb	Introduced	N/A
Brassica rapa	Field mustard	Brassicaceae	Herb	Invasive	Limited
Briza maxima	Rattlesnake grass	Poaceae	Herb	Invasive	Limited
Briza minor	Small quaking grass	Poaceae	Herb	Introduced	N/A
Bromus carinatus	California brome	Poaceae	Herb	Native	N/A
Bromus diandrus	Ripgut grass	Poaceae	Herb	Invasive	Moderate
Bromus laevipes	Chinook brome or woodland brome	Poaceae	Herb	Native	N/A
Bromus sitchensis var. *carinatus*	Sitka brome	Poaceae	Herb	Native	N/A
Bromus vulgaris	Columbia brome	Poaceae	Herb	Native	N/A
Calandrinia menziesii	Red maids	Montiaceae	Herb	Native	N/A
Cardamine californica	California toothwort	Brassicaceae	Herb	Native	N/A
Cardamine oligosperma	Western bittercress	Brassicaceae	Herb	Native	N/A
Carduus pycnocephalus	Italian thistle	Asteraceae	Herb	Invasive	Moderate
Carex brevicaulis	Short-stemmed sedge	Cyperaceae	Herb	Native	N/A
Carex densa	Dense sedge	Cyperaceae	Herb	Native	N/A
Carex obnupta	Slough sedge	Cyperaceae	Herb	Native	N/A
Carex subbracteata	Small bract sedge	Cyperaceae	Herb	Native	N/A
Castilleja sp.	Paintbrush or owl's-clover	Orobanchaceae	Herb	Unknown	N/A
Castilleja wightii	Wight's paintbrush	Orobanchaceae	Herb	Native	N/A
Ceanothus thyrsiflorus	Blue blossom	Rhamnaceae	Shrub	Native	N/A
Ceanothus thyrsiflorus var. *griseus*	Carmel ceanothus	Rhamnaceae	Shrub	Native	N/A
Centaurium tenuiflorum	Slender centuary	Gentiaceae	Herb	Introduced	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Cerastium glomeratum	Sticky mouse-ear chickweed	Caryophyllaceae	Herb	Introduced	N/A
Cerastium sp.	Chickweed	Caryophyllaceae	Herb	Unknown	N/A
Chamerion angustifolium subsp. *circumvagum*	Fireweed	Onagraceae	Herb	Native	N/A
Cirsium vulgare	Bull thistle	Asteraceae	Herb	Invasive	Moderate
Cistus incanus	Rock-rose (pink)	Cistaceae	Shrub	Introduced	N/A
Cistus sp.	Rock-rose	Cistaceae	Shrub	Introduced	N/A
Claytonia perfoliata	Miner's lettuce	Montiaceae	Herb	Native	N/A
Claytonia sibirica	Candy flower	Montiaceae	Herb	Native	N/A
Conium maculatum	Poison hemlock	Apiaceae	Herb	Invasive	Moderate
Cortaderia jubata	Purple pampas grass	Poaceae	Herb	Invasive	High
Cotoneaster franchetii	Franchet's cotoneaster	Rosaceae	Shrub	Invasive	Moderate
Cotoneaster lacteus	Late cotoneaster	Rosaceae	Shrub	Invasive	Moderate
Cotoneaster pannosus	Silverleaf cotoneaster	Rosaceae	Shrub	Invasive	Moderate
Cotoneaster sp.	Cotoneaster	Rosaceae	Shrub	Introduced	N/A
Cynodon dactylon	Bermudagrass	Poaceae	Herb	Invasive	Moderate
Cynoglossum grande	Grand hound's tongue	Boraginaceae	Herb	Native	N/A
Cynosurus echinatus	Bristly dogtail grass	Poaceae	Herb	Invasive	Moderate
Cyperus eragrostis	Tall flat-sedge	Cyperaceae	Herb	Native	N/A
Cytisus scoparius	Scotch broom	Fabaceae	Shrub	Invasive	High
Dactylis glomerata	Orchard grass	Poaceae	Herb	Invasive	Limited
Danthonia californica	California oat grass	Poaceae	Herb	Native	N/A
Daucus carota	Queen Anne's lace	Apiaceae	Herb	Introduced	N/A
Delairea odorata	Cape ivy	Asteraceae	Herb	Invasive	High
Digitalis purpurea	Purple foxglove	Plantaginaceae	Herb	Invasive	Limited
Digitaria sanguinalis	Hairy crab grass	Poaceae	Herb	Introduced	N/A
Diplacus aurantiacus	Orange bush monkey-flower	Phrymaceae	Shrub	Native	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Distichlis spicata	Coastal salt grass	Poaceae	Herb	Native	N/A
Dudleya farinosa	Bluff lettuce	Crassulaceae	Herb	Native	N/A
Echium pininana	Pine echium	Boraginaceae	Shrub	Introduced	N/A
Eleocharis macrostachya	Common spikerush	Cyperaceae	Herb	Native	N/A
Elymus glaucus	Blue or Western wild-rye	Poaceae	Herb	Native	N/A
Epilobium sp.	Willowherb	Onagraceae	Herb	Native	N/A
Epilobium ciliatum	Slender willow herb	Onagraceae	Herb	Native	N/A
Equisetum arvense	Common horsetail	Equisetaceae	Herb	Native	N/A
Equisetum telmateia subsp. *braunii*	Giant horsetail	Equisetaceae	Herb	Native	N/A
Erigeron glaucus	Seaside daisy	Asteraceae	Herb	Native	N/A
Eriogonum latifolium	Seaside wild buckwheat	Polygonaceae	Herb	Native	N/A
Eriophyllum lanatum	Common woolly sunflower	Asteraceae	Shrub	Native	N/A
Erodium cicutarium	Redstem filaree	Geraniaceae	Herb	Invasive	Limited
Erodium moschatum	Greenstem filaree	Geraniaceae	Herb	Introduced	N/A
Erythranthe guttata	Seep monkeyflower	Phrymaceae	Herb	Native	N/A
Eschscholzia californica	California poppy	Papaveraceae	Herb	Native	N/A
Eucalyptus globulus	Blue gum	Myrtaceae	Tree	Invasive	Limited
Euphorbia sp.	Spurge	Euphorbiaceae	Herb	Introduced	N/A
Festuca arundinacea	Tall fescue	Poaceae	Herb	Invasive	Moderate
Festuca microstachys	Small fescue	Poaceae	Herb	Native	N/A
Festuca myuros	Rattail sixweeks grass	Poaceae	Herb	Invasive	Moderate
Festuca perennis	Italian rye grass	Poaceae	Herb	Invasive	Moderate
Foeniculum vulgare	Fennel	Apiaceae	Herb	Invasive	Moderate
Fragaria chiloensis	Beach strawberry	Rosaceae	Herb	Native	N/A
Fragaria vesca	Wood strawberry	Rosaceae	Herb	Native	N/A
Frangula purshiana	Cascara	Rhamnaceae	Shrub	Native	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Fuchsia magellanica	Hardy fuchsia	Onagraceae	Shrub	Introduced	N/A
Fuchsia sp.	Ornamental fuchsia	Onagraceae	Shrub	Domestic	N/A
Galium aparine	Goose grass	Rubiaceae	Herb	Native	N/A
Galium parisiense	Wall bedstraw	Rubiaceae	Herb	Introduced	N/A
Galium sp.	bedstraw	Rubiaceae	Herb	Native	N/A
Gamochaeta ustulata	Featherweed	Asteraceae	Herb	Native	N/A
Garrya elliptica	Coast silk-tassle	Garryaceae	Shrub	Native	N/A
Gaultheria shallon	Salal	Ericaceae	Shrub	Native	N/A
Genista monspessulana	French broom	Fabaceae	Shrub	Invasive	High
Geranium dissectum	Cut-leaved geranium	Geraniaceae	Herb	Invasive	Limited
Geranium molle	Dovefoot geranium	Geraniaceae	Herb	Introduced	N/A
Geranium robertianum	Robert's geranium	Geraniaceae	Herb	Introduced	N/A
Glebionis segetum	Corn chrysanthemum	Asteraceae	Herb	Introduced	N/A
Goodyera oblongifolia	Rattlesnake plantain	Orchidaceae	Herb	Native	N/A
Grevillea sp.	Domestic protea	Proteaceae	Shrub	Domestic	N/A
Hedera helix	English ivy	Araliaceae	Herb	Invasive	High
Helminthotheca echioides	Bristly ox-tongue	Asteraceae	Herb	Invasive	Limited
Heracleum maximum	Cow parsnip	Apiaceae	Herb	Native	N/A
Hesperevax sparsiflora var. *sparsiflora*	Erect dwarf cudweed	Asteraceae	Herb	Native	N/A
Hesperocyparis macrocarpa	Monterey cypress	Cupressaceae	Tree	Native / Invasive	Problematic Native
Heuchera micrantha	Small-flowered alumroot	Saxifragaceae	Herb	Native	N/A
Heuchera pilosissima	Seaside alumroot	Saxifragaceae	Herb	Native	N/A
Holcus lanatus	Common velvet grass	Poaceae	Herb	Invasive	Moderate
Hordeum brachyantherum	Meadow barley	Poaceae	Herb	Native	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Hordeum murinum subsp. *leporinum*	Hare barley	Poaceae	Herb	Introduced	N/A
Hordeum vulgare	Cereal barley	Poaceae	Herb	Introduced	N/A
Hosackia gracilis	Harlequin lotus	Fabaceae	Herb	Native	N/A
Hypericum calycinum	Aaron's beard	Hypericaceae	Herb	Introduced	N/A
Hypericum perforatum subsp. *perforatum*	Klamathweed	Hypericaceae	Herb	Invasive	Limited
Hypochaeris glabra	Smooth cat's-ear	Asteraceae	Herb	Invasive	Limited
Hypochaeris radicata	Rough cat's-ear	Asteraceae	Herb	Invasive	Moderate
Ilex aquifolium	English holly	Aquifoliaceae	Tree	Invasive	Limited
Iris douglasiana	Douglas iris	Iridaceae	Herb	Native	N/A
Juncus bolanderi	Bolander’s rush	Juncaceae	Herb	Native	N/A
Juncus bufonius	Toad rush	Juncaceae	Herb	Native	N/A
Juncus effusus	Soft or lamp rush	Juncaceae	Herb	Native	N/A
Juncus patens	Spreading rush	Juncaceae	Herb	Native	N/A
Juncus phaeocephalus	Brownhead rush	Juncaceae	Herb	Native	N/A
Lathyrus latifolius	Perennial sweet pea	Fabaceae	Herb	Introduced	Watch
Lathyrus vestitus var. *vestitus*	Hillside pea	Fabaceae	Herb	Native	N/A
Lavandula stoechas	French lavendar	Lamiaceae	Shrub	Domestic	N/A
Leontodon saxatilis	Hairy hawkbit	Asteraceae	Herb	Introduced	N/A
Leucanthemum vulgare	Ox-eye daisy	Asteraceae	Herb	Invasive	Moderate
Linum bienne	Western blue flax	Linaceae	Herb	Introduced	N/A
Lonicera hispidula	Pink honeysuckle	Caprifoliaceae	Shrub	Native	N/A
Lonicera involucrata var. *ledebourii*	Black twinberry	Caprifoliaceae	Shrub	Native	N/A
Lotus corniculatus	Bird's-foot treefoil	Fabaceae	Herb	Introduced	N/A
Lupinus albifrons	Silver bush lupine	Fabaceae	Shrub	Native	N/A
Lupinus arboreus	Yellow bush lupine	Fabaceae	Shrub	Native / Invasive	Problematic Native
Lupinus bicolor	Miniature lupine	Fabaceae	Herb	Native	N/A
Lupinus littoralis var. *variicolor*	Varied lupine	Fabaceae	Herb	Native	N/A
Lupinus rivularis	Riverbank lupine	Fabaceae	shrub	Native	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Luzula comosa	Pacific woodrush	Juncaceae	Herb	Native	N/A
Luzula sp.	Wood rush	Juncaceae	herb	Native	N/A
Lysichiton americanus	Yellow skunk-cabbage	Araceae	Herb	Native	N/A
Lysimachia latifolia	Pacific starflower	Myrsinaceae	Herb	Native	N/A
Lythrum hyssopifolia	Hyssop loosestrife	Lythraceae	Herb	Invasive	Moderate
Maianthemum racemosum	Feathery false lily of the valley	Ruscaceae	Herb	Native	N/A
Maianthemum stellatum	Starry false lily of the valley	Ruscaceae	Herb	Native	N/A
Malva parviflora	Cheeseweed mallow	Malvaceae	Herb	Introduced	N/A
Marah oregana	Coast man-root	Cucurbitaceae	Herb	Native	N/A
Marah sp.	Wild cucumber	Cucurbitaceae	Herb	Native	N/A
Matricaria discoidea	Pineapple weed	Asteraceae	Herb	Introduced	N/A
Medicago arabica	Spotted bur clover	Fabaceae	Herb	Introduced	N/A
Medicago lupulina	Black medick	Fabaceae	Herb	Introduced	N/A
Medicago orbicularis	Buttonclover	Fabaceae	Herb	Introduced	N/A
Medicago polymorpha	California burclover	Fabaceae	Herb	Invasive	Limited
Melica torreyana	Torrey's melic	Poaceae	Herb	Native	N/A
Mentha pulegium	Pennyroyal	Lamiaceae	Herb	Invasive	Moderate
Micranthes sp.	Saxifrage	Saxifragaceae	Herb		N/A
Morella californica	Wax myrtle	Myricaceae	Shrub	Native	N/A
Narcissus pseudonarcissus	Daffodil	Amaryllidaceae	Herb	Introduced	N/A
Nasturtium officinale	Water cress	Brassicaceae	Herb	Native	N/A
Notholithocarpus densiflorus var. *densiflorus*	Tanoak	Fagaceae	Shrub	Native	N/A
Oenanthe sarmentosa	Pacific water-parsley	Onagraceae	Herb	Native	N/A
Oenothera elata	Evening primrose	Onagraceae	Herb	Native	N/A
Osmorhiza berteroi	Sweet-cicely	Apiaceae	Herb	Native	N/A
Oxalis incarnata	Crimson woodsorrel	Oxalidaceae	Herb	Introduced	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Oxalis oregana	Redwood sorrel	Oxalidaceae	Herb	Native	N/A
Oxalis pes-caprae	Sourgrass	Oxalidaceae	Herb	Invasive	Moderate
Oxalis pilosa	Hairy wood sorrel	Oxalidaceae	Herb	Native	N/A
Parentucellia viscosa	Yellow glandweed	Orobanchaceae	Herb	Invasive	Limited
Paspalum dilatatum	Dallis grass	Poaceae	Herb	Introduced	N/A
Passiflora manicata	Red passionflower	Passifloraceae	Herb	Introduced	N/A
Petasites frigidus var. *palmatus*	Western sweet coltsfoot	Asteraceae	Herb	Native	N/A
Pinus muricata	Bishop pine	Pinaceae	Tree	Native	N/A
Pinus radiata	Monterey pine	Pinaceae	Tree	Native / Invasive	Problematic Native
Pittosporum tenuifolium	short leaf box	Pittosporaceae	Tree	Introduced	N/A
Plantago erecta	Dotseed plantain or California plantain	Plantaginaceae	Herb	Native	N/A
Plantago lanceolata	English plantain	Plantaginaceae	Herb	Invasive	Limited
Plantago major	Common plantain	Plantaginaceae	Herb	Introduced	N/A
Plantago subnuda	Naked plantain	Plantaginaceae	Herb	Native	N/A
Poa annua	Annual blue grass	Poaceae	Herb	Introduced	N/A
Poa pratensis subsp. *pratensis*	Kentucky blue grass	Poaceae	Herb	Introduced	Limited
Polypodium glycyrrhiza	Licorice fern	Polypodiaceae	Herb	Native	N/A
Polypodium scouleri	Leather-leaf fern	Polypodiaceae	Herb	Native	N/A
Polystichum munitum	Western sword fern	Dryopteridaceae	Herb	Native	N/A
Poterium sanguisorba	Garden burnet	Rosaceae	Herb	Introduced	N/A
Prosartes hookeri	Drops of gold	Liliaceae	Herb	Native	N/A
Prosartes smithii	Largeflower fairybells	Liliaceae	Herb	Native	N/A
Prunella vulgaris	Common self-heal	Lamiaceae	Herb	Native	N/A
Prunus sp.	Domestic plum	Rosaceae	Shrub	Domestic	N/A
Pseudognaphalium luteoalbum	Weedy cudweed	Asteraceae	herb	Introduced	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Pseudotsuga menziesii var. *menziesii*	Douglas-fir	Pinaceae	Tree	Native	N/A
Pteridium aquilinum var. *pubescens*	Western bracken fern	Dennstaedtiaceae	Herb	Native	N/A
Raphanus sativus	Wild radish	Brassicaceae	Herb	Invasive	Limited
Ribes sanguineum var. *glutinosum*	Red-flowering currant	Grossulariaceae	Shrub	Native	N/A
Rosa californica	California rose	Rosaceae	Shrub	Native	N/A
Rosa gymnocarpa	Wood rose	Rosaceae	Shrub	Native	N/A
Rosa nutkana subsp. *nutkana*	Nootka rose	Rosaceae	Shrub	Native	N/A
Rosa sp.	Rose	Rosaceae	Shrub	Introduced	N/A
Rubus armeniacus	Himalayan blackberry	Rosaceae	Shrub	Invasive	High
Rubus parviflorus	Thimbleberry	Rosaceae	Shrub	Native	N/A
Rubus spectabilis	Salmonberry	Rosaceae	Shrub	Native	N/A
Rubus ursinus	California blackberry	Rosaceae	Shrub	Native	N/A
Rumex acetosella	Sheep sorrel	Polygonaceae	Herb	Invasive	Moderate
Rumex crispus	Curly dock	Polygonaceae	Herb	Invasive	Limited
Rumex salicifolius	Willow dock	Polygonaceae	Herb	Native	N/A
Rytidosperma penicillatum	Hairy oat grass or poverty oat grass	Poaceae	Herb	Invasive	Limited
Salix hookeriana	Coastal willow	Salicaceae	Tree	Native	N/A
Salix lasiolepis	Arroyo willow	Salicaceae	Tree	Native	N/A
Salix sitchensis	Sitka willow	Salicaceae	Tree	Native	N/A
Sambucus racemosa var. *racemosa*	Red elderberry	Adoxaceae	Shrub	Native	N/A
Sanicula crassicaulis	Pacific snakeroot	Apiaceae	Herb	Native	N/A
Scirpus microcarpus	Small fruited bulrush	Cyperaceae	Herb	Native	N/A
Scoliopus bigelovii	Slink-pod	Liliaceae	Herb	Native	N/A
Scrophularia californica	California figwort	Scrophulariaceae	Herb	Native	N/A
Sedum spathulifolium	Broadleaf stonecrop	Crassulaceae	Herb	Native	N/A
Senecio vulgaris	Common groundsel	Asteraceae	Herb	Introduced	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Sherardia arvensis	Field madder	Rubiaceae	Herb	Introduced	N/A
Silene gallica	Small-flower catchfly	Caryophyllaceae	Herb	Introduced	N/A
Silybum marianum	Milk thistle	Asteraceae	Herb	Invasive	Limited
Sisyrinchium bellum	Western blue-eyed-grass	Iridaceae	Herb	Native	N/A
Sisyrinchium californicum	Golden-eyed-grass	Iridaceae	Herb	Native	N/A
Solanum americanum	Common nightshade	Solanaceae	Herb	Native	N/A
Solanum aviculare	New Zealand nightshade	Solanaceae	Herb	Introduced	Watch
Sonchus asper subsp. *asper*	Prickly sow thistle	Asteraceae	Herb	Introduced	N/A
Sonchus oleraceus	Common sow thistle	Asteraceae	Herb	Introduced	N/A
Spergula arvensis	Stickwort or corn spurry	Caryophyllaceae	Herb	Introduced	N/A
Spiranthes porrifolia	Western ladies tresses	Orchidaceae	Herb	Native	N/A
Stachys ajugoides	Hedge-nettle	Lamiaceae	Herb	Native	N/A
Stachys rigida var. *rigida*	Rough hedge-nettle	Lamiaceae	Herb	Native	N/A
Symphyotrichum chilense	Pacific aster	Asteraceae	Herb	Native	N/A
Taraxacum officinale	Common dandelion	Asteraceae	Herb	Introduced	N/A
Tellima grandiflora	Fringe cups	Saxifragaceae	Herb	Native	N/A
Thalictrum fendleri var. *polycarpum*	Meadow rue	Ranunculaceae	Herb	Native	N/A
Torilis arvensis	Tall sock-destroyer	Apiaceae	Herb	Invasive	Moderate
Toxicodendron diversilobum	Poison-oak	Anacardiaceae	Shrub	Native	N/A
Trifolium dubium	Little hop clover	Fabaceae	Herb	Introduced	N/A
Trifolium repens	White clover	Fabaceae	Herb	Introduced	N/A
Trifolium subterraneum	Subterranean clover	Fabaceae	Herb	Introduced	N/A
Tropaeolum majus	Garden nasturtium	Tropaeolaceae	Herb	Introduced	N/A

Scientific Name	Common Name	Family	Habit	Origin	Cal-IPC Rating[1]
Ulex europaeus	Common Gorse	Fabaceae	Shrub	Invasive	High
Urtica dioica subsp. *gracilis*	American stinging nettle	Urticaceae	Herb	Native	N/A
Vaccinium ovatum	California huckleberry	Ericaceae	Shrub	Native	N/A
Vaccinium parvifolium	Red huckleberry	Ericaceae	Shrub	Native	N/A
Veratrum fimbriatum	Fringed false hellebore	Melanthiaceae	Herb	Native	N/A
Veronica americana	American brooklime	Plantaginaceae	Herb	Native	N/A
Veronica sp.	*Veronica* sp.	Plantaginaceae	Herb	Unknown	N/A
Vicia gigantea	Giant vetch	Fabaceae	Herb	Native	N/A
Vicia hirsuta	Hairy vetch	Fabaceae	Herb	Introduced	N/A
Vicia sativa subsp. *nigra*	Narrow-leaved vetch	Fabaceae	Herb	Introduced	N/A
Vicia sativa subsp. *sativa*	Spring vetch	Fabaceae	Herb	Introduced	N/A
Vinca major	Greater periwinkle	Apocynaceae	Herb	Invasive	Moderate
Viola sempervirens	Evergreen violet	Violaceae	Herb	Native	N/A
Vitis californica	California wild grape	Vitaceae	Shrub	Native	N/A
Watsonia meriana	Watsonia	Iridaceae	Herb	Invasive	Limited
Woodwardia fimbriata	Giant chain fern	Blechnaceae	Herb	Native	N/A
Wyethia angustifolia	Narrow-leaf mule ear	Asteraceae	Herb	Native	N/A
Zantedeschia aethiopica	Calla-lily	Araceae	Herb	Invasive	Limited

[1] The California Invasive Plant Council (Cal-IPC) inventories non-native invasive plants that threaten the state's wildlands. The inventory serves as a scientific and educational report—it has no regulatory authority, and does have some limitations, such as not addressing the range of geographic variation in California. Invasiveness ratings are as follows:

- **High:** These species have severe ecological impacts, moderate to high rates of dispersal and establishment, and most are widely distributed ecologically.

- **Moderate:** These species have substantial and apparent ecological impacts, moderate to high rates of dispersal, establishment dependent on ecological disturbance, and limited to widespread ecological amplitude and distribution.

- **Limited:** These species have minor ecological impacts, low to moderate invasiveness, and limited ecological amplitude and distribution, but may be locally persistent and problematic.

- **Watch:** These species pose a high risk of becoming invasive in the future.

Problematic Native: Though this category does not represent a Cal-IPC rating, it represents species that are native to California, but have become invasive in regions outside their natural range. Impacts would be considered Moderate for areas in which they are invasive.

Appendix F. Special Status Species Lists

Amphibians

Common Name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Pacific tailed frog	*Ascaphus truei*	-/SSC	Cool, perennial, swiftly flowing streams in redwood, Douglas-fir, and yellow pine forests.	Absent	No Impact. No suitable habitat.
Northern red-legged frog	*Rana aurora*	-/SSC	Usually found near ponds or other permanent water bodies with extensive vegetation.	Present	Potential impact. Low potential for the species to disperse in the project area within and along edges of Jack Peters Creek. However, no substantial impacts are anticipated. Caltrans would implement species-specific measures to avoid impacts.
Foothill yellow-legged frog	*Rana boylii*	-/SSC	Creeks or rivers in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge.	Absent	No Impact. No suitable habitat.
California red-legged frog	*Rana draytonii*	FT/SSC	Permanent and semi-permanent aquatic habitats, such as creeks and cold water ponds, with emergent and submergent vegetation.	Absent	No Effect. Outside current geographic range. Northern limit of hybrid zone with *Rana aurora* northern is Big River.
Southern torrent salamander	*Rhyacotriton variegatus*	-/SSC	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rock within trickling water.	Absent	No Impact. No suitable habitat within the BSA because tidal water salinity levels are too high, and lack of dense canopy cover over stream channel.
Red-bellied newt	*Taricha rivularis*	-/SSC	Streams and rivers in coastal woodlands with high canopy cover. Preferred aquatic habitat is fast flowing, perennial, with rocky substrate. Exist in a state of dormancy (aestivate) in the summer in root channel gaps.	Present	Potential impact. Low potential for the species to disperse in the project area within and along edges of the creek. However, no substantial impacts are anticipated. Caltrans would implement species-specific measures to avoid impacts.

Birds

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Northern goshawk	*Accipiter gentilis*	-/SSC	Mature and old-growth coniferous and mixed forest stands above 1,000 ft.	Absent	No impact. Outside of elevation range for this species.
Marbled murrelet	*Brachyramphus marmoratus*	FT/SE	Mature, coastal coniferous forests for nesting; nearby coastal water for foraging; nests in conifer stands greater than 150 years old and may be found up to 35 miles inland; winters on subtidal and pelagic waters often well offshore.	Absent	No Effect. No mature coniferous forest breeding or foraging habitat (USFWS pers. comm). The stands of grand fir forest and bishop pine forest southeast of Jack Peters Creek Bridge contain trees that are limited in size and canopy compared to preferred marbled murrelet (MAMU) habitat. Nearest critical habitat is adjacent to the northwest edge of the BSA at Jack Peters Creek. The nearest known occurrence of MAMU to Jack Peters is approximately 2 miles northeast in the Russian Gulch watershed.
Vaux's swift	*Chaetura vauxi*	-/SSC	Forage over most terrains and habitats but show a preference for foraging over rivers and lakes. Prefer redwood, Douglas-fir, and other coniferous forests where they nest in large hollow trees and snags. Often nest in flocks.	Absent	No impact. No old-growth or mature coniferous forests. The nearest known nesting site occurs 1.5 miles east of Jack Peters Creek in Russian Gulch State Park.
Western snowy plover	*Charadrius nivosus*	FT/SSC	Coastal beaches above the normal high tide limit with wood or other debris for cover. Inland shores of salt ponds and alkali or brackish inland lakes.	Absent	No Effect. The habitat within the BSA is not suitable for breeding or foraging western snowy plover (WSP). Jack Peters Creek has no sandy substrate for nesting WSP. The CNDDB lists no observations within the nine-quad search. The eBird database lists detections at MacKerricher State Park, which also contains the nearest designated critical habitat (Unit CA-7), approximately 13 miles north of Jack Peters Creek Bridge.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT/SE	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak-riparian habitats where scrub jays are abundant.	Absent	No Effect. No dense riparian multi-layered forests were detected for suitable nesting habitat within the BSA. Jack Peters Creek is a highly incised channel with very little riparian habitat. The CNDDB lists no observations of this species within the nine-quad search. The eBird database lists one detection approximately 7 miles southeast of Pudding Creek Bridge, in riparian habitat within Navarro Redwood State Park.
Olive-sided flycatcher	*Contupus cooperi*	-/SSC	Late-successional conifer forests with open canopies (e.g., 0%–39% canopy cover). Usually breed at mid to high elevations at 3018–6988 ft (Altman and Sallabanks 2000).	Absent	No impact. Elevation of the BSA is outside of the range established for nesting individuals of this species. Occurrences may be limited to migrants or fly overs.
Yellow warbler	*Dendroica petechia*	-/SSC	Nests in riparian deciduous habitats containing cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland habitats. Territories often include tall trees for singing and foraging with a heavy brush understory for nesting. Willow cover and Oregon ash are important predictors of abundance (Hunter et al., 2005).	Absent	No impact. No nesting habitat detected in the BSA. Occurrences may be limited to migrants or fly overs.
White-tailed kite	*Elanus leucurus*	-/FP	Resident in the Central Valley and entire California coast in a variety of habitats with abundant prey. Nests in dense, relatively large stands of riparian, redwood, and Douglas-fir trees.	Present	Potential impact. Low potential for the species to nest in the BSA at Jack Peters Creek in grand fir forest. However, no substantial impacts are anticipated. Caltrans would implement standard measures to avoid impacts.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
American peregrine falcon	*Falco peregrinus anatum*	DL/FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Present	No impact. Juveniles were observed flying along the coastal bluff within the BSA. The species could nest on these coastal bluffs. However, there would be no impact or disturbance to nesting peregrine falcons because of visual and auditory barriers from where project activities would occur.
Tufted puffin	*Fratercula cirrhata*	-/SSC	Offshore rocks and islands largely free of mammalian predators and human disturbance. Nests in earthen burrows or rock crevices on steep slopes, cliffs, or cliff tops.	Absent	No impact. No nesting habitat in the project area.
Bald eagle	*Haliaeetus leucocephalus*	DL/SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Typically nests within 1 mile of water, in large, old-growth, or dominant live trees with open branches. Roost communally in winter. This species is also protected under the Federal Bald and Golden Eagle Protection Act.	Absent	No Effect. No nesting habitat in the project area. Occurrences may be limited to migrants or fly overs.
Yellow-breasted chat	*Icteria virens*	-/SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	Absent	No impact. No nesting habitat in the BSA. Occurrences may be limited to migrants or fly overs.
Ashy storm-petrel	*Oceanodroma homochroa*	-/SSC	The entire breeding population breeds on offshore islands at 17 localities from Southeast Farallon Island to Los Coronados (Ainley 1995).	Absent	No impact. No nesting habitat in the project area.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Osprey	*Pandion haliaetus*	-/WL	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Present	Potential impact. Low potential for the species to nest in the project area in tree tops of large trees adjacent to coastal cliffs. However, no substantial impacts are anticipated. Caltrans would implement standard measures to avoid impacts.
Short-tailed albatross	*Phoebastria albatrus*	FE/-	Nests on two Japanese islands, Torishima and Minimi-kojima. When at sea feeding, they range across the North Pacific to as far west as off-shore of California.	Absent	No Effect. No nesting or feeding habitat in the project area. The BSA outside of the range for this albatross, which begins farther west along the continental shelf margins of the Pacific Ocean.
Purple martin	*Progne subis*	-/SSC	Nests in abandoned woodpecker holes in trees in a variety of wooded and riparian habitats, and vertical drainage holes under elevated freeways and highway bridges.	Present	Potential impact. Low potential for the species to nest in the BSA in grand fir forest. However, no substantial impacts are anticipated. Caltrans would implement standard measures to avoid impacts.
Northern spotted owl	*Strix occidentalis caurina*	FT/ST	Dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices.	Absent	No Effect. No old-growth or mature coniferous forests. There is no suitable nesting or foraging old-growth or mature coniferous forest habitat within 0.25 mile of the project BSA at the project site (USFWS pers. comm.), Nearest critical habitat is 1.5 miles from the BSA. The nearest activity center occurs 1.5 miles east of Jack Peters Creek in Russian Gulch State Park. Critical habitat for NSO in the region is part of the Redwood Coast Sub-Unit 2, which is approximately 1.6 miles east of the BSA.

Fish

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Green Sturgeon, Southern DPS	*Acipenser medirostris*	FT/-	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.	Absent	No Effect. Critical habitat is within BSA but offshore and adjacent to Jack Peters Creek. Not known to occur in Jack Peters Creek, as no suitable passage, spawning, or rearing habitat is present; Water levels during the main summer and fall construction season would be too low for migrating sturgeon to reach the head of the tide within the ESL. Although tides would be higher in the winter and the flow would infrequently reach the head of the tide, all work would be contained higher up on the bridge superstructure and falsework with measures in place to prevent debris from entering the creek. The intertidal estuary at Jack Peters Creek is generally not suitable habitat for foraging by sub-adults and adults due to shallow and rocky substrate.
Pacific lamprey	*Entosphenus tridentatus*	-/SSC	Parasitic. Forage in marine waters; spawn in gravel bottomed streams at the upstream end of riffle habitat. Spawning occurs between March and July depending upon location within their range.	Absent	No impact. Not known to occur in Jack Peters Creek. The drainage is too shallow and narrow to support spawning habitat.
Tidewater goby	*Eucyclogobius newberryi*	FE/SSC	On bottom or existing on submerged plants in shallow weedy areas of coastal lagoons and estuaries.	Absent	No effect. No suitable foraging, rearing, or spawning habitat is present in the BSA.
Navarro roach	*Lavinia symmetricus navarroensis*	-/SSC	Found exclusively in the Navarro River. Prefer waters with low flow velocity and deep pools.	Absent	No impact. Not known to occur in Jack Peters Creek.
Coho salmon, Central California Coast ESU	*Oncorhynchus kisutch*	FE/SE	Cool freshwater streams and rivers, require sand and gravel for spawning.	Absent	No effect. No suitable foraging, rearing, or spawning habitat is present in the BSA. Jack Peters Creek does not support coho salmon, most likely because of its relative size and topography. Jack Peters Creek is not designated critical habitat for coho salmon.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Steelhead, Northern California DPS	*Oncorhynchus mykiss*	FT/-	Cool freshwater streams and rivers, require sand and gravel for spawning.	Present Critical Habitat	May affect but not likely to adversely affect. Suitable and occupied rearing habitat is present within the BSA in Jack Peters Creek. Critical habitat is also present within the BSA.
Chinook salmon, California Coastal ESU	*Oncorhynchus tshawytscha*	FT/-	Ocean and coastal streams.	Absent	No Effect. The BSA is within the range of the California Coastal ESU of Chinook salmon; however, Chinook salmon is not known to occur in Jack Peters Creek. This is likely because smaller streams like Jack Peters Creek do not provide sufficient area of estuary habitat for outmigrant Chinook smolts. There is no designated critical habitat for Chinook salmon within Jack Peters Creek.

Invertebrates

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Obscure bumble bee	*Bombus caliginosus*	-/S1S2	Open grassy coastal prairies and meadows. Generalist foragers. Nest above or underground.	Present	Potential impact. Low potential for the species to forage in the project area in low-lying herbaceous cover; however, no substantial impacts are anticipated. Caltrans would implement standard measures to avoid impacts.
Western bumble bee	*Bombus occidentalis*	-/SCE	Generalist foragers. Require pollen from floral resources throughout the duration of the colony period (spring to fall), and suitable overwintering sites for the queens. Nest in underground cavities and in open west-southwest slopes bordered by trees (Xerxes Society et al., 2018).	Present	Potential impact. Low potential for the species to forage in the project area in low-lying herbaceous cover. However, no substantial impacts are anticipated. Caltrans would implement standard measures to avoid impacts.
Mendocino leptonetid spider	*Calileptoneta wapiti*	-/S1	Cool, moist microenvironments in caves, leaf litter, and embedded rocky outcrops.	Absent	No Impact. No suitable habitat in project area. In addition, historic specimen was obtained approximately 15 miles south in Elk.
Globose dune beetle	*Coelus globosus*	-/S1S2	Foredunes and sand hummocks immediately bordering the coast.	Absent	No Impact. No suitable habitat in project area.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Pomo bronze shoulderband	*Helminthoglypta arrosa pomoensis*	-/S1.1	Redwood forests.	Absent	No Impact. No suitable habitat in project area.
Lotis blue butterfly	*Lycaeides idas lotis*	FE/-	Coastal peat bogs and pygmy conifer forest inland from coastal sand dunes.	Absent	No Effect. No peat bogs or pygmy conifer forest. The host plant for LBB, *Hosackia gracilis*, was found 20 feet east of the ESL, within the BSA. However, based on conversations with USFWS the host plants would not be affected by construction due to topography and water flow of the area, as well as standard measures implemented by Caltrans. Thus, the LBB using the host plant would not be affected as well.
Ten mile shoulderband	*Noyo interessa*	-/S2	Dune mat habitat at the mouth of the Ten Mile River.	Absent	No Impact. No suitable habitat in project area.
Behren's silverspot butterfly	*Speyeria zerene behrensii*	FE/-	Habitats with larval food sources (violets) are required; specific habitat unknown.	Absent	No Effect. Within historic range. The host plant, *Viola adunca*, was not found within 100 ft of the ESL.

Terrestrial Mammals

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Pallid bat	*Antrozous pallidus*	-/SSC	Day roost in caves, crevices, and mines, and occasionally in hollow trees and buildings throughout western California at lower and mid elevations.	Absent	No impact. No suitable habitat in project area.
Point Arena mountain beaver	*Aplodontia rufa nigra*	FE/SSC	North-facing, wooded slopes of ridges or gullies where there is abundant moisture, thick under-growth, and soft soil for burrowing.	Absent	No Effect. Outside species range, which is approximately 35 miles south.
Sonoma tree vole	*Arborimus pomo*	-/SSC	Coastal forests in mature, old-growth forests of Douglas-fir, redwood, or montane hardwood-conifer species. Prefer larger trees with greater canopy cover and wide limbs to support nests.	Present	Potential impact. Suitable nesting habitat in mature stands of second-growth conifer forest southeast of Jack Peters Creek in the ESL and BSA in grand fir and bishop pine trees.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Townsend's big-eared bat	*Corynorhinus townsendii*	-/SSC	Caves, mines, tunnels, large old- growth trees with large cavities, bridges, buildings along coast.	Absent	No Effect. No suitable habitat in project area.
Fisher, West Coast DPS	*Pekania pennanti*	-/ST	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. They utilize cavities, snags, logs and rocky areas for cover and denning.	Absent	No Effect. Outside species range, with the closest area in the Klamath Mountains in Del Norte and Humboldt counties.
Pacific marten, Coastal Distinct Population Segment (DPS)	*Martes caurina*	FT/SE	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. Associated with late-successional coniferous forests, prefer forests with low, overhead cover.	Absent	No Effect. Project location is outside the current range of this species.

Marine Mammals

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
Guadalupe fur seal	*Arctocephalus townsendi*	FT/ST	Mainly inhabit tropical islands off the coast of Baja California, but known from the Mexico/Guatemala border to Point Reyes.	Absent	No Effect. No suitable habitat in the project area.
Sei whale	*Balaenoptera borealis*	FE/-	Open ocean whales, not often seen near the coast.	Absent	No Effect. No suitable habitat in project area.
Blue whale	*Balaenoptera musculus*	FE/-	Occur in all oceans, primarily along the edge of the continental shelf or along ice fronts. Major populations are found in the North Pacific, North Atlantic and southern hemisphere.	Absent	No Effect. No suitable habitat in project area.
Fin whale	*Balaenoptera physalus*	FE/-	Located throughout the world's oceans, especially in the Northeastern Pacific portion of North America, less common in tropical seas. Tend to stay in deep water, however they have been seen along coastal areas with depth no less than 90 feet.	Absent	No Effect. No suitable habitat in project area.

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
North Pacific right whale	*Eubalaena japonica*	FE/-	Coastal or shelf waters; sometimes deep waters.	Absent	No Effect. No suitable habitat in project area.
Humpback whale	*Megaptera novaeangliae*	FE/-	Distributed worldwide in all ocean basins, though in the North Pacific they do not occur in Arctic waters.	Absent	No Effect. No suitable habitat in project area.
Southern Resident killer whale	*Orcinus orca*	FE/-	North Pacific Ocean. Winter range may extend south to central California. Consume salmon.	Absent	No Effect. No suitable habitat in project area.
Sperm whale	*Physeter macrocephalus*	FE/-	Tend to inhabit areas with a water depth of 1,968 feet or more. Uncommon in waters less than 984 feet deep.	Absent	No Effect. No suitable habitat in project area.

Reptiles

Common name	Scientific name	Status[1]: Federal/ State	Habitat	Habitat Present/ Absent	Rationale
East Pacific green sea turtle	*Chelonia mydas*	FT/-	Mainly pelagic, but also feeds in coastal areas. Nests on Pacific Coast beaches in Central and South America.	Absent	No Effect. No suitable habitat in the project area. Habitat within the BSA is not suitable foraging habitat for this species because it does not contain seagrass beds.
Leatherback sea turtle	*Dermochelys coriacea*	FE/-	Mainly pelagic, but also forages in coastal waters. Nests in Indonesia.	Absent	No Effect. The BSA is outside of the range of this species.
Olive Ridley sea turtle	*Lepidochelys olivacea*	FT/-	Mainly pelagic, but also feeds in coastal areas. Nests on Pacific Coast beaches in Central and South America.	Absent	No Effect. No suitable habitat in the project BSA.
Western pond turtle	*Emys marmorata*	-/SSC	Ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Need basking sites and suitable upland habitat (sandy banks or grassy open fields) within 0.3 mile of water for egg laying.	Absent	No Impact. No suitable large, deep pond foraging or upland habitat is present within the BSA.

Plants

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Pink sand-verbena	*Abronia umbellata* ssp. *breviflora*	-/-/Rank 1B.1	Coastal dunes.	Absent	No Impact. No suitable habitat within the project BSA. Species not observed during botanical surveys.
Blasdale's bent grass	*Agrostis blasdalei*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie.	Absent	No Impact. No suitable habitat within the project BSA. Species not observed during botanical surveys.
Sea-watch	*Angelica lucida*	-/-/ Rank 4.2	Coastal bluff scrub, coastal dunes, coastal scrub, marshes and swamps (coastal salt).	Absent	No Impact. Species not observed during botanical surveys.
Pygmy manzanita	*Arctostaphylos nummularia* ssp. *mendocinoensis*	-/-/ Rank 1B.2	Closed-cone coniferous forest in acidic sandy clay.	Absent	No Impact. Species not observed during botanical surveys.
Humboldt County milk-vetch	*Astragalus agnicidus*	-/SE/ Rank 1B.1	Openings and disturbed areas in mixed coniferous forest.	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Point Reyes blennosperma	*Blennosperma nanum* var. *robustum*	-/-/ Rank 1B.2	Coastal prairie, coastal scrub.	Absent	No Impact. Species not observed during botanical surveys.
Bolander's reed grass	*Calamagrostis bolanderi*	-/-/ Rank 4.2	Bogs and fens, broad-leaved upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps (mesic), marshes and swamps (freshwater), North Coast coniferous forest/mesic.	Absent	No Impact. Species not observed during botanical surveys.
Thurber's reed grass	*Calamagrostis crassiglumis*	-/-/ Rank 2B.1	Northern coastal scrub, freshwater marsh/wetlands, wetland-riparian.	Absent	No Impact. Species not observed during botanical surveys.
Coastal bluff morning glory	*Calystegia purpurata* ssp. *saxicola*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal dunes, and North Coast coniferous forest.	Absent	No Impact. Species not observed during botanical surveys.
Swamp harebell	*Campanula californica*	-/-/ Rank 1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes and swamps (freshwater), North Coast coniferous forest/mesic.	Absent	No Impact. Species not observed during botanical surveys.
California sedge	*Carex californica*	-/-/ Rank 2B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes and swamps (margins).	Absent	No Impact. Species not observed during botanical surveys.
Lagoon sedge	*Carex lenticularis* var. *limnophila*	-/-/ Rank 2B.2	Wetlands, North Coast coniferous forest, wetland-riparian.	Absent	No Impact. Species not observed during botanical surveys.
Livid sedge	*Carex livida*	-/-/ Rank 2A	Bogs and fens.	Absent	No Impact. Species not observed during botanical surveys.
Lyngbye's sedge	*Carex lyngbyei*	-/-/ Rank 2B.2	Coastal wetlands, salt-marsh, wetland-riparian.	Absent	No Impact. Species not observed during botanical surveys.
Deceiving sedge	*Carex saliniformis*	-/-/ Rank 1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt)/mesic.	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Johnny-nip	*Castilleja ambigua* var. *ambigua*	-/-/ Rank 4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pool margins.	Absent	No Impact. Species not observed during botanical surveys.
Humboldt Bay owl's-clover	*Castilleja ambigua* var. *humboldtiensis*	-/-/ Rank 1B.2	Coastal salt marsh, wetlands, wetland-riparian.	Absent	No Impact. Species not observed during botanical surveys.
Oregon coast paintbrush	*Castilleja litoralis*	-/-/ Rank 2B.2	Sandy soils in coastal bluff scrub, coastal dunes and coastal scrub.	Absent	No Impact. Species not observed during botanical surveys.
Mendocino Coast paintbrush	*Castilleja mendocinensis*	-/-/ Rank 1B.2	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal prairie, coastal scrub.	Absent	No Impact. Species not observed during botanical surveys.
Glory brush	*Ceanothus gloriosus* var. *exaltatus*	-/-/ Rank 4.3	Chaparral.	Absent	No Impact. Species not observed during botanical surveys.
Point Reyes ceanothus	*Ceanothus gloriosus* var. *gloriosus*	-/-/ Rank 4.3	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal scrub/sandy.	Absent	No Impact. Species not observed during botanical surveys.
Howell's spineflower	*Chorizanthe howellii*	FE/ST/ Rank 1B.2	Coastal dunes, coastal prairie, coastal scrub/sandy, often disturbed areas.	Absent	No Effect. Species not observed during botanical surveys.
Pacific golden saxifrage	*Chrysosplenium glechomifolium*	-/-/ Rank 4.3	North Coast coniferous forest, and riparian forest along streambanks and sometimes seeps. Occasionally found on roadsides.	Absent	No Impact. Species not observed during botanical surveys.
Whitney's farewell-to-spring	*Clarkia amoena* ssp. *whitneyi*	-/-/ Rank 1B.1	Coastal bluff scrub, coastal scrub.	Absent	No Impact. Species not observed during botanical surveys.
Round-headed Chinese-houses	*Collinsia corymbosa*	-/-/ Rank 1B.2	Coastal dunes.	Absent	No Impact. No dunes within the limits of work. Not found during plant surveys.
Oregon goldthread	*Coptis laciniata*	-/-/ Rank 4.2	North Coast coniferous forest, meadows and seeps. Mesic sites such as moist streambanks.	Absent	No Impact. Species not observed during botanical surveys.
Bunchberry	*Cornus canadensis*	-/-/ Rank 2B.2	Bogs, fens, meadows, and seeps in North Coast coniferous forest.	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Mendocino dodder	*Cuscuta pacifica* var. *papillata*	-/-/ Rank 1B.2	Coastal dunes.	Absent	No Impact. Species not observed during botanical surveys.
Supple daisy	*Erigeron supplex*	-/-/ Rank 1B.2	Coastal prairie, Northern coastal scrub.	Absent	No Impact. Species not observed during botanical surveys.
Bluff wallflower	*Erysimum concinnum*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal dunes and coastal prairie.	Absent	No Impact. Species not observed during botanical surveys.
Menzies' wallflower	*Erysimum menziesii* ssp. *menziesii*	FE/SE/ Rank 1B.1	Coastal dunes.	Absent	No Effect. Species not observed during botanical surveys.
Roderick's fritillary	*Fritillaria roderickii*	-/SE/ Rank 1B.1	Coastal bluff scrub, coastal prairie, valley and foothill grassland.	Absent	No Effect. Species not observed during botanical surveys.
Pacific gilia	*Gilia capitata* ssp. *pacifica*	-/-/ Rank 1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grassland.	Absent	No Impact. Species not observed during botanical surveys.
Dark-eyed gilia	*Gilia millefoliata*	-/-/ Rank 1B.2	Coastal dunes.	Absent	No Impact. Species not observed during botanical surveys.
Congested-headed hayfield tarplant	*Hemizonia congesta.* ssp. *congesta*	-/-/ Rank 1B.2	Valley and foothill grasslands, sometimes on roadsides.	Absent	No Impact. Species not observed during botanical surveys.
Short-leaved evax	*Hesperevax sparsiflora* var. *brevifolia*	-/-/ Rank 1B.2	Coastal bluff scrub (sandy), coastal dunes.	Absent	No Impact. Species not observed during botanical surveys.
Pygmy cypress	*Hesperocyparis pygmaea*	-/-/ Rank 1B.2	Closed-cone coniferous forest (usually podzol-like soil).	Absent	No Impact. Species not observed during botanical surveys.
Point Reyes horkelia	*Horkelia marinensis*	-/-/ Rank 1B.2	Coastal dunes, coastal prairie, coastal scrub/sandy.	Absent	No Impact. Species not observed during botanical surveys.
Harlequin lotus	*Hosackia gracilis*	-/-/ Rank 4.2	Wetlands and roadsides in a variety of habitats.	Present	Potential for impact. Patch of approximately 100 individuals observed within the BSA approximately 20 feet east of the ESL Caltrans would implement standard measures to avoid impacts.
Hair-leaved rush	*Juncus supiniformis*	-/-/ Rank 2B.2	Bogs and fens, marshes and swamps (freshwater)/near coast.	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Small groundcone	*Kopsiopsis hookeri*	-/-/ Rank 2B.3	Redwood forest.	Absent	No Impact. No suitable habitat within the BSA. Species not observed during botanical surveys.
Burke's goldfields	*Lasthenia burkei*	FE/SE/ Rank 1B.1	Meadows and seeps (mesic), vernal pools.	Absent	No Effect. Species not observed during botanical surveys.
Baker's goldfields	*Lasthenia californica* ssp. *bakeri*	-/-/ Rank 1B.2	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps.	Absent	No Impact. Species not observed during botanical surveys.
Perennial goldfields	*Lasthenia californica* ssp. *macrantha*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub.	Absent	No Impact. Species not observed during botanical surveys.
Contra Costa goldfields	*Lasthenia conjugens*	FE/-/ Rank 1B.1	Vernal pools, also meadows, woodlands, grasslands, and seeps (mesic).	Absent	No Effect. Species not observed during botanical surveys.
Marsh pea	*Lathyrus palustris*	-/-/ Rank 2B.2	Coastal wetlands, freshwater marsh, coastal scrub, bogs/fens, coastal prairie, yellow pine forest, North Coast coniferous forest, wetland-riparian.	Absent	No Effect. Species not observed during botanical surveys.
Coast lily	*Lilium maritimum*	-/-/ Rank 1B.1	Broad-leaved upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, marshes and swamps (freshwater), North Coast coniferous forest/sometimes roadside.	Absent	No Impact. Species not observed during botanical surveys.
Redwood lily	*Lilium rubescens*	-/-/ Rank 4.2	Chaparral, lower montane coniferous forest, broad-leaved upland forest, upper montane coniferous forest, North Coast coniferous forest. Sometimes on serpentine soils.	Absent	No Impact. Species not observed during botanical surveys.
Running-pine	*Lycopodium clavatum*	-/-/ Rank 4.1	Lower montane coniferous forest, North Coast coniferous forest, marshes and swamps. Forest understory, edges, openings, roadsides; mesic sites with partial shade and light.	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Northern microseris	*Microseris borealis*	-/-/ Rank 2B.1	Bogs and fens, meadows and seeps, lower montane coniferous forest.	Absent	No Impact. Species not observed during botanical surveys.
Leafy-stemmed mitrewort	*Mitellastra caulescens*	-/-/ Rank 4.2	Broad-leaved upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest/mesic, sometimes roadsides.	Absent	No Impact. Species not observed during botanical surveys.
Seacoast ragwort	*Packera bolanderi* var. *bolanderi*	-/-/ Rank 2B.2	Coastal scrub, North Coast coniferous forest/sometimes roadsides.	Absent	No Impact. Species not observed during botanical surveys.
North Coast phacelia	*Phacelia insularis* var. *continentis*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal dunes/sandy, sometimes rocky.	Absent	No Impact. Species not observed during botanical surveys.
Bolander's beach pine	*Pinus contorta* ssp. *bolanderi*	-/-/ Rank 1B.2	Closed-cone coniferous forest (podzol-like soil).	Absent	No Impact. Species not observed during botanical surveys.
White-flowered rein orchid	*Piperia candida*	-/-/ Rank 1B.2	North Coast coniferous forest, lower montane coniferous forest, broad-leaved upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg.	Absent	No Impact. Species not observed during botanical surveys.
California pinefoot	*Pityopus californicus*	-/-/ Rank 4.2	Mesic areas of broad-leaved upland, lower or upper montane, and North Coast coniferous forest.	Absent	No Impact. Species not observed during botanical surveys.
Nodding semaphore grass	*Pleuropogon refractus*	-/-/ Rank 4.2	Meadows and seeps, lower montane coniferous forest, North Coast coniferous forest, riparian forest. Mesic sites along streams, grassy flats in shaded redwood groves, often on granite.	Absent	No Impact. Species not observed during botanical surveys.
Dwarf alkali grass	*Puccinellia pumila*	-/-/ Rank 2B.2	Marshes and swamps (coastal salt).	Absent	No Impact. Species not observed during botanical surveys.
Angel's hair lichen	*Ramalina thrausta*	-/-/ Rank 2B.1	North Coast coniferous forest; on dead twigs and other lichens.	Absent	No Impact. Species not observed during botanical surveys.
White beaked-rush	*Rhynchospora alba*	-/-/ Rank 2B.2	Bogs and fens, meadows and seeps, marshes and swamps (freshwater).	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Great burnet	*Sanguisorba officinalis*	-/-/ Rank 2B.2	Bogs and fens, broad-leaved upland forest, meadows and seeps, marshes and swamps, North Coast coniferous forest, riparian forest/often serpentinite.	Absent	No Impact. Species not observed during botanical surveys.
Point Reyes checkerbloom	*Sidalcea calycosa* ssp. *rhizomata*	-/-/ Rank 1B.2	Coastal salt marsh, freshwater marsh, wetland-riparian.	Absent	No Impact. Species not observed during botanical surveys.
Maple-leaved checkerbloom	*Sidalcea malachroides*	-/-/ Rank 4.2	Broad-leaved upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland/often in disturbed areas.	Absent	No Impact. Species not observed during botanical surveys.
Siskiyou checkerbloom	*Sidalcea malviflora* ssp. *patula*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal prairie, North Coast coniferous forest. Open coastal forest; roadcuts.	Absent	No Impact. Species not observed during botanical surveys.
Purple-stemmed checkerbloom	*Sidalcea malviflora* ssp. *purpurea*	-/-/ Rank 1B.2	Broad-leaved upland forest, coastal prairie.	Absent	No Impact. Species not observed during botanical surveys.
Trifoliate laceflower	*Tiarella trifoliata* var. *trifoliata*	-/-/ Rank 3.2	Lower montane coniferous forest, North Coast coniferous forest. Forest edge; moist shady banks.	Absent	No Impact. Species not observed during botanical surveys.
Showy Indian clover	*Trifolium amoenum*	FE/-/ Rank 1B.1	Coastal bluff scrub and valley and foothill grassland (sometimes serpentinite).	Absent	No Effect. Species not observed during botanical surveys.
Santa Cruz clover	*Trifolium buckwestiorum*	-/-/ Rank 1B.1	Broad-leaved upland forest and cismontane woodland.	Absent	No Impact. Species not observed during botanical surveys.
Monterey clover	*Trifolium trichocalyx*	FE/SE/ Rank 1B.1	Closed-cone coniferous forest (sandy, openings, burned areas).	Absent	No Effect. Species not observed during botanical surveys.
Coastal triquetrella	*Triquetrella californica*	-/-/ Rank 1B.2	Coastal bluff scrub, coastal scrub/soil.	Absent	No Impact. Species not observed during botanical surveys.
Methuselah's beard lichen	*Usnea longissimi*	-/-/ Rank 4.2	Found hanging on tree branches; usually on old-growth hardwoods and conifers within broad-leaved upland forest and North Coast coniferous forest.	Absent	No Impact. Species not observed during botanical surveys.

Common Name	Scientific Name	Status[1]: Federal/ State/ CRPR	Habitat	Habitat Present/ Absent	Rationale
Fringed false-hellebore	*Veratrum fimbriatum*	-/-/ Rank 4.3	Bogs and fens, coastal scrub, meadows and seeps, North Coast coniferous forest/mesic.	Present	Potential for impact. Patch of over 100 individuals observed within the BSA approximately 10 feet east of the ESL. Caltrans would implement standard measures such as installing THVF along the patch boundary to avoid impacts.
Alpine marsh violet	*Viola palustris*	-/-/ Rank 2B.2	Bogs and fens (coastal), coastal scrub (mesic).	Absent	No Impact. Species not observed during botanical surveys.

[1] Status Explanations

Federal:

-- = No status definition.
FE = Endangered.
FT = Listed as threatened under the Federal Endangered Species Act.
DL = Delisted.

State:

-- = No status definition.
SE = Listed as endangered under the California Endangered Species Act (CESA).
ST = Listed as threatened under CESA.
SCE = Proposed for state listing as tendangered under CESA.
FP = Fully protected, species may not be taken or possessed without a permit from the FG Commission and/or the CDFW.
SSC = Species of Special Concern.
WL = Watch List: Species that do not meet the criteria of SSC, but for which there is concern and a need for additional information to clarify status.

California Rare Plant Rank (CRPR):

-- = No status definition.
1A = Plants presumed extinct in California.
1B = Plants are rare and endangered in California.
2 = Plants endangered in California, but more common elsewhere.
3 = More information is needed about the plant species.
4 = Limited distribution (Watch List) (4.1 = seriously endangered in California; 4.2 = fairly endangered in California; 4.3 = Not very endangered in California)