ROCKPORT CULVERTS PROJECT

MENDOCINO COUNTY, CALIFORNIA
DISTRICT 1 – MEN – 1 (Post Miles 85.09 to 88.95)
EA 01-49620 / EFIS 0118000087

INITIAL STUDY

with Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

January 2022

General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration (IS/MND) which examined the potential environmental effects of a proposed project on State Route 1 near Rockport, California. 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. The Initial Study circulated to the public between November 29, 2021 and January 3, 2022. No comments were received during this period. Elsewhere throughout this document a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document are available for review at the District 1 office at 1656 Union Street, Eureka CA 95501. This document may 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

Alternative Formats:

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) 445-6600 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

ROCKPORT CULVERTS PROJECT

Culvert improvements on State Route 1 in Mendocino County,
from post miles 85.09 to 88.95 located near Rockport, California.

INITIAL STUDY

With Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA

Department of Transportation

02/28/22
Date of Approval

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

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

Liza Walker, Senior Environmental Planner/Branch Chief
North Region Environmental-District 1
1656 Union Street, Eureka, CA 95501
(707) 502-9657
or use the California Relay Service TTY number, 711 or 1-800-735-292

MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2021110418

Project Description

The California Department of Transportation (Caltrans) proposes a culvert replacement project along State Route 1 (SR 1) from post miles (PMs) 85.09 to 88.95.

Determination

Caltrans has prepared an Initial Study for this project and, following public review, has determined 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 Effect* on Aesthetics, Agriculture and Forest Resources, Air Quality, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire.

The project would have *Less than Significant Impacts* on:

- Greenhouse Gas Emissions
- Hydrology and Water Quality

With the following mitigation measures incorporated, the project would have *Less than Significant Impact*s to Biological Resources:

- Mitigation for impacts to Waters of the U.S. and State would be offset at an appropriate off-site location approved by the resource and regulatory agencies. Off-site compensatory mitigation options could include the purchase of credits from the Mendocino Coast Mitigation Bank. Appropriate mitigation ratios would be identified and coordinated with resource agencies but would likely be 3:1.

Brandon Larsen _____ 02/28/22 _____

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

Date

Table of Contents

List of Appendices

List of Tables

List of Figures

List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
ABMP	Additional Best Management Practices
ARDR	Aquatic Resources Delineation Report
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAS	Cable Anchoring System
CCC	Central California Coast (coho salmon ESU)
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
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSP	Corrugated Steel Pipe
CTP	California Transportation Plan
CWA	Clean Water Act
dB	Decibels
dBA	A-weighted Decibels
DBH	Diameter at Breast Height
DD	Down Drain
Department	Caltrans
DI	Drainage Inlet
DOT	Department of Transportation
DPPIAs	Design Pollution Prevention Infiltration Areas
DPS	Distinct Population Segment

Abbreviation	Description
DSA	Disturbed Soil Area
ECL	Environmental Construction Liaison
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
ES	Ephemeral drainage
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESL	Environmental Study Limits
ESU	Evolutionarily Significant Unit
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FES	Flared End Section
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FGDC	Federal Geographic Data Committee
FIRM	Flood Insurance Rate Map
FMP	Fishery Management Plan
FP	Fully Protected
FR	Federal Register
“G”	Global: ranking for Natural Communities of Special Concern
GHG	Greenhouse Gas
GWP	Global Warming Potential
H&SC	Health & Safety Code
HFCs	Hydrofluorocarbons
HU	Hydrologic Unit
IPCC	Intergovernmental Panel on Climate Change
IS	Intermittent Drainage
IS	Initial Study
ISA	International Society of Arboriculture
IS/MND	Initial Study/Mitigated Negative Declaration
LCFS	Low Carbon Fuel Standard
LSAA	Lake and Streambed Alteration Agreement
MAMU	Marbled murrelet
MBTA	Migratory Bird Treaty Act
MCOG	Mendocino Council of Governments
MGS	Midwest Guardrail System
MLD	Most Likely Descendent
MMT	Million metric tons
MMTC02e	Million metric tons of carbon dioxide equivalent

Abbreviation	Description
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NC	North Coast
NCRWQCB	North Coast Regional Water Quality Control Board
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
NRHP	National Register of Historic Places
NSO	Northern spotted owl
O_3	Ozone
OHWM	Ordinary High Water Mark
OW	Other Waters
PBO	Programmatic Biological Opinion
PDT	Project Development Team
PIF	Project Initiation Form
PLOC	Programmatic Letter of Concurrence
PM(s)	Post Mile(s)
PRC	Public Resources Code
Quad	United States Geological Survey 7-5 minute Quadrangles
RCP	Representative Concentration Pathways
RED	Rock Energy Dissipator
RHZ	Root Health Zone
ROW	Right of Way
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
“S”	State: ranking for Natural Communities of Special Concern
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF	Square Feet
SF_6	Sulfur Hexafluoride

Abbreviation	Description
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community/Communities
SO_2	Sulfur Dioxide
SR	State Route
SRA	State Responsibility Area
SRZ	Structural Root Zone
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
TCE	Temporary Construction Easement
THVF	Temporary High Visibility Fencing
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
U.S. or US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
USGCRP	U.S. Global Change Research Program
VMT	Vehicle Miles Traveled
WPCP	Water Pollution Control Program
WRCC	Western Regional Climate Center

Chapter 1. Proposed Project

1.1. Project History

This project was initiated in 2009 when several failing or damaged drainage systems needing repair or replacement were identified in Mendocino County on State Route (SR) 1. The Project Initiation Form (PIF) was approved in August 2009. The project was originally referred to as the Westport Culverts Project and initially consisted of 14 culvert locations. This project was later renamed Rockport Culverts Project after the culverts between post miles (PM) 75.47 and PM 84.10 were removed from the scope. Subsequently, two drainage system locations (PM 84.83 and 87.62) were removed from the scope of this project after an emergency project was proposed to address voids in the embankment, and two additional drainage system locations (PM 84.30 and 84.69) were removed from this project and programmed for a separate project due to budget constraints. The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA).

1.2. Project Description

The proposed project would rehabilitate or replace five culvert systems on SR 1 from PMs 85.09 to 88.95 near Rockport, from 1.3 mile north of the Hardy Creek Bridge to 1.1 mile south of the Cottoneva Creek Bridge. A detailed description of project components is provided below.

Project Objective

Purpose

The purpose of the project is to improve drainage systems and reduce erosion to protect the structural integrity of SR 1.

Need

The identified drainage structures have either severely failed inverts or corroded, separated, and/or misaligned culverts. The current condition of these drainage structures is compromising the structural integrity of SR 1 within the project limits. The project is needed because the culverts are severely damaged or have failed, resulting in insufficient drainage capacity causing roadway flooding and embankment erosion which could potentially lead to roadway failure.

Proposed Project

Caltrans proposes a culvert replacement project along SR 1 from PMs 85.09 to 88.95. The project transverses two United States Geological Survey 7.5-minute Quadrangles (Quads). The southernmost point begins in Section 8, Township 20 North, Range 17 West, Mount Diablo Principal Meridian of the Westport quad, approximately 0.4 mile north of the community of Hardy, and ends in Section 14, Township 22 North, Range 18 West of the Hales Grove quad, approximately 1.3 miles north of Rockport in Mendocino County (Figures 1 and 2).

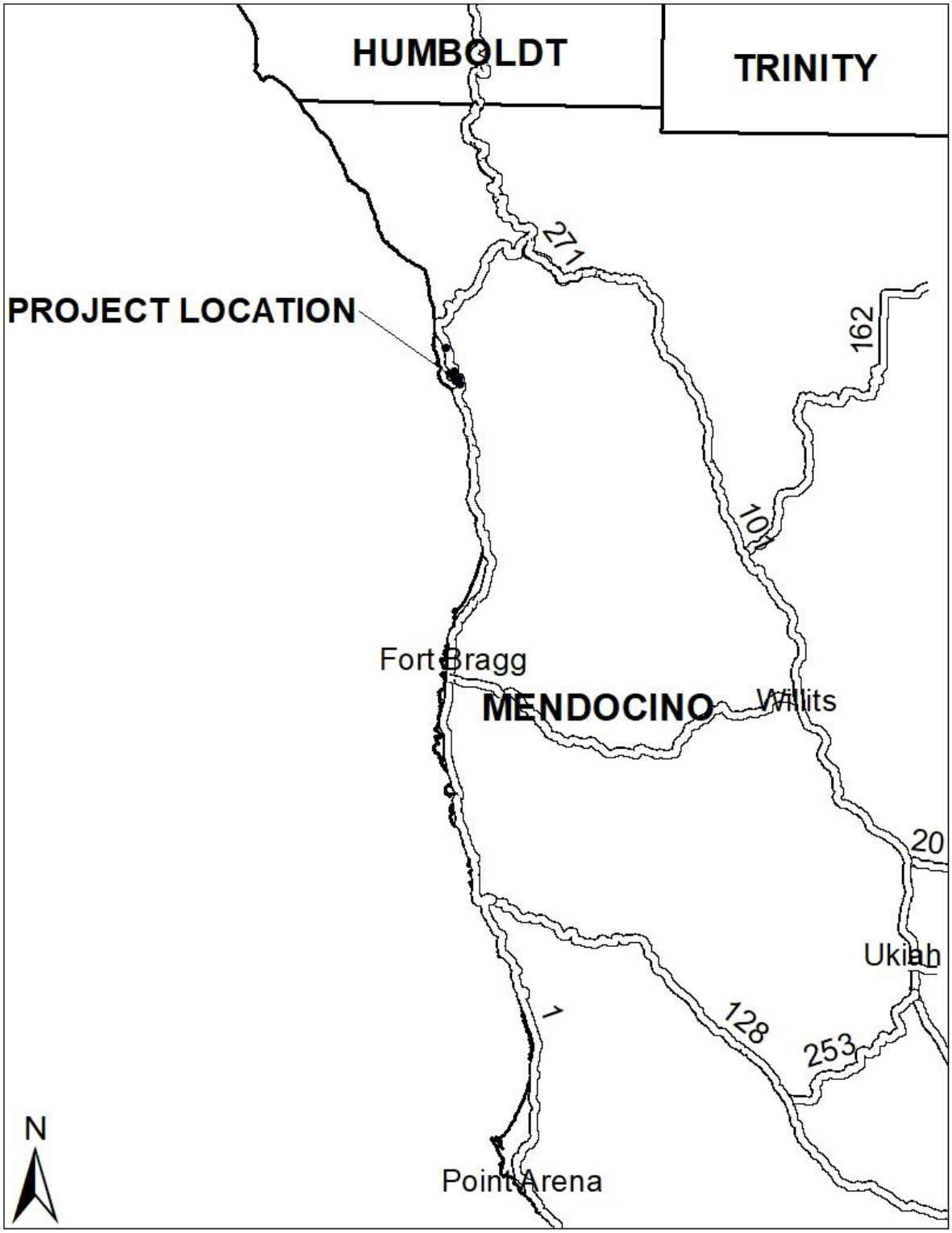


Figure 1. Project Vicinity

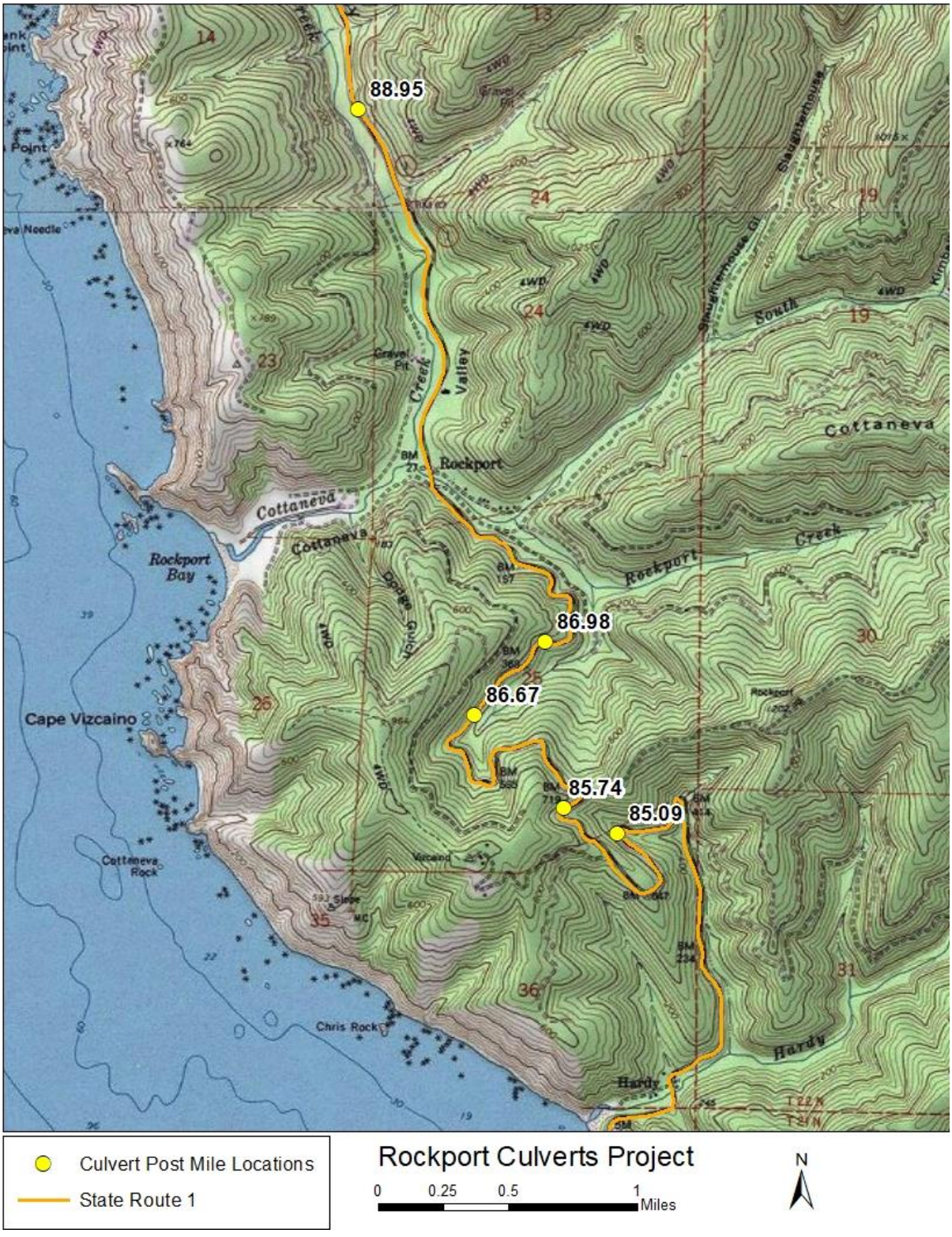


Figure 2. Project Location and Topography Map

The existing drainage systems and proposed work at each culvert site are shown on the Project Layouts in Appendix A and outlined in detail below. While most of the activities would be conducted within the existing Caltrans right of way (ROW), access and culvert replacement at all culvert locations would require a temporary construction easement (TCE) from Mendocino Redwood Company for small areas at the inlets and outlets adjacent to the ROW. Permanent drainage easements would be obtained for long-term maintenance of the facilities. Replacement methods vary based on culvert condition and topography. Water diversion may be required at any or all the locations if water is present at the beginning of construction. Vegetation clearing and grubbing would be required for construction access, culvert replacement, and installation of bank stabilization activities. Culverts would be replaced using the half-width cut and cover method as outlined below. The maximum depth of excavation would be 15 feet and the width would be the diameter of the pipe with roughly 24 inches on each side of the pipe.

Replacement of culverts via cut and cover method would generally include the following steps:

1. Setup temporary traffic control using portable delineators and traffic signs for single lane closure as required.
2. Setup staging areas in designated pullouts as well as within the existing closed portion of the roadbed.
3. Set up project erosion control Best Management Practices (BMPs), as needed.
4. Conduct nesting bird surveys as needed for vegetation clearing.
5. Conduct minor vegetation removal. May require small equipment such as a bobcat and trimming/removal equipment.
6. Set up clear water diversion, as needed.
7. Sawcut or grind existing roadway one traffic lane at a time (half width construction).
8. Conduct culvert improvements one half at a time (half width construction).
    i. Excavate trench using an excavator.
    ii. Remove or abandon existing culvert, inlets, and associated drainage structures per plan using a crane, excavator, dump truck or bobcat.
    iii. Install new culverts using a crane, backhoe, loader, bobcat, or compactor.
    iv. Construct inlets, headwalls, wingwalls, down drains (DDs), and outfalls per plan using a crane, excavator, bobcat, and compactors as needed. Concrete

truck will operate from closed traffic lane with potential use of concrete pump.

9. Remove clear water diversion, as needed.
10. Replace or install rock slope protection (RSP) as needed or fill under the DD using excavator, bobcat, skip loader, or boom truck.
11. At locations where culverts would be realigned, backfill existing culvert location with structural backfill (i.e., soil or fill from excavated area for new culvert location).
12. Restore asphalt using a paver and pavement striper.
13. Restore site, including placing erosion control measures.

Drainage System at PM 85.09

The existing drainage system consists of an 82-foot-long, 24-inch diameter CSP culvert. Water from an unnamed intermittent drainage flows into the culvert inlet, through the culvert, and outlets into existing RSP before continuing downstream through an incised channel that eventually connects with a tributary of Hardy Creek.

A metal FES would be installed at the existing inlet. The existing culvert would be replaced with a new 65-foot-long, 24-inch diameter CSP that would be installed via cut and cover method. Additionally, a new 32-foot-long, 24-inch diameter CSP DD would be attached to the culvert outlet. A CAS would be installed to secure the DD at approximately 3 feet downslope of the hinge point. The new culvert would be vertically realigned so that the inlet would be approximately one foot higher in elevation and the outlet would be approximately 3 feet lower in elevation. 84 SF of RSP would be installed at the new outlet.

Staging would occur in the pullout at PM 85.47 on the northbound side of SR 1, and at a large unpaved turnout at PM 84.73 on the southbound side of SR 1. Culvert replacement and RSP installation construction would require vegetation clearing and grubbing.

Drainage System at PM 85.74

The existing drainage system consists of a 53-foot-long, 18-inch diameter CSP culvert with a 30-foot-long, 18-inch diameter CSP DD which conveys stormwater runoff from an unnamed ephemeral drainage into the culvert inlet. The culvert and DD funnel the flow from this drainage through the culvert and the runoff outlets into existing RSP and downstream along a shallow ephemeral drainage.

A metal FES would be installed at the existing culvert inlet. The existing culvert would be replaced with a new 63-foot-long, larger diameter 24-inch CSP culvert that would be installed via cut and cover method. Additionally, a new 16-foot-long, larger diameter 24-inch CSP DD would be attached to the culvert outlet. A CAS would be installed to secure the DD at approximately 3 feet downslope of the hinge point. The new culvert would be lowered in elevation by one foot where it intersects the CAS. 72 SF of RSP would be installed at the DD outlet.

Staging would occur on the shoulder or turnout at PM 85.62, on the northbound side of SR 1, and at a large unpaved turnout at PM 84.73 on the southbound side of the west side of SR 1. Culvert replacement and RSP installation construction would require vegetation clearing and grubbing. Redwood trees near the outlet would be protected and designated an Environmentally Sensitive Area (ESA).

Drainage System at PM 86.67

The existing drainage system consists of a 45-foot-long, 18-inch diameter CSP culvert which conveys stormwater runoff from the roadway into the culvert inlet. The culvert funnels the flow from this drainage through the culvert and the runoff outlets into existing RSP.

A concrete box DI approximately 3 feet long by 2 feet wide by 4 feet deep would be installed at the existing inlet. The existing culvert would be replaced with a new 47-foot-long, larger diameter 24-inch CSP culvert that would be installed via cut and cover method. The culvert would be upsized to better accommodate stormwater flow in major storms and for increased ease of maintenance. Additionally, a new 15-foot-long, 24-inch diameter CSP DD would be attached to the culvert outlet. A CAS would be installed to secure the DD approximately 2 feet downslope of the hinge point. The new culvert would be vertically realigned so that the inlet would be approximately one foot higher in elevation and the outlet would be approximately 3 feet lower in elevation. 102 SF of RSP would be installed at the DD outlet.

Staging would occur on the shoulder or turnout at PM 86.46, on the northbound side of SR 1, and at a large unpaved shoulder or turnout at PM 87.13 on the southbound side of the west side of SR 1. Culvert replacement and DD, RSP, and DI construction would require vegetation clearing and grubbing.

Drainage System at PM 86.98

The existing drainage system consists of a 48-foot-long, 18-inch diameter CSP culvert which conveys stormwater runoff from the roadway into the culvert inlet. The culvert funnels the flow from this drainage through the culvert and the runoff outlets into existing RSP.

A concrete box DI approximately 3 feet long by 3 feet wide by 3.4 feet deep would be installed at the inlet. The inlet would also be realigned by approximately 14 degrees to the north. The existing culvert would be replaced with a new 47-foot-long, larger diameter 24-inch CSP culvert that would be installed via cut and cover method. The culvert would be upsized to better accommodate stormwater flow in major storms and for increased ease of maintenance. Additionally, a new 24-foot-long, larger diameter 24-inch CSP DD would be attached to the culvert outlet. A CAS would be installed to secure the DD at approximately 3 feet downslope of the hinge point. The new culvert would be vertically realigned so that the inlet would be approximately one foot higher in elevation and the outlet would be approximately 3 feet lower in elevation. 72 SF of RSP would be installed at the DD outlet.

Staging would occur on the shoulder or turnout at PM 87.39 on the northbound side of SR 1, and at a large unpaved shoulder or turnout at PM 87.13 on the southbound side of the west side of SR 1. Culvert replacement and DD, RSP, and DI installation construction would require vegetation clearing and grubbing.

Drainage System at PM 88.95

The existing drainage system consists of a 55-foot-long, 24-inch diameter CSP culvert which conveys water from an unnamed intermittent drainage into the culvert inlet. The culvert is halfway buried at the outlet and does not effectively facilitate flow from the inlet. Current stormwater runoff is sheet flow downslope of the shoulders on the southbound side of SR 1.

A metal FES would be installed at the culvert inlet and outlet. 72 SF of RSP would be installed at the new outlet. The existing culvert would be removed and replaced with a new 48-foot-long, 24-inch diameter CSP that would be installed via cut and cover method.

Staging would occur in the pullout at PM 88.66 on the northbound side of SR 1, and at a large unpaved shoulder at PM 88.95 on the southbound side of SR 1. Culvert replacement and RSP installation construction would require vegetation clearing and grubbing.

Construction Schedule

The project would be completed in one season in 2023 during the late summer and early fall to accommodate various biological resources seasonal restriction work windows. Work within drainages would occur during the dry season, June 15–October 15, to avoid impacts to aquatic organisms and water quality. Work windows to avoid auditory impacts to sensitive biological resources are described in further detail in Section 1.4.

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, no alterations to the existing conditions would occur and the proposed improvements would not be implemented.

Alternatives Considered but Eliminated from Further Consideration

Various drainage system components and alignments were considered throughout the development of the project, some of which were not selected. Alignments and system lengths at several locations have been modified to avoid tree removal. Components such as gabion baskets and RSP filter fabric have been removed from the scope based on feedback from resource agencies. The proposed rehabilitation and alignment at each location is based upon factors such as hydraulic conditions and environmental resources.

General Plan Description, Zoning, and Surrounding Land Uses

The project area and surrounding lands are within Mendocino County and subject to the County of Mendocino General Plan (County of Mendocino, 2009). The land within the project limits is zoned "TP" for Timberland, with a land use designation of Forest Land. All project culvert locations are outside of the Coastal Zone. Land uses in the greater surrounding area include remote low-density residential, forest lands, remote resource lands, and rangelands. The project would not change the existing land use or zoning designations in the project area.

1.3. Permits and Approvals Needed

The following table indicates the permitting agency, permits/approvals and status of permits required for the project.

Table 1. Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	1600 Lake and Streambed Alteration Agreement (LSAA)	Obtain after approval of final environmental document (FED)
Regional Water Quality Control Board (RWQCB)	401 Water Quality Certification	Obtain after approval of FED
U.S. Army Corps of Engineers (USACE)	404 Nationwide Permit	Obtain after approval of FED
U.S. Fish and Wildlife Service (USFWS)	Programmatic Letter of Concurrence (PLOC)	Complete
National Marine Fisheries Service (NMFS)	Programmatic Biological Opinion (PBO)	Complete

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 Resources

AR-1: 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-2: Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.

AR-3: Where feasible, construction lighting would be limited to within the area of work.

AR-4: 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 Environmental Construction Liaison (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. 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.

D. 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 installation and removal of dewatering or diversion systems. In-water work restrictions would be implemented.

E. 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. This Plan may be included as part of the Temporary Creek Diversion System Plan identified in **BR-5**.

F. 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.

G. 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.

H. No construction activities generating noise levels greater than 90 decibels (dB) (with the exception of backup alarms) or activities generating sound levels 20 or more dB above ambient sound levels would occur between February 1 and August 5. Between August 6 and September 15, work that generates noise levels greater than 10 dB above ambient sound levels or above 90 dB max would observe a daily work window beginning 2 hours post-sunrise and ending 2 hours pre-sunset. Noise-related work windows would be lifted between September 16 and January 31. Further, no construction activities would occur within a visual line-of-sight of 131 feet or less from any known active nest locations for northern spotted owl or marbled murrelet.

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. Seasonally appropriate, pre-construction surveys for sensitive plant species would be completed (or updated) by a qualified biologist prior to construction in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

B. 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.

C. 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.

D. Where feasible, the structural root zone would be identified around each large-diameter tree (>2-foot DBH) directly adjacent to project activities, and work within the zone would be limited.

E. When possible, excavation of roots of large diameter trees (>2-foot DBH) would not be conducted with mechanical excavator or other ripping tools. Instead, roots would be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots would be pruned away to make sharp, clean cuts.

F. 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. The contractor would be required to prepare and submit a Temporary Creek Diversion System Plan to Caltrans for approval prior to any creek diversion. Depending on site conditions, the plan may also require specifications for the relocation of sensitive aquatic species (see also Aquatic Species Relocation Plan in **BR-2**). Water generated from the diversion operations would be pumped and discharged according to the approved plan and applicable permits.

B. 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-2**). 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) or Water Pollution Control Program (WPCP),) and/or project permit requirements.

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

Cultural Resources

CR-1: 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-2: 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 Protection and 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.

GS2: 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-3: Pedestrian and bicycle access would be maintained on State Route 1 during project activities.

Hazardous Waste and Material

HW-1: Pursuant to 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."

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:

- 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 off-site.
- 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.

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 Environmental Checklist on the following pages for additional information.

Potential Impact Area	Impacted: Yes / No
Aesthetics	No
Agriculture and Forestry	No
Air Quality	No
Biological Resources	**Yes**
Cultural Resources	No
Energy	No
Geology and Soils	No
Greenhouse Gas Emissions	**Yes**
Hazards and Hazardous Materials	No
Hydrology and Water Quality	**Yes**
Land Use and Planning	No
Mineral Resources	No
Noise	No
Population and Housing	No
Public Services	No
Recreation	No
Transportation and Traffic	No
Tribal Cultural Resources	No
Utilities and 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 Environmental 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 standardized measures 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 [Section 1.4]), are 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

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 the 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 an 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 in the project area based on their location and the effect of the potential impact on the resource *as a whole*. 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 processes 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.

No-Build Alternative

For each of the following CEQA Environmental Checklist questions, the "No-Build" alternative has been determined to have "No Impact". Under the "No-Build" alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The "No-Build" alternative will not be discussed further in this document.

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?				✓
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
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?				✓
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 Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Visual Impact Assessment Memo dated July 2021 (Caltrans 2021i). Potential impacts to Aesthetics are not anticipated because there are no scenic vistas or designated scenic resources that would be affected by the project. Minor visual impacts caused by vegetation removal would not substantially degrade public views and would be alleviated over time as native vegetation is reestablished. No new source of substantial light or glare would result from the project. No mitigation is required.

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; the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

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?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning or cause rezoning of forest land (as defined by 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))?				✓
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project site is surrounded by forest lands zoned for timber production. Drainage easements would be obtained from Mendocino Redwood Company for small areas at the inlets and outlets of the culvert systems adjacent to Caltrans right of way. Temporary construction would occur on these adjacent timberlands. This would not result in a use that is incompatible with timber production. The project would rehabilitate or replace existing drainage facilities and would not cause changes to zoning or land use at any of the culvert locations. Therefore, impacts to Agriculture and Forest Resources are not anticipated. No mitigation is required.

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?				✓
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?				✓
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?				✓
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Noise Analysis for the Rockport Culvert Project dated May 5, 2021 (Caltrans 2021b). Potential impacts to Air Quality are not anticipated because the project would not result in changes to traffic volumes, fleet mix, speed or any other factor that would result in an increase of emissions or pollutants. Mendocino County is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards (NAAQS). Therefore, transportation conformity requirements do not apply. No mitigation is required.

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?			✓	
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?			✓	
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?		✓		
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?				✓

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?				✓
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?				✓

Regulatory Setting

Within this section of the document (2.4. Biological Resources), the topics are separated into Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as "threatened" or "endangered" are covered within the Threatened and Endangered sections. Other special status plant and animal species, including CDFW fully protected species, species of special concern, USFWS and NMFS candidate species, and California Native Plant Society (CNPS) rare and endangered plants are covered in the Plant and Animal sections.

Natural Communities

CDFW maintains records of sensitive natural communities (SNC) in the California Natural Diversity Database (CNDDB). 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

"Waters" of the United States (including wetlands) and State are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal Clean Water Act (CWA), 33 USC 1344
- Federal Executive Order for the Protection of Wetlands (EO 11990)
- State Sections 1600–1607 of the California Fish and Game Code (CFGC)
- State Porter-Cologne Water Quality Control Act, Section 3000 et seq.

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. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA), United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402
- California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq.
- Native Plant Protection Act, California Fish and Game Code, Sections 1900–1913
- National Environmental Policy Act (NEPA), 40 CFR Section 1500 through Section 1508
- California Environmental Quality Act (CEQA), California Public Resources Code, Sections 21000–2117

Animal Species

The USFWS, NMFS, and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

- NEPA, 40 CFR Section 1500 through Section 1508
- CEQA, California Public Resources Code, Sections 21000–2117
- Migratory Bird Treaty Act, 16 USC Sections 703–712

- Fish and Wildlife Coordination Act, 16 USC Section 661
- 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 laws governing threatened and endangered species include:

- FESA, United States Code (USC) 16, Section 1531, et seq. See also 50 CFR Part 402
- CESA, California Fish and Game Code, Section 2050, et seq.
- CEQA, California Public Resources Code, Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, 16 USC Section 1801

Invasive Species

The primary laws governing invasive species are Executive Order (EO) 13112 and NEPA.

Environmental Setting

A Natural Environment Study (NES) (Caltrans 2021g) was prepared for the project. An addendum to the NES was completed to address updates to impacts after drainage system locations were removed from the project (Caltrans 2021h). Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from CDFW, USFWS, NMFS, NCRWQCB, and USACE. See Chapter 3 for a summary of these coordination efforts and professional contacts.

The project area encompasses five locations within Mendocino County along State Route (SR) 1 south of Rockport. Four of the culverts are within the Westport U.S. Geological Survey (USGS) 7.5-minute quadrangle (quad) at PMs 85.09, 85.74, 86.67, 86.98, and one culvert is within the Hales Grove USGS quad at PM 88.95. The Environmental Study Limits (ESL) (shown on Project Layouts in Appendix A) comprises the proposed construction footprint where work is anticipated to occur, including areas for equipment storage and access. The Biological Study Area (BSA) comprises the ESL plus several surrounding buffers of varying distances depending on extents of different protected species' biology. For this project, the BSA extends up to 0.25 mile beyond the project footprint (Figure 3) to account for potential auditory impacts to northern spotted owl (*Strix occidentalis caurina*) and marbled murrelet (*Brachyramphus marmoratus*) (USFWS 2006). Ambient noise level in the project area is estimated as High (81–90 dB) because of its location on SR 1.

Figure 3. Biological Study Area

The project is within the Outer North Coast Ranges District in the Northwestern California Region of the California Floristic Province, which is characterized by very high rainfall as well as redwood, mixed-evergreen, and mixed-hardwood forests (Baldwin 2012). The Northwestern Range has a Mediterranean climate characterized by moderate daily and annual temperature variations. The nearest weather station to the project study area is in Wheeler, California, Station 049612. The average rainfall is 54 inches per year, mostly falling between November and March. The summer months of June through September receive the lowest rainfall, averaging a combined 0.69 inch for the four-month period. The average annual air temperature is 60°F, with a low of 41°F in January and a high of 64°F in July (Western Regional Climate Center [WRCC] 2020).

Topography at each culvert site varies, but generally comprises sloping and terraced hills, with steeply sloped drainages that feed into Cottaneva Creek and Hardy Creek. The elevation varies between locations from approximately 80 feet (at PM 88.95) to 800 feet (at PM 85.74) above mean sea level.

The culverts and associated drainages at PMs, 85.09 and 85.74 are within the Hardy Creek watershed. This portion of SR 1 ascends in elevation along a ridge parallel to an unnamed tributary to Hardy Creek. Hardy Creek has three named tributaries: North Fork, Middle Fork, and South Fork. Hardy Creek discharges into the Pacific Ocean approximately 0.6 mile southeast of SR 1. As the Stream Inventory Report (CDFG 2009) describes, "Hardy Creek is a second order stream and has approximately 6.8 miles of blue line stream. Hardy Creek drains a watershed of approximately 5.1 square miles. Elevations range from about 0 feet at the mouth of the creek to 1,500 feet in the headwater areas. Mixed conifer forest dominates the watershed. The watershed is entirely privately owned and is managed for timber production and rural residence."

North of PM 85.74, SR 1 descends into the Cottaneva Creek watershed. Cottaneva Creek has eight named tributaries at various levels. The culverts at PMs 86.67 and 86.98 are along an unnamed tributary to Rockport Creek, but do not drain or hydrologically connect to fish-bearing waters at Rockport Creek. The culvert and drainage at PM 88.95 drains to and is approximately 120 feet from the ordinary high-water mark (OHWM) of the mainstem of Cottaneva Creek within the Cottaneva Valley. Cottaneva Creek discharges into Rockport Bay, into the Pacific Ocean approximately 1.05 mile northwest of PM 86.98. As the Stream Inventory Report (CDFG 2008a) describes, "Cottaneva Creek is a third order stream and has approximately 15.1 total miles of blue line stream. Cottaneva Creek drains a watershed of approximately 16.3 square miles. Elevations range from sea level at the mouth of the creek

to 1,800 feet in the headwater areas. Redwood and Douglas-fir forest dominates the watershed, but there are areas of pasture land along the main stem and coastal chaparral near the mouth. The watershed is privately owned and is managed for timber production and rangeland."

Natural Communities

The vegetation communities in the study area were identified based on the vegetation classification and keys in *A Manual of California Vegetation*, second edition (Sawyer et al., 2009). Results are documented in the Botanical Resources Report (Caltrans 2019d).

Sensitive natural communities (SNCs) are natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to disturbance. High priority sensitive natural communities are globally (G) and state (S) ranked 1 to 3, where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. Global and state ranks of 4 and 5 are considered apparently secure and demonstrably secure, respectively (CDFW 2020). The only SNC observed within the BSA was *Sequoia sempervirens* Forest and Woodland Alliance, which is described in further detail below.

Sequoia sempervirens Forest and Woodland Alliance

Sequoia sempervirens Forest and Woodland Alliance (Redwood forest and woodland) is a SNC that is globally ranked vulnerable and state ranked imperiled, G3/S3 (CDFW 2020). Ninety-five percent of the range of *Sequoia sempervirens* exists within California. For a vegetation community to qualify as Redwood Forest, the composition must comprise *Sequoia sempervirens* in > 50% relative cover in the tree canopy, or in > 30% relative cover with other conifers such as Douglas-fir or hardwood trees such as tanoak (*Notholithocarpus densiflorus*) (Sawyer et al., 2009).

Years of logging have left less than 90% of the original forest (Sawyer et al., 2009). The forest along SR 1 within the BSA is considered second-growth, meaning the forest has been logged once and is growing back, even in areas with larger-diameter individuals. The second-growth forest stage of *Sequoia sempervirens* Forest and Woodland Alliance SNC provides cover, refuge, and wildlife/migration corridors and contributes food resources for a variety of species, including plants, insects, amphibians, reptiles, birds, fish, and mammals. It also serves important flood protection and erosion control functions (Borman and Likens, 1979).

This SNC is present at all five culvert locations where coast redwood dominates the canopy layer with greater than 70% presence, while either western sword fern (*Polystichum munitum*) or redwood sorrel (*Oxalis oregana*) dominates the herbaceous layer. Though not dominant, tanoak is present in the canopy and/or subcanopy.

Wetlands and Other Waters

Wetland delineations were performed to survey for potentially jurisdictional wetland and non-wetland Waters of the U.S. and State within and adjacent to the project construction footprint at each culvert location. Surveys occurred on May 1, 2, and 3, 2019, in accordance with methods described in *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). An Aquatic Resources Delineation Report (ARDR) was prepared for the Westport Culverts Project (Caltrans 2019c), which initially involved 14 culvert locations. The project was renamed Rockport Culverts Project after the culverts located from PM 75.47 to PM 84.10 were removed from the scope. These findings were re-evaluated in early 2021 by Caltrans wetlands and waters specialists and updated to capture current site conditions. This methodology relies on a three-parameter approach in which criteria for hydrophytic vegetation, hydric soils, and wetland hydrology must each be met to conclude that an area qualifies as a wetland. Wetlands and other waters were classified according to *Classification of Wetlands and Deepwater Habitats of the United States, 2nd Edition* (Federal Geographic Data Committee [FGDC] 2013).

Several potentially jurisdictional water features, including intermittent and ephemeral drainages flowing through the various culverts, were identified in the BSA as noted in the ARDR (Caltrans 2019c) and summarized in Table 2 below. Aquatic Resource Delineation Maps are available in Appendix D. No wetlands are present within the ESL of the project locations. Potentially jurisdictional drainages, or non-wetland other waters (OWs), are present at all the culverts except PMs 86.67 and 86.98. All Waters of the U.S. and State identified within the BSA in 2019 were reassessed in 2021 by Caltrans USACE liaison Robert Meade. All features were confirmed with the exception of ephemeral drainages at PMs 86.67, 86.98, and the area adjacent to the outlet at PM 88.95 as none of these had a distinct OHWM. Additionally, the drainage at PM 88.95 was determined to be intermittent, rather than ephemeral.

Table 2. Summary of Potential Jurisdictional Waters of the U.S. within the ESL

Project Location	Aquatic Feature[1]	Feature Type	Size (acres)
PM 85.09	IS-4	Intermittent drainage	0.007
PM 85.09	ES-2	Ephemeral drainage	0.003
PM 85.74	ES-3	Ephemeral drainage	0.008
PM 86.67	No jurisdictional features	N/A	N/A
PM 86.98	No jurisdictional features	N/A	N/A
PM 88.95	ES-7	Intermittent drainage	0.009

All vegetated ground cover adjacent to drainages within the BSA are considered riparian, regardless of species composition, owing to their connectivity to Waters of the U.S. and State within the BSA and relative functional values for improving water quality and habitat for aquatic species. This also includes trees and woody vegetation within the banks of the drainages. Riparian vegetation varied at each culvert. No mature riparian vegetation was observed at the culverts at PMs 85.74, 86.67, and 86.98. The canopy within the BSA at many of the culverts was mostly coast redwood and Douglas-fir. The redwood canopy was mixed evenly with Douglas-fir, red alder, and included big-leaf maple and tanoak. The riparian subcanopy and shrub layer at this culvert included red elderberry, evergreen huckleberry, thimbleberry, and California blackberry. Generally, the herbaceous layer within the BSA, at all culverts with riparian cover, consists of vegetation including five-finger fern, Western lady fern, creeping wild ginger, candy flower, and giant horsetail rush.

[1] IS = Intermittent Stream (drainage), ES = Ephemeral Stream (drainage)

Invasive Species

Introduction and naturalization of non-native species are a major threat to global biodiversity, second only to habitat loss and fragmentation (Scott and Wilcove, 1998). English Ivy (*Hedera helix*), which was observed within the project limits, is considered to have the highest potential to threaten native ecosystem function and structure (California Invasive Plant Council [Cal-IPC] 2011). Several species with Limited to Moderate CAL-IPC ratings were recorded in the ESL. A list of invasive species occurring within the project construction footprint is found in Appendix E as part of the list of plant species observed.

Plant Species

Seasonally appropriate floristic surveys were conducted according to *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018) using the current version of the Jepson Manual to identify species (Baldwin et al., 2012). Floristic botanical surveys were conducted to document potential presence of sensitive plant species within and adjacent to the project construction footprint. Three plant surveys were conducted in 2019: May 1, 2, and 3; June 17 and 18; and August 22. Species that were not detected during appropriate blooming surveys were presumed to be absent. A complete list of plant species observed during project surveys is available in Appendix E.

Leafy-stemmed Mitrewort

Leafy-stemmed mitrewort (*Mitellastra caulescens*) is a perennial rhizomatous herb within the saxifrage family (*Saxifragaceae*). It grows in wet, shaded areas below approximately 4,800 feet in elevation, often along streams, meadows, seeps, or roadsides (Calflora 2020). Between April and October, the plants grow inflorescences with numerous small saucer-shaped flowers with yellow-green petals and brown spots. Within the botanical survey areas during surveys in 2019, this species had finished blooming by July, with peak blooming likely occurring in June or earlier. The range of this species extends from northern California, north to British Columbia, and east to Montana (Calflora 2020). CNPS has ranked this plant as having a limited distribution and fairly endangered within California (California Rare Plant Rank [CRPR] 4.2). The primary threats to this species are road maintenance activities and logging. The Consortium of California Herbaria reports the closest collected specimen to the BSA is approximately 2.5 miles north of the culvert at PM 88.95 (Consortium of California Herbaria 2019).

Leafy-stemmed mitrewort was observed within the BSA at PM 88.95. Approximately 50 or more individuals were blooming during the June 2019 surveys, but all these individuals

appeared to be outside the ESL. These plants were growing along the shoulder of the SR 1 embankment approximately 20 feet to the south of the culvert and adjacent to the first highway pullout along southbound SR 1, which would be used for staging.

Animal Species

All waterways within and adjacent to the project construction footprint were evaluated to determine potential presence of special status aquatic species and their habitat, including fish, amphibians, and other special status aquatic species. An evaluation of habitat suitability within and adjacent to the construction footprint was also conducted on October 3 and December 6, 2019, and August 8, 2020, to determine potential presence of all terrestrial special status animals. This involved reviewing the habitat for nests, burrows, host plant species, and vegetation structure. Special status species which could potentially occur within the BSA, based on queries and the rationale on whether or not there was potential habitat in the BSA, are discussed further below and in Appendix F—Special Status Species Table.

Amphibians and Reptiles

All culvert locations except those at PMs 86.67 and 86.98 support habitat for the following species of special concern (SSC): Foothill yellow-legged frog (*Rana boylii*), northern red-legged frog (*Rana aurora*), Pacific tailed frog (*Ascaphus truei*), red-bellied newt (*Taricha rivularis*), southern torrent salamander (*Rhyacotriton variegatus*), and western pond turtle (*Emys marmorata*). The project construction footprint does not provide suitable breeding habitat for these species because the presence of water at the culverts is intermittent; however, the construction footprint and the surrounding riparian and upland habitat may provide non-breeding dispersal and foraging habitat.

Habitat preferences vary among these species. The Pacific tailed frog is restricted to perennial montane streams, whereas the Foothill yellow-legged frog and northern red-legged frog can be found in more varied habitats such as roadside ditches, woodlands, grasslands, and rocky substrates. Red-bellied newts and Southern torrent-salamanders prefer consistently wet, cool aquatic environments with high shade and canopy cover. Western pond turtles can be found near permanent ponds, lakes, streams, and irrigation ditches (California Herps 2020a, b, c, d, e, f).

Surveys for special status amphibians and reptiles were not conducted. These species may be present in waterways and adjacent riparian and upland redwood forest habitat; therefore, it is presumed they could occur within and adjacent to the project construction footprint.

Bats

In California, nine species of bats are considered state SSC by CDFW and three additional species are proposed for that status. The U.S. Forest Service and Bureau of Land Management list some species as sensitive, and the Western Bat Working Group lists some as high priority for consideration of conservation measures. Section 15380 of the CEQA Guidelines indicates that species of special concern (SSC) should be included in an analysis of project impacts. CFGC Section 4150 provides further protection to bats (non-game mammals) from take or possession.

The project BSA lies within the range of three SSC bats—pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and Western red bat (*Lasiurus blossevillii*). Several more common bat species may also occur in the project vicinity such as big brown bat (*Eptesicus fuscus*), silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), long-legged myotis (*Myotis volans*), and California myotis (*Myotis californicus*) (CDFW-CNDDB 2021).

Several bat species in California either use or are likely to use trees for their habitat needs (Taylor 2006). Bats use tree cavities for roosting during the day and for bearing and rearing young (i.e., maternal roost) typically from May through August. They may also use trees in winter as hibernacula (a shelter occupied during the winter by a dormant animal). At night, bats often roost in the open on tree bark. Night roosts, which are used from approximately sunset to sunrise, are sites where animals congregate to rest and digest their food between foraging bouts. Night roosts also serve as important stopping points during migration. In the mild northern California coastal climate, bats are present year-round.

There are no CNDDB records of occurrences of special status bat species within the project footprint and adjacent areas along SR 1. The nearest occurrence documented in CNDDB is Townsend's big-eared bat along the South Fork of Usal Creek, approximately 5.81 miles north of PM 88.95. Other more common species may utilize the forested habitat. Conifer trees and snags near the project construction footprint provide potentially suitable bat roosting habitat in basal hollows, cavities, sloughed bark, and broken limbs, however no trees within the project construction footprint provide this nesting and roosting habitat.

Migratory Birds

The Federal Migratory Bird Treaty Act (MBTA) (15 USC 703-711), Title 50 Code of Federal Regulations Part 21 and 50 CFR Part 10, and the CFGC Sections 3503, 3513, and 3800, protect migratory birds, their occupied nests, and their eggs from disturbance or

destruction. The MBTA provides protection in part by restricting the disturbance of nests during the bird nesting season. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered a "take" and unlawful. Take is defined in the MBTA as "any attempt to pursue, capture, or possess any migratory bird, and any part, nest, or eggs of any such bird."

Suitable nesting habitat for various migratory bird species is present within the BSA. The habitat for these species includes redwood forest.

Purple Martin and Vaux's Swift

The coniferous forests found within the BSAs around all the culverts may provide nesting habitat for purple martin (*Progne subis*) (Brown 1997) and Vaux's swift (*Chaetura vauxi*) (Bull and Collins, 1993). These species are discussed together since they occupy the same taxonomic group, similar ecological niches, and have similar potential to be impacted by construction activities. Both species are considered by CDFW as species of special concern. The current population trend for both species is decreasing (International Union for Conservation of Nature [IUCN] 2016).

No purple martins or Vaux's swifts were observed within or adjacent to project construction footprints during field surveys. There are no documented CNDDB occurrences of Vaux's swift within the nine-quad search. The nearest documented CNDDB occurrence of purple martin is approximately 10.6 miles south of the BSA in the Inglenook area. No nests of either species have been observed within or adjacent to project construction footprints during field surveys, however the widespread coast redwood forest mixed with Douglas-fir within the BSA provides suitable nesting habitat. Purple martin and Vaux's swift are not likely to nest within the project construction footprint, or ESL; however, the potential for these species to occur cannot be discounted due to suitable habitat presence [IUCN] 2016).

Ring-tailed Cat

Ring-tailed cat (*Bassariscus astutus*) is a California state fully protected (FP) species. A member of the raccoon family, ring-tailed cat can be found in fragmented and disturbed areas and dens inside buildings and other manmade structures (Zeiner et al., 1990). Ring-tailed cats are nocturnal carnivores that forage for a variety of prey—primarily small mammals, invertebrates, birds, and reptiles. In northwest California, ring-tailed cats tend to select diurnal rest sites near steep slopes and water sources (Zeiner et al., 1990). They frequently change rest sites, although some may be revisited regularly. Most litters are born in May or June, with young beginning to forage outside the den site after two months. Dens can be

found in rock crevices, living and dead hollow trees, logs, brush piles, buildings, and other manmade structures. Female ring-tailed cats may regularly move young between dens.

No CNDDB occurrence information is available as CNDDB does not track ring-tailed cat observations. Although suitable denning or nesting habitat may be present within the 0.25-mile BSA in redwood basal hollows, downed logs, or brush piles, none of these habitat features are present within the project construction footprint (ESL) at any of the culvert sites.

Sonoma Tree Vole

The Sonoma tree vole (*Arborimus pomo*) is a California SSC. It is endemic to California and occurs within the fog belt from Sonoma County north to the Oregon border. Sonoma tree voles feed almost exclusively on Douglas-fir and grand fir needles or tender tree bark. Both males and females nest in trees from 6-150 feet above the ground, with females building larger nests up to three feet in diameter (Zeiner et al., 1990). Sonoma tree voles breed year-round. The typical home range of male voles likely encompasses several trees, while females often live in one tree. The main predator of this species is Northern Spotted Owl (NSO).

The habitat within the project footprint and adjacent habitat was evaluated for suitable nesting trees. This species could be present where suitable nesting trees (e.g., Douglas-fir or redwood with DBH >12 inches) exist.

Threatened and Endangered Species

Bald Eagle

Though the bald eagle (*Haliaeetus leucocephalus*) was delisted from federal status, it is still considered state endangered. This species remains federally protected by the Bald and Golden Eagle Protection Act (16 USC §668). 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 usually below the top with some cover above the nest within one mile of fishable waters (Jackman and Jenkins, 2004). Bald eagle nest trees in northern California are commonly 100 feet tall, average 43 inches in DBH, and have an unobstructed view of a water body.

Active breeding occurs February through August (Buehler 2000). In Mendocino County, bald eagles are strongly tied to open water and undisturbed shorelines. River corridors and estuaries attract scattered individuals thought to be migrants, or otherwise nonresident, from October to March (Hunter et al., 2005).

There were no records of bald eagle in the CNDDB nine-quad search. Habitat within the BSA was visually assessed for presence of larger conifers with structures that would support nests. Within the project footprint, there is no nesting or foraging habitat. There is no foraging habitat for bald eagle adjacent to the project footprint; however, there is low-quality nesting habitat, with several conifers of suitable size within one mile of the larger drainages, such as Cottaneva Creek. Bald eagles are not expected to occur within or adjacent to project locations where they could be affected by auditory or visual disturbance as this species is sensitive to noise and visual disturbance and there is existing human disturbance from traffic and logging activities adjacent to the project.

Marbled Murrelet

Marbled murrelet (MAMU) (*Brachyramphus marmoratus*) is federally threatened and state endangered. This species was federally listed in September 1992 and critical habitat was designated in 2011. Marbled murrelet was listed as state endangered in March 1992. A federal recovery plan was finalized in September 1997 (USFWS 1997). The marbled murrelet is a small Pacific seabird that breeds along the Pacific Coast of North America from Alaska south to central California. They forage primarily in nearshore marine waters (within a few miles of shore) and fly inland to nest in mature conifers. Nesting habitat is primarily associated with large tracts of old-growth forest, typically within 50 miles from shore, characterized by large trees, a multistoried stand, and moderate to high canopy closure. Nests are not built, but an egg is laid in a depression of moss or other debris on the limb of a large conifer. Suitable nest structures include large mossy horizontal branches, mistletoe infections, structural deformities of the tree, and other such structures. During the March to September breeding season, MAMU typically fly along river corridors for their morning and evening nest visits (USFWS 1997).

Habitat suitability for MAMU was examined within the project construction footprint (ESL) and up to 0.25 mile out from the project construction footprint (BSA). During these field reviews, MAMU habitat suitability was evaluated for nesting, roosting, and foraging habitat within the BSA buffer. The trees in the project footprint are unlikely to support MAMU due to proximity to the roadway and associated noise and visual disturbance; however, there is potentially suitable nesting habitat in adjacent forested habitats. The redwood forest habitat adjacent to the project footprints at the various culvert locations is primarily second-growth forest, but some of the older trees are greater than 48 inches DBH and there is high canopy closure.

The CNDDB lists the nearest MAMU detections near Standley State Recreation Area in Branscomb, Mendocino County, approximately 12 miles southeast of PM 85.09. No MAMU critical habitat occurs within or adjacent to the project construction footprint. The nearest critical habitat is within Sinkyone Wilderness State Park approximately 5.76 miles north of the northernmost culvert location at PM 88.95.

Northern Spotted Owl

The Northern spotted owl (NSO) (*Strix occidentalis caurina*) is a federal and state threatened species. It was federally listed (55 FR 26114) on June 26, 1990, and state listed on August 25, 2016. Critical habitat was designated (73 FR 47326) on August 13, 2008. A revised federal recovery plan was finalized in October 2011 (USFWS 2011). NSO generally has large home ranges and uses large tracts of land containing significant acreage of older forest to meet their biological needs. The attributes of high-quality NSO nesting and roosting habitat typically include a moderate-to-high canopy closure (60–80%); a multi-layered, multi-species canopy with large overstory trees; a high incidence of large trees with deformities (large cavities, broken tops, mistletoe infections, and debris accumulation); large accumulations of fallen trees and other debris; and sufficient open space below the canopy for flight. In redwood forests and mixed conifer-hardwood forests along the coast of northwestern California, considerable numbers of NSO also occur in young forest stands. NSO tends to select broken-top trees and cavities in older forests for nest sites, although they will also use existing platforms such as abandoned raptor nests, squirrel nests, mistletoe brooms, and debris piles (LaHaye and Gutierrez, 1999). In younger forests, existing platforms are more frequently utilized for nest sites (Gutierrez et al., 1995). Courtship initiates in February or March with the first eggs laid in late March through April. Fledglings generally leave the nest in late May or in June but continue to be dependent on their parents into September until they are able to fly and hunt on their own. By September, juveniles have left their natal area (USFWS 2011).

Habitat suitability for NSO was examined within the project footprint (ESL) and up to 0.25 mile out from the project footprint (BSA). During these field reviews, NSO habitat suitability was evaluated for nesting, roosting, and foraging habitat within the BSA buffer. The dataset used for this analysis was the EVEG Region 5 North Coast Mid northern spotted owl nesting/roosting habitat (USFS 2018). Presence of NSO was assumed for all culvert locations due to the presence of suitable nesting and roosting habitat assessed during site visits. Table 3 below lists the nearest activity centers recorded in CNDDB (CDFW-CNDDB 2021) and the proximity to culvert locations.

Table 3. Northern Spotted Owl Activity Centers in Project BSA

Activity Center	Approximate Distance from ESL	Year of Last Positive Observation	Observation Details
MEN0434	0.5 mile from PM 85.09 0.6 mile from PM 85.74	2011	Nesting pair observed in 2002, but unknown age male was last observed in 2011
MEN0576	0.6 mile from PM 86.67 0.7 mile from PM 86.98	2018	Unknown age male observed
MEN0110	0.5 mile from PM 88.95	2002	Unknown age pair observed

The nearest documented NSO nest (CDFW-CNDDB 2021) was associated with the MEN 0434 activity center. A pair had a nest with young in 2002. However, no nest was observed in 2011, which was the latest year that a NSO adult was observed at the activity center. No NSO critical habitat is located within the BSA. The nearest critical habitat is approximately 6.43 miles northeast of PM 88.95.

Salmonids

Central California Coast Coho Salmon ESU

The Central California Coast (CCC) coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU) is both a federal and state endangered species. Federal listing as threatened (61 FR 56138) occurred on October 31, 1996, and a final listing of endangered was enacted on June 28, 2005 (70 FR 37160). Critical habitat was designated on May 5, 1999 (64 FR 24049). A Recovery Plan for this species was finalized in September 2012 (NMFS 2012). California Fish and Game Commission listed the CCC ESU of coho salmon on August 30, 2002 (CDFG 2004). The current range of the CCC ESU of coho salmon extends from Punta Gorda in southern Humboldt County to Aptos Creek in Santa Cruz County. Historically, the range also included the San Francisco Bay and its tributaries; today, CCC coho salmon are extirpated from all rivers that flow into San Francisco Bay.

In Mendocino County, migration of CCC ESU coho salmon from the ocean to freshwater spawning sites typically occurs between October and January, with a peak in December (S. Gallagher [CDFW], July 18, 2016). Adult coho salmon in Cottaneva Creek and its tributaries can enter drainages after the sandbar is breached during the first large rain event to swim upstream to spawn in upper reaches. Hatched juveniles with attached yolk sacs remain

in the gravel from February to March. Upon emergence from redds, or nests, in March to May, fry utilize river margins and undercut banks for cover. Juveniles remain in fresh water for one to two years before developing into smolts. Coho salmon juveniles in Mendocino County generally out-migrate to the ocean from February to June, although timing may be slightly earlier or later depending on the year (S. Gallagher [CDFW], July 18, 2016). After one to two years spent in the ocean, adults return to their natal streams to spawn and continue the life cycle.

Critical habitat is designated to include all river reaches accessible to coho salmon within the range of the ESU and consists of the water, substrate, and adjacent riparian zone of estuarine and riverine reaches (NMFS 2012). The culvert at PM 88.95 is within designated critical habitat for CCC coho salmon. Suitable coho salmon freshwater habitat consists of perennial streams with cool, high-quality water; dense riparian canopy; deep complex pools with large woody debris; in-stream cover with woody debris and undercut banks; and a gravel or cobble substrate. These structural features create an environment that supports existence of food sources for coho, including aquatic vegetation, plankton, benthic and nearshore invertebrates, and other fish species. The adjacent riparian zones provide shade, sediment, nutrient and/or chemical regulation, streambank stability, and input of large woody debris and/or organic matter.

Winter-run Northern California Steelhead DPS

The winter-run Northern California (NC) steelhead (*Oncorhynchus mykiss irideus*) Distinct Population Segment (DPS) is a federally threatened species, listed as threatened under FESA in 2000 and reaffirmed a threatened species on January 5, 2006 (71 FR 834). Critical habitat was designated on September 2, 2005 (70 FR 52488). A draft Recovery Plan was released in October 2015 and finalized in 2016 (NMFS 2016). This DPS ranges from northern Humboldt County to Sonoma County.

Suitable freshwater spawning habitat consists of fast, well-oxygenated rivers and streams with gravel substrates that do not have excessive amounts of silt (NMFS 2016). 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. Steelhead feed on zooplankton, aquatic and terrestrial insects, mollusks, crustaceans, and other small fishes. The lateral extent of designated critical habitat in estuarine environments that exhibit the critical habitat features for steelhead is defined by the ordinary high water mark (OHWM).

The population of steelhead trout on the Mendocino coast are winter-run, which are ocean-maturing-type steelhead (NMFS 2016). When the fish enter fresh water between November and April, they are already sexually mature and migrate upstream to spawn. Once suitable spawning habitat is found, females prepare the redd and lay up to 1,000 eggs. Eggs hatch within three to four weeks. 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.

Focused surveys were not conducted for special status salmonids within the BSA. Cottaneva Creek, its tributaries South Fork Cottaneva Creek and Rockport Creek, as well as Hardy Creek, are considered anadromous fish habitat based on stream inventory surveys (CDFG 2008a, 2008b, 2008c, 2009) as well as data from Calfish distribution maps (Calfish 2020a, 2020b). The culvert at PM 88.95 is within designated critical habitat for NC steelhead. Although the project footprint at PM 88.95 is within 120 feet of the OHWM of Cottaneva Creek that supports these species, they are not expected to utilize the culvert due to the existing blockage that restricts fish passage. The culvert drainages at PMs 86.67 and 86.98 only drain occasional stormwater and are not potentially jurisdictional features. These culverts do not support fish or drain to tributaries of Rockport Creek or other fish bearing waters. The culverts at PMs 85.09 and 85.74 drain into a tributary of Hardy Creek. A Fish Passage Assessment was performed by Caltrans biologists in April 2019 according to *CDFW Fish Passage Assessment Database* (PAD) guidelines. The assessment determined there was a natural barrier of a series of pools with greater than 20% slope immediately downstream of an existing culvert at PM 84.30, thus this culvert, and all those above it (i.e., PMs 85.09 and 85.74), do not support salmonids but do hydrologically connect to the fish-bearing waters of Hardy Creek.

Essential Fish Habitat for Pacific Coast Salmon

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal fishery management plans (FMPs) to describe Essential Fish Habitat (EFH) being managed, as well as describe threats to that habitat from both fishing and non-fishing activities. In addition, to protect this EFH, federal agencies are required to consult with NMFS on activities that may adversely affect EFH.

EFH is defined by the MSA for federally-managed species as “those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity.” Pacific Coast Salmon EFH is regulated under the Federal Pacific Coast Salmon FMP (Pacific Fishery Management Council 2016). Freshwater EFH for Pacific Coast salmon consists of four

major components: (1) spawning and incubation; (2) juvenile rearing; (3) juvenile migration corridors; and (4) adult migration corridors.

Cottaneva Creek within the BSA of the culvert at PM 88.95 includes EFH for Pacific Coast salmon. There is no EFH within the project construction footprint.

Discussion of CEQA Environmental Checklist Question 2.4a)—Biological Resources

"No Impact" determinations were made for questions d), e) and f) of the CEQA Environmental Checklist-Biological Resources section based on the scope, description, and location of the proposed project, as well as the NES prepared in 2021 (Caltrans 2021g). The following discusses questions a), b) and c), of the CEQA Checklist-Biological Resources section.

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

Leafy-stemmed Mitrewort

Leafy-stemmed mitrewort was observed during botanical surveys at PM 88.95 within the BSA, but outside of the project construction footprint. Therefore, it is unlikely that individuals would be impacted by construction. Due to the relative abundance of this species within and near the project locations, as well as the quantity and size of nearby CNDDB occurrences, it is expected that the populations in proximity to the project do not represent locally or range-wide significant populations. Caltrans would avoid known occurrences of leafy-stemmed mitrewort and suitable habitat for this species with implementation of the Standard Measures and Best Management Practices, such as installing THVF to isolate the work area from the areas where the species is growing, where possible.

Given the relative abundance of the species and the restoration efforts to offset minor disturbance to this species and its habitat, it was determined the project would have a "*Less than Significant Impact*" on leafy-stemmed mitrewort.

Animal Species

Amphibians and Reptiles

In work areas adjacent to or within stream channels where surface waters are present, special status amphibians and reptiles could be directly impacted during construction activities involving moving construction equipment, open trenches, and pump intakes for dewatering. Standard measures that include pre-construction surveys and relocation would minimize these potential direct impacts.

Construction activities have the potential to temporarily degrade water quality, through increases in sediment loads and occasional accidental spills of construction-related fluids into or near creeks where culvert work would occur. Degraded water quality could harm all life stages in or downstream of work areas. Standard measures to protect water quality would avoid and minimize these potential impacts.

Due to the short-term nature of construction activities and the abundance of suitable habitat adjacent to the project construction footprint for which they could relocate if necessary, it was determined the project would have a "*Less than Significant Impact*" on amphibians and reptiles.

Bats

Project impacts to special status bat species could occur as a result of indirect auditory disturbance associated with construction noise that could temporarily displace nearby bats using suitable day roosting habitat. Noise impacts to bats are unlikely to occur or would be minimal because of the relatively high ambient noise level and temporary increases in sound level would likely be greatly attenuated by the structure of the roosting habitat itself (Taylor 2006). The proposed project would not result in tree removal.

Additionally, the proposed work is expected to occur during the daytime, which would avoid impacts to night roosting bats. However, in case of any night work, artificial night lighting may be required. To reduce potential disturbance to sensitive resources, such as bats roosting in trees adjacent to the project construction footprint, 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.

Since the project would not permanently impact bat habitat, result in take of individual bats, or substantially impact roosting and foraging behavior, it was determined the project would have a "*Less than Significant Impact*" on bats.

Migratory Birds

Construction activities may produce noise above ambient noise levels, and this elevated noise could potentially cause temporary hearing loss in avian species. Many studies have been conducted on the effects of intense noise on bird hearing and auditory structures (Caltrans 2016). These studies show that birds are much more resistant to hearing loss and auditory damage than humans and other mammals. Traffic and construction noise, even at extreme levels, is unlikely to cause hearing loss, auditory damage, or damage to other organs in birds. However, if birds are within proximity to extreme noise levels, such as jackhammering or drilling, then noise may reach levels high enough to cause auditory damage (Caltrans 2016).

Noise from jackhammering typically reaches 95 A-weighted decibels (dBA) at 50 feet. Based on noise exposure studies in birds and small mammals, the interim guidelines for multiple impulse noise sources indicate that airborne noise levels below 125 dBA would not cause hearing damage (Caltrans 2016). Therefore, airborne noise produced by jackhammering would not result in permanent injury to birds but may result in temporary hearing loss or change in behavior to birds within 50 feet.

Auditory and visual disturbance from project activities could result in disruption of breeding behavior or nest abandonment. Also, project activities, such as road widening and access clearance, could result in vegetation removal of habitat and general ground disturbance that may support bird nests when conducted during the nesting season, which extends approximately February 1 to September 15.

Potential project-related impacts to migratory birds would be avoided or minimized with implementation of the Standard Measures and Best Management Practices described in Section 1.4. Vegetation removal would be restricted to the period outside of the bird breeding season (September 16 through January 31). Removal of vegetation that is not suitable roosting or nesting habitat for northern spotted owl or marbled murrelet may be removed between February 1 and September 15 after a qualified biologist conducts a nesting bird survey and obtains negative survey results. Nesting bird surveys must be completed within five days of 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 prior to vegetation removal. The appropriate buffer would be delineated around each active nest and construction activities would be excluded from these areas.

The project would also be subject to the noise restrictions outlined in the Programmatic Letter of Concurrence (PLOC) with USFWS (USFWS 2018) for the protection of northern

spotted owl and marbled murrelet. With these measures in place, impacts to nesting migratory birds would be minimal. Given this, it was determined the project would have a "*Less than Significant Impact*" on migratory birds.

Purple Martin and Vaux's Swift

Nesting purple martins and Vaux's swifts within the BSA may potentially be impactedby visual disturbance, and noise disturbance associated with construction. Noise and visual impacts to this species would not be substantial given the existing relatively high ambient noise along SR 1, the temporary nature of the project, and implementation of the Standard Measures and Best Management Practices identified in Section 1.4 designed to avoid disturbing active nests. Given this, it was determined the project would have a "*Less than Significant Impact*" on purple martin or Vaux's swift.

Ring-tailed Cat

This project would not remove ring-tailed cat denning or nesting habitat. The presence of a highly traveled roadway in the ESL is likely to prevent denning within the project footprint. Therefore, it was determined the project would have "*No Impact*" on ring-tailed cats.

Sonoma Tree Vole

Sonoma tree voles are unlikely to be impacted by the proposed work, as no trees would be removed as a result of this project. Furthermore. Sonoma tree voles are not likely to nest at the project locations, as they are adjacent to a highly traveled roadway that would provide low quality habitat due to disturbance from traffic noise. Overall, few old-growth trees are present to support tree vole nests, thus limiting the use for nesting voles. Indirect auditory disturbance associated with construction noise levels are expected to be minimal.

Given the project is not likely to impact Sonoma tree vole or impact potentially suitable nest habitat, it was determined the project would have a "*Less than Significant Impact"* on Sonoma tree vole.

Threatened and Endangered Species

Bald Eagle

. No trees would be removed as a result of this project, and no impacts to bald eagle nesting trees would occur. Bald eagles are not anticipated to be within a visual line of site of the project locations.

The existing ambient noise levels are ranked High within the various project footprints and Low-Moderate within adjacent habitats; construction-generated noise is expected to attenuate to ambient levels prior to reaching any trees that could potentially support suitable nesting habitat. Thus, the project would result in no adverse effects on bald eagle from auditory or visual disturbance. The project would not result in take of or permanently affect potentially suitable habitat for bald eagle. Given this, it was determined the project would have a "*Less Than Significant Impact*" on bald eagle.

Given the project would not directly harm this species, per CESA, this project would have no "*Take*" of bald eagles.

Marbled Murrelet

The USFWS guidance, *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California*, was used to assess the potential for auditory and visual impacts to MAMU during construction (USFWS 2006 and 2018). There would be no visual disturbances to MAMU nests because no activities would occur within a visual line-of-sight of 131 feet (40 m) of any known nest location. No trees would be removed as part of the project.

Daytime ambient noise levels within the project footprint along SR 1 were estimated as High (81-90 decibels [dB]) (Table 4). Sound levels for equipment used in project activities were estimated as Moderate (71-80 dB) to Very High (91-100 dB) (Table 5).

Table 4. Estimated Ambient Noise Level

Vehicle	Decibel Level (dB) measured at a distance of 50 feet	Relative Sound Level
Passenger car (50 mph)	67	Low
Pickup Truck (idle) (low end)	55	Low
Street motorcycle (low end)	65	Low
RVs (small) (low end)	75	Moderate
Street motorcycle (high end)	82	Moderate
RVs (large) (low end)	85	High

Table 5. Equipment and Estimated Peak Noise Levels

Measured Sound Source	"Standardized" Value dB at 50 ft[1]	Relative Sound Level
Pickup Truck (driving)	71	Moderate
Welder	73	Moderate
Generator (high end)	84	High
Drill rig (high end)	88	High
Excavator	81[2]	High
Front end loader (high end)	87	High
Jackhammer	89[2]	High
Compactor (high end)	82	High
Concrete truck (high end)	85	High
Concrete pump	82	High
Crane (high end)	88	High
Chainsaw	85	High
Chipping machine (low end)	91	Very High

[1] All values are based on USFWS (2006, 2018) unless otherwise indicated

[2] Average dB based on Federal Highway Administration (FHWA) (2017)

Any construction noise that is expected to reach or exceed ambient noise levels within the project footprint could result in noise disturbance to nesting MAMU. However, these potential effects would be minimized by implementing standard avoidance and minimization measures for protection of MAMU, which includes conducting work that exceeds 90 dB outside of the breeding season.

With implementation of the Standard Measures and Best Management Practices in Section 1.4, and utilization of the PLOC to minimize impacts, project actions are not likely to adversely affect MAMU individuals or MAMU habitat. Given this, it was determined the project would have a "*Less Than Significant Impact*" on marbled murrelet and their habitat.

Per FESA, Caltrans anticipates the proposed project *may affect, is not likely to adversely affect* MAMU. There would be "*No Effect*" to MAMU designated critical habitat from this project.

Given the project would not directly harm this species, per CESA, this project would have no "*Take*" of MAMU.

Northern Spotted Owl

The USFWS (2006) guidance, *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California*, was used to assess the potential for auditory and visual impacts to NSO during construction. The existing ambient pre-project sound level is estimated as High (81–90 dB) because of its location on SR 1 (Table 4). Most of the project-generated noise is estimated to be high (typically 81–90 dB) (Table 5). The estimated noise buffer distance based on elevated project-generated sound levels is 165 feet. Suitable NSO breeding and foraging habitat occurs within or adjacent to the project footprint within this 165-foot estimated harassment distance. However, potential effects would be minimized by implementing Standard Measures and Best Management Practices in Section 1.4. Construction activities that exceed 90 dB would be limited during the breeding season. The project's activities are covered under the PLOC for projects that *may affect, but are not likely to adversely affect* the covered species (USFWS 2018).

Project activities are not anticipated to result in adverse effects to individual NSO. There is no NSO designated critical habitat within the BSA, and no suitable nest trees would be removed during the breeding season. Given this, it was determined the project would have a "*Less Than Significant Impact*" on NSO and their habitat.

Per FESA, Caltrans anticipates the proposed project *may affect, is not likely to adversely affect* NSO. There would be "*No Effect*" to NSO designated critical habitat from this project.

Given the project would not directly harm this species, per CESA, this project would have no "*Take*" of NSO.

Salmonids

Potential impacts to salmonids at culvert PMs 85.09, and 88.95 would be negligible, but may include impacts on water quality and temporary riparian habitat modification (at PM 88.95) on downstream fish-bearing waters. These potential effects are further described below.

Water Quality Impacts

Construction activities that could impact water quality include excavation and vegetation removal for access, grading, and installation of culvert and erosion control structures. Disturbance to soils from these activities may result in temporary and short-term increases in turbidity and suspended sediments in watercourses downstream from the project sites. At certain thresholds, elevated levels of suspended sediments can cause negative physiological and behavioral effects on fish. Short-term increases in turbidity and suspended sediment can disrupt normal behavior patterns of fish, potentially affecting foraging, rearing, and migration (Bash et al., 2001). Accidental discharges (spills or leaks) of petroleum products during operation of heavy equipment near drainages or watercourses or contact of surface waters with uncured concrete can be toxic to fish.

Adverse effects to salmonids or salmonid habitat are not anticipated as a result of this project. No work would occur within a salmonid-bearing stream. Any minor incursions of sediment from construction activities not contained on site would be short-term and temporary, limited to the construction period. The drainage work would be conducted during the dry season (June 15 to October 15). By implementing Caltrans' Standard Measures and BMPs to protect water quality as described in Section 1.4., and the Additional Best Management Practices (ABMPs) from the NMFS Programmatic Biological Opinion (PBO), the potential for water quality impacts to affect salmonids would be discountable if they were to occur.

Habitat Modification Impacts

The dense canopy and minimal area of vegetation removal at the culvert at PM 88.95 would not result in a reduction in shade or measurable increase in water temperature for fish bearing waters. Potential riparian vegetation impacts and their effects on salmonids and their designated critical habitat would be discountable because the vegetation removal within the

riparian zone would be limited to shrubs and herbaceous plants that would be replanted or would regrow within a year.

Based on the minimal and temporary nature of these potential impacts and implementation of the standard measures included as part of the project design and ABMP measures in the PBO, per FESA, Caltrans anticipates the proposed project *may affect, is not likely to adversely affect* CCC coho salmon and NC steelhead or their designated critical habitats.

Given the project would not directly harm this species, per CESA, this project would have no "*Take*" of CCC coho salmon or NC steelhead.

Essential Fish Habitat for Pacific Coast Salmon

Potential effects to EFH in Cottaneva Creek and its tributaries are similar to those described for salmonid critical habitat above. While these potential impacts would be negligible, they may include temporary reductions in water quality and temporary removal of riparian vegetation at the culvert at PM 88.95. The proposed project may adversely affect EFH for Pacific Coast salmon in downstream waters due to:

- potential temporary increases in turbidity from activities that involve ground disturbance or by contaminants in roadway stormwater runoff or accidental spills during construction
- temporary removal of riparian habitat

Water quality may be temporarily impaired due to short term, localized increases in turbidity due to ground disturbance, contaminants in roadway stormwater runoff, or accidental spills. Reductions in water quality can compromise safe passage conditions for fish migration and/or reduce the quality of localized rearing habitat. However, project features described in Standard Measures and Best Management Practices (Section 1.4) and the NMFS PBO ABMPs would minimize the magnitude and duration of any turbidity increases, provide for site stabilization post construction, and ensure proper handling and storage of potential contaminants. There would also be a temporal loss of vegetation that provides riparian function at the culvert at PM 88.95.

Caltrans anticipates the proposed project *may adversely affect* EFH; however, the scale of potential impact is anticipated to be small, resulting in no measurable, permanent decrease in the quality of the rearing habitat or migration corridors for EFH species. The NMFS PBO (NMFS 2013) would be used for EFH consultation to address potential effects on Pacific Coast salmon.

Given the project is not anticipated to result in substantial adverse effects to salmonid populations, and the impacts to designated critical habitat and EFH would be negligible, it was determined the project would have a "*Less Than Significant Impact*" on salmonids.

Endangered Species Act Determinations for Species Not Discussed in Section 2.4

The following species were identified as potentially occurring in the project vicinity; however, given they were determined to be absent from the BSA, the species are not discussed further in Section 2.4 (see Appendix F). As a result, per FESA, Caltrans has determined the project would have "*No Effect*" on the following federally listed species, critical habitat, or species proposed for listing:

- Burke's goldfields
- Contra Costa goldfields
- Howell's spineflower
- McDonald's rockcress
- Menzies' wallflower
- Showy Indian clover
- California red-legged frog
- Short-tailed albatross
- Western snowy plover
- Yellow-billed cuckoo, Western DPS
- Chinook salmon, California Coastal (CC) ESU
- Coho salmon, Southern Oregon/Northern California Coast (SONCC) ESU
- North American green sturgeon, Southern DPS
- NC Steelhead trout, summer-run DPS
- Tidewater goby
- Pacific marten, Coastal DPS
- Blue whale
- Fin whale
- Guadalupe fur seal
- Humpback whale
- North Pacific right whale
- Sei whale
- Southern Resident killer whale
- Sperm whale

- East Pacific green turtle
- Leatherback sea turtle
- Olive Ridley sea turtle

Per CESA, this project would have no "*Take*" of the following state-listed or state candidate species:

- Burke's goldfields
- Howell's spineflower
- Humboldt County milk-vetch
- Kellogg's buckwheat
- McDonald's rockcress
- Menzies' wallflower
- Red Mountain catchfly
- Showy Indian clover
- Western yellow-billed cuckoo
- Coho salmon, Southern Oregon/Northern California Coast ESU
- North Coast steelhead trout, summer-run DPS (population no. 36)
- Crotch bumble bee
- Western bumble bee
- Fisher, West Coast DPS
- Humboldt marten
- Guadalupe fur seal

Given the above, it was determined the project would have "*Less Than Significant Impact*" in response to CEQA Environmental Checklist Question 2.4 a). No mitigation is required.

Discussion of CEQA Environmental Checklist 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

Sequoia sempervirens Forest and Woodland Alliance

The proposed project would result in minor impacts to the *Sequoia sempervirens* Forest and Woodland Alliance (Redwood forest and woodland), present at all project locations. Construction activities, such as placing RSP for erosion control, would result in vegetation removal consisting of understory species immediately adjacent to the road and the culverts. Equipment use within the root zone of trees has the potential to impact tree health

Impacts to trees were assessed on November 30, 2020, by Darin Sullivan, a Caltrans arborist—certified under International Society of Arboriculture (ISA). Trees over six inches in DBH were surveyed by Caltrans land survey crews in October 2020. Tree locations, species and DBH were recorded and plotted on project layout maps. DBH was measured following Caltrans' standard guidelines for surveyors. Redwood trees have two zones: a structural root zone (SRZ) which is three times the DBH and the root health zone (RHZ) which is five times the DBH, shown in Figure 4 below. Both distances are measured from the surface of the tree.

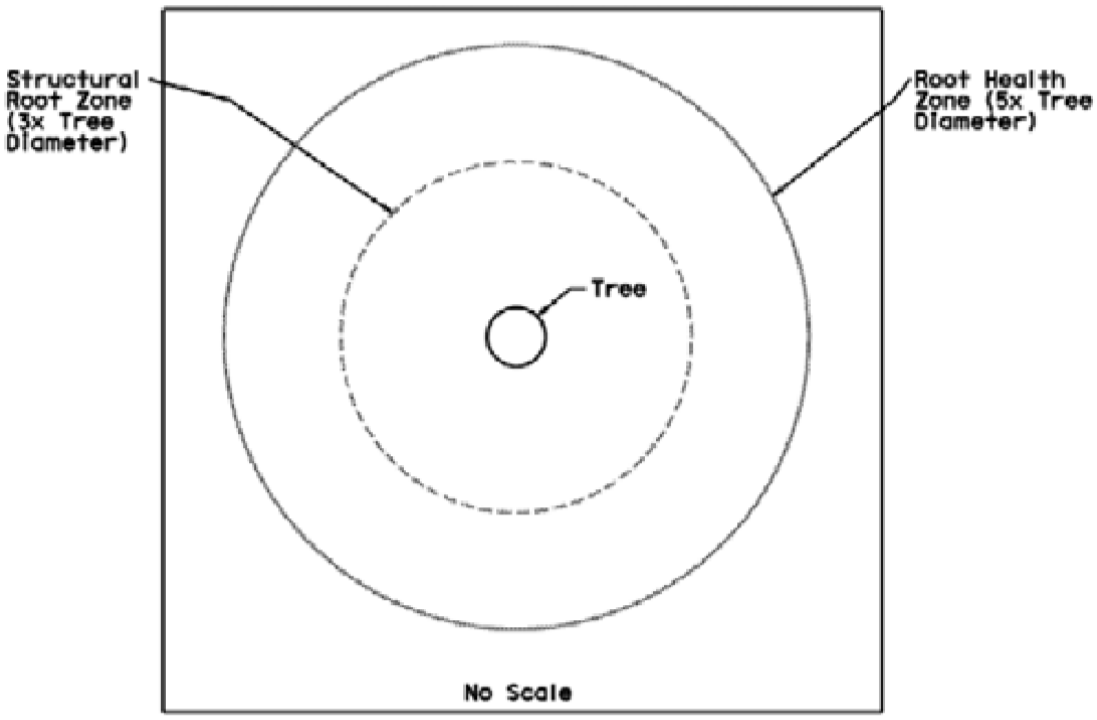


Figure 4. Diagram of the Root Zones of Coast Redwood Trees

Project impacts were evaluated by overlaying the two tree root zones on the draft project plans, to identify where excavation and other soil disturbing activities intersect with the root zones. Table 6 defines the standard ratings for assessing health impacts to redwood trees.

Table 6. Effects of Root Zone Disturbance on Tree Health

Rating	Effect
1	Root zone disturbance will have no effect on tree health.
2	Effect of root zone disturbance is extremely minor and there would be no decline in foliage density or tree health.
3	Effect of root zone disturbance is slight and there would be no decline in foliage density or tree health.
4	Effect of root zone disturbance may be short-term visible reduction in foliage density that is still well within the adaptive capabilities of the tree.
5	Effect of root zone disturbance may be a reduction in root health sufficient to cause lasting visible dieback of wood in the uppermost crown; tree survival is not threatened.
6	Effect of the root zone disturbance may be severe enough to threaten survival of the tree.

While there would be work conducted within various root zones of redwood trees identified on the project layouts (Appendix A), there would be minimal impacts to these individual trees—none of the impacts would threaten the long-term health of the trees or require their removal.

The greater Mendocino County region contains many thousands of acres of redwood forest, much of which is secondary forest that has regrown after the timber industry harvested a majority of old-growth primary forest in the 19th and 20th centuries. These primary and secondary redwood forests occur both locally within the BSA as well as to the south, north, and east within Mendocino County and California as a whole. The coast redwood forests within the BSA likely do not represent locally or globally-significant populations. Given the relatively small work areas necessary to complete the anticipated scope of construction activities, project activities would not impact the overall quality, characteristics, or structure of the stands of redwood forest in which they are located. It was determined the project would have a "*Less Than Significant Impact*" on *Sequoia sempervirens* Forest and Woodland Alliance (Redwood forest and woodland).

Invasive Species

Invasive species may be introduced to new areas or spread through the work sites by the tires and tracks of construction equipment. They may also recruit naturally and robustly, outcompeting native species, following soil disturbance.

To reduce the spread of invasive species, construction equipment would be inspected and cleaned during construction to remove invasive species and/or pathogens. Additionally, all disturbed areas would be seeded with native herbaceous species and weed-free mulch would be applied post construction. It is expected that potential for colonization of the area by invasive species would be greatly reduced and the native vegetation would be better able to colonize along with other native species. Caltrans Standard Measures and Best Management Practices would be implemented to ensure invasive species would not proliferate and would not present adverse impacts to natural communities.

Given the above, it was determined the project would have a "*Less Than Significant Impact*" in response to CEQA Environmental Checklist Question 2.4 b). No mitigation is required.

Discussion of CEQA Environmental Checklist 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 would have temporary and permanent impacts to potentially jurisdictional Waters of the U.S. and State and adjacent riparian vegetation. Table 7 below provides a summary of aquatic feature type and impacts by culvert location. Temporary impacts refer to those areas that would be restored on-site and in-kind upon completion of construction. Impacts expected to last longer than one year were considered permanent by means of temporal loss.

Table 7. Temporary and Permanent Impacts to Non-wetland Waters of the U.S. and State

Project Location	Aquatic Feature	Feature Type	Temporary Impact (acres)	Permanent Impact Fill below OHWM (acres)
PM 85.09	IS-4	Intermittent drainage	0.002	0.001
PM 85.09	ES-2	Ephemeral drainage	None	None
PM 85.74	ES-3	Ephemeral drainage	0.001	0.001
PM 86.67	No jurisdictional features	N/A	None	None
PM 86.98	No jurisdictional features	N/A	None	None
PM 88.95	ES-7	Intermittent drainage	< 0.001	< 0.001
Total Impacts	**N/A**	**N/A**	**0.004**	**0.003**

Wetlands

No wetland impacts would occur as a result of this project.

Non-Wetland Waters of the U.S. and State

Temporary and permanent impacts to non-wetland waters of the U.S. and State would occur from project activities. Approximately 0.004 acre of these waters (intermittent drainage) at the culverts at PMs, 85.09, 85.74, and 88.95 would be temporarily impacted due to construction activities (such as vegetation removal and excavation) to replace culverts (Table 7).

Additionally, approximately 0.003 acre of waters at these same culverts would incur permanent impacts as a result of extending existing culverts and installation of erosion control structures such as down drains, rock slope protection, gravel or structural fill under portions of the down drains, metal flared end sections at inlets and outlets, headwalls and wingwalls, concrete box drainage inlets, and cable anchorage systems. Section 1.2 provides details of the proposed permanent structures that would result in permanent impacts at each of the culverts listed above.

Associated Riparian Habitat

Temporary and permanent impacts for riparian habitat at each culvert are summarized in Table 8 below.

Table 8. Temporary and Permanent Impacts to Riparian Habitat

Project Location	Temporary Impact Riparian Habitat (acres)	Permanent Impact Riparian Habitat (acres)
PM 85.09	0.005	0.001
PM 85.74	None	None
PM 86.67	None	None
PM 86.98	None	None
PM 88.95	0.003	0.002
Totals	**0.008 acre**	**0.003 acre**

The proposed project would temporarily impact approximately 0.026 acre of riparian habitat at the culverts at PMs 85.09 and 88.95 (Table 8). Clearing and grubbing would occur at all sites for site access and construction work, which would result in removal of riparian vegetation. However, riparian vegetation removal would be considered temporary and minor as the sites would be replanted as needed and/or revegetated naturally within one year.

Permanent removal of riparian vegetation comprising approximately 0.003 acre at these same culverts would be required for extending existing culverts and installation of erosion control structures including down drains, RSP, gravel or structural fill under portions of the down drains, metal flared end sections at inlets and outlets, headwalls and wingwalls, concrete box drainage inlets, and cable anchorage systems Section 1.2 provides details of the proposed structures that would result in permanent impacts at each of the culverts listed above.

Temporary impacts to potentially jurisdictional Waters of the U.S. and State and riparian vegetation would be avoided, minimized, or restored with incorporation of the Standard Measures identified in Section 1.4. Standard Measures and BMPs would be used to stabilize all bare soil areas over both the short- and long-term and to minimize adverse effects to water quality, aquatic habitat, and aquatic species. BMPs include treatment controls, soil

stabilization practices, and weather-appropriate scheduling. THVF would be used to designate ESAs to limit ground disturbance within the project footprint.

Any debris and sediment would be contained within the project site and disposed appropriately off-site to ensure construction debris does not enter adjacent waters. The contractor would be required to restore waters and riparian areas temporarily impacted by construction to pre-existing conditions once construction is complete by means of regrading and revegetation. Caltrans would also prepare a project-specific Revegetation Plan which would implement a program of invasive weed control to improve habitat for native species in and adjacent to disturbed soil areas within the project limits.

Mitigation Measures

Permanent displacement of this small portion of Waters of the U.S. and State and riparian vegetation is not anticipated to have an adverse impact on the quality or function of the adjacent riverine systems or affect wildlife corridors. The State of California has a "no net loss" jurisdictional waters policy. The permanent loss of up to 0.003 acre of waters protected under Sections 404 and 401 of the CWA would be offset at an appropriate off-site location approved by the resource and regulatory agencies. Off-site compensatory mitigation options could include the purchase of credits from the Mendocino Coast Mitigation Bank. Appropriate mitigation ratios would be identified and coordinated with resource agencies but would likely be 3:1.

Given this, it was determined the project would have a "*Less Than Significant Impact with Mitigation*" regarding CEQA Environmental Checklist Question 2.4 c).

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Cultural Screening Memo for Rockport 9 Culverts (Rockport Culverts Project) dated May 7, 2021 (Caltrans 2021e). Potential impacts to Cultural Resources are not anticipated because no cultural materials were observed during archaeological surveys and no known cultural resources are recorded within the project area of potential effects. Caltrans has determined the project has no potential to affect historic properties. No mitigation is required.

2.6. Energy

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Noise Analysis for the Rockport Culverts Project dated May 5, 2021 (Caltrans 2021b). Potential impacts to energy are not anticipated because the proposed project would not increase highway capacity or provide congestion relief when compared to the No-Build alternative. The project would not result in an operational change in energy consumption. Construction-related energy consumption would be temporary and represent a small demand on local and regional fuel supplies. 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. No mitigation is required.

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.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?				✓
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?				✓
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?				✓

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?				✓
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Geology and Soils are not anticipated because no Alquist-Priolo earthquake fault zones are mapped at the project locations (California Geological Survey 2010). Landslide activity is mapped throughout the SR 1 corridor and within the project area (California Geological Survey 2015); however, the project proposes to rehabilitate or replace existing drainage facilities and would not result in substantial adverse effects involving risk of loss, injury or death. The project is designed to decrease water velocities at the outlets of culverts to address scour and reduce soil erosion. The project does not involve the building of structure or foundations or the disposal of wastewater. Potential impacts to Paleontological Resources are not anticipated because the geology of the project locations is assigned a low paleontological sensitivity for fossil resources and the culvert work would occur within previously disturbed materials (constructed roadway), largely as fill prisms, thus reducing the likelihood of finding intact/undisturbed specimens (Caltrans 2021f). Given the existing footprint of the drainage facilities, unique paleontological resources or geologic features are not anticipated to be destroyed. No mitigation is required.

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?			✓	
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

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 based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

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

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

STATE

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

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

Assembly Bill 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 (CARB) 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 the CARB 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. The CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The

program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the CARB 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 the CARB, 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 the CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e).[2] 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

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

greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

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

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, 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 the CARB 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 the CARB 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.

EO N-79-20 (September 2020): Establishes goals for 100 percent of in-state sales of new passenger cars and trucks to be zero-emissions vehicles by 2035, that the state transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible, and that 100 percent of medium- and heavy-duty vehicles in the state be zero-emissions by 2045 where feasible.

Environmental Setting

The proposed project is located in a remote rural area, with a local economy based predominantly on tourism and agriculture heavily reliant on its natural resources. The project is situated at the very northernmost end of the Mendocino Coast, a popular tourist destination, and the vast majority of visitors access the location by vehicle (as there are no other transportation modes to the North Coast other than small municipal airports). The Lost Coast begins just north of Rockport where it becomes undeveloped wild lands. Residential density is extremely low; the nearest population center is Fort Bragg with a population of approximately 7,200, located 24 miles south of the project site on a narrow, curvy stretch of highway. SR 1 is the main transportation route to and through the area for both passenger and commercial vehicles, traversing much of California's coast and running nearly the full length of the Mendocino County coastline. Traffic counts are low in the project area, and SR 1 is rarely congested; however, the summer season does have higher traffic volumes due to recreational tourism. The Mendocino Council of Governments' (MCOG) Regional Transportation Plan (RTP) guides transportation development in Mendocino County. The Mendocino County General Plan was adopted in 2009 and does not specifically address GHGs or climate change.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB 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 (Figure 5). 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 1990-2019 inventory found that overall GHG emissions were 6,558 million metric tons (MMT) in 2019, down 1.7 percent from 2018 but up 1.8% from 1990 levels. Of these, 80 percent were CO_2, 10 percent were CH_4, and 7 percent were N_2O; the balance consisted of fluorinated gases. CO_2 emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990. As shown in Figure 5, the transportation sector accounted for 29 percent of U.S. GHG emissions in 2019 (U.S. EPA 2021a, 2021b).

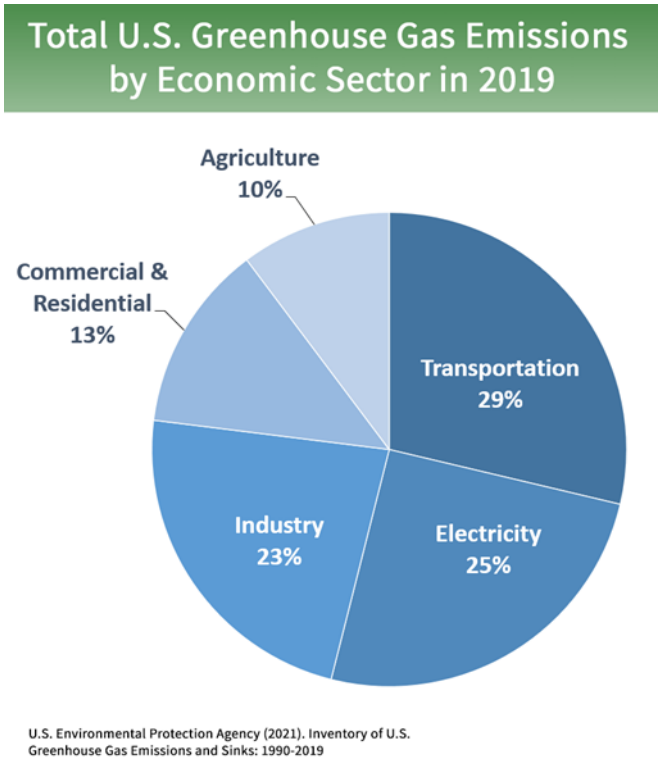


Figure 5. U.S. 2019 Greenhouse Gas Emissions

Source: U.S. EPA 2021c

STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2020 edition of the GHG emissions inventory reported emissions trends from 2000 to 2018. It found total California emissions were 425.3 $MMTCO_2e$ in 2018, 0.8 $MMTCO_2e$ higher than 2017 but 6 $MMTCO_2e$ lower than the statewide 2020 limit of 431 MMT CO_2e. The transportation sector was responsible for 41 percent of total GHGs. Transportation emissions decreased in 2018 compared to the previous year, which is the first year over year decrease since 2013. Overall statewide GHG emissions declined from 2000 to 2018 despite growth in population and state economic output (CARB 2020).

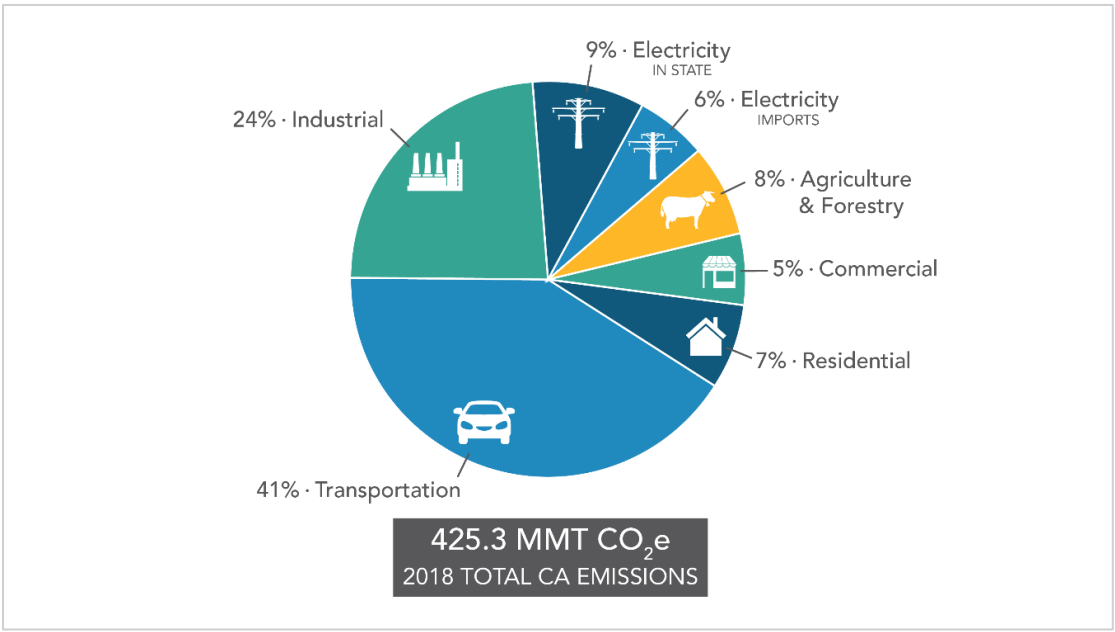


Figure 6. California 2018 Greenhouse Gas Emissions

Source: CARB 2020

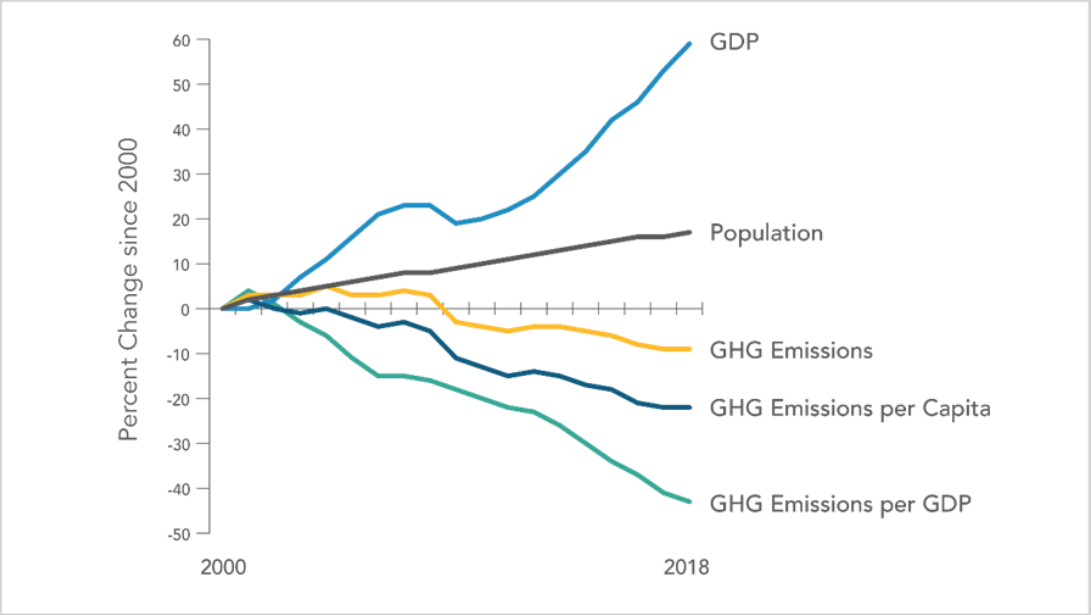


Figure 7. Change in California GDP, Population, and GHG Emissions Since 2000

Source CARB 2020

AB 32 required CARB 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. The CARB 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

CARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. However, Mendocino County does not have a MPO and therefore CARB does not establish a GHG reduction target for the county. Mendocino Council of Governments (MCOG) serves as the responsible Regional Transportation Planning Agency (RTPA) for Mendocino County cities and unincorporated areas. Mendocino Council of Governments prepares an RTP; the 2017 RTP was adopted February 5, 2018. The 2017 RTP outlines policies and goals intended to reduce GHGs. The RTP's climate change objectives include "Improve resiliency of the region's transportation system to climate related impacts." (MCOG 2018).

The State Highway System element of the RTP identifies various long-range safety and operational projects needed on SR 1 if funding becomes available (MCOG 2018). The 2017 RTP identifies GHG reduction policies and strategies including:

- Encourage implementing agencies to consider strategies for climate change adaptation when designing improvements or additions to transportation networks.
- Evaluate transportation projects based on their abilities to reduce Mendocino County's transportation related GHG emissions
- Prioritize transportation projects which lead to reduced GHG emissions
- Monitor new technologies and opportunities to implement energy efficient and nonpolluting transportation infrastructure.

Mendocino County does not have a climate action plan that specifically addresses transportation projects. In 2019, the County formed a Mendocino County Climate Action Advisory Committee to make recommendations to the Board of Supervisors regarding implementation of a Mendocino County Sustainability and Climate Action Program.

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 §§ 15064(h)(1) and 15130).

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

Operational Emissions

The purpose of the proposed project is to rehabilitate or replace existing drainage systems and will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR 1, no increase in vehicle miles traveled (VMT) would occur due to construction of the project. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

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

In addition, with innovations such as longer pavement lives, improved Transportation 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 2018 Caltrans Construction Emissions Tool (CAL-CET2018) version 1.3 was used to estimate carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons (HFCs) emissions from construction activities. Table 9 summarizes estimates of GHG emissions generated by onsite equipment for the proposed project. The project is anticipated to occur in 2023, over an estimated 65 working days. The carbon dioxide equivalent (CO_2e) produced during construction is estimated to be approximately 140 tons.

Table 9. Estimated Construction Emissions in U.S. Tons

Construction Duration	CO_2	CH_4	N_2O	HFCs	CO_2e*
65 working days	79	0.002	0.005	0.004	140

* A quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFCs by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, and HFCs is 1, 25, 298, and 14,800, respectively.

All construction contracts include Caltrans Standard Specifications (Caltrans 2018) Sections 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 CARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

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

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

Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals (Figure 8) that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to fifty 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.

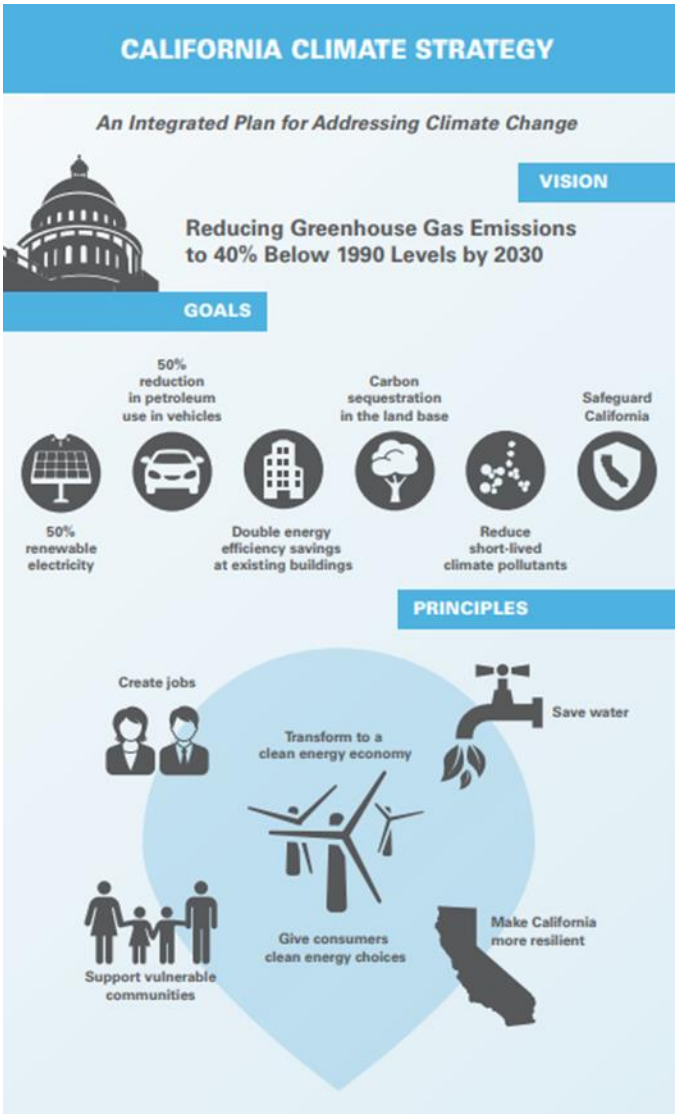


Figure 8. California Climate Strategy

Source: California Environmental Protection Agency 2015

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce

today's petroleum use in cars and trucks by up to 40 percent by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged and vulnerable communities. Each agency is to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the State's carbon neutrality goal and build climate resilience.

CALTRANS ACTIVITIES

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB 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

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more

efficient land use and development practices; and continued shifts to telework (Caltrans 2021c).

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

Caltrans Strategic Plan

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

Funding and Technical Assistance Programs

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

Caltrans Policy Directives and Other Initiatives

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

Project-Level Greenhouse Gas Reduction Strategies

The following measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project.

- Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.
- 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.
- Caltrans Standard Specification “Emissions Reduction” ensures construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).
- 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.
- 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.
- Pedestrian and bicycle access would be maintained on State Route 1 during project activities.
- Earthwork would be balanced as much as possible to reduce the need for transport of cut and fill materials.

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

The *U.S. DOT Policy Statement on Climate Adaptation* in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT 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* (State of California 2018) is the state's effort to "translate the

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

- *Adaptation* to climate change refers to adjustments 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 to state agencies on how to incorporate "sea-level rise (SLR) projections into planning and decision making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California—An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

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

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

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

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

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

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

Project Adaptation Efforts

Caltrans has considered the effects of climate change on the project. The project is not anticipated to exacerbate the effects of climate change related to flooding, hazards, and wildfire, discussed below.

Sea-Level Rise

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

Floodplains

A *Floodplain Evaluation Report Summary* was prepared for the project (Caltrans 2020). The project area lies within the Federal Emergency Management Agency (FEMA) mapped area shown on the 06045C0625G Firmette[3] and is classified as, "Zone X", "Area of minimal flood hazard".

The *Caltrans Climate Change Vulnerability Assessment for District 1* (Caltrans 2019a) mapped potential changes in the 100-year storm precipitation event throughout the district. The 100-year storm event is a metric commonly used in the design of culverts. The projections are based on the Representative Concentration Pathways (RCP) 8.5 Emissions Scenario[4]. The mapping indicates a percentage increase of 5.0% to 9.9 % in 2025, 2055, 2085 in the project area in Mendocino County (Caltrans 2019a). Heavier precipitation and extreme weather events, such as the 100-year flood (a 100-year flood is a flood event that has a 1 in 100 chance of being equaled or exceeded in any given year), may occur as a result of climate change. Many location-specific variables make it difficult to calculate exactly how precipitation change would affect flood flows at a given site.

A *Hydrology Computations and Hydraulics Analysis* report was prepared to evaluate site specific hydrology and drainage at each project location (Caltrans 2021a). Flood frequency estimates in the project limits were reviewed using NOAA Atlas 14 (in this region, historic NOAA Atlas 14 data tends to model higher precipitation levels than future climate projection tools, such as CalAdapt). This information is used to estimate flows at culverts for discharge events, based on the storm duration and average recurrence interval. The project culverts are designed to pass historic 100-year flood events.

The proposed project would replace existing deteriorated culverts, with larger pipe sizes where needed. Increasing the diameter of culverts is anticipated to reduce the occurrence of flooding upstream of culverts and decrease water velocities at the outlet of culverts. This will decrease erosion of the bed, bank and channel both upstream and downstream of the culverts. The rate and volume of stormwater discharged to adjacent waterbodies would be

[3] A section of a Flood Insurance Rate Map (FIRM) developed by the Federal Emergency Management Agency

[4] RCPs represent the most recent generation of GHG scenarios produced by the IPCC. RCP 8.5 assumes that high GHG emissions will continue to the end of the century.

controlled by using rock energy dissipators (RED). The proposed project would improve the drainage facilities to better protect the roadways compared to existing conditions.

Wildfire

The project corridor is located within State Responsibility Area (SRA). The project area is within lands classified as high fire hazard severity zones (CALFIRE 2020). The Caltrans *Climate Change Vulnerability Assessments* for District 1 (Caltrans 2019a) mapped centerlines miles exposed to medium to very high wildfire concern on routes throughout the district. The projections are based on the Representative Concentration Pathways (RCP) 8.5 Emissions Scenario. By 2085, the project corridor is modeled at a medium level of Wildfire concern. While average temperatures on the coast are currently relatively mild, increased precipitation due to climate change could lead to an increase in fuel in already fire-prone locations.

Standard fire prevention measures would be implemented during construction, including:

- The names and emergency telephone numbers of the nearest fire suppression agencies would be posted at a prominent place at the job site.
- Fires occurring within and near the project limits would be immediately reported to the nearest fire suppression agency by using the emergency phone numbers retained at the job site and by dialing 911. Performance of the work would be in cooperation with fire prevention authorities.
- Project personnel would be prevented from setting open fires that are not part of the work.
- Fires caused directly or indirectly by job site activities would be extinguished and escape of fires would be prevented.
- Materials resulting from clearing and grubbing would be disposed of or managed to prevent accumulation of flammable material.

These measures would minimize wildfire risk during construction. It is the policy of District 1 to not expose plastic pipe to fire hazard, therefore down drains would be made of steel and would be constructed so that connections with any plastic pipe cross drain would be below ground. Culvert liners would be grouted and buried below fill. The project would replace or rehabilitate existing drainage structures and would not result in changes to the highway facilities or environment that could exacerbate fire risk.

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?				✓
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?				✓
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?				✓
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?				✓
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?				✓

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?				✓
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 Impact" determinations in this section are based on the scope, description, and location of the proposed project and Initial Site Assessment review for issues relating to hazardous materials dated January 10, 2019 (Caltrans 2019b). Potential hazards and hazardous materials impacts are not anticipated because the project would involve the rehabilitation or replacement of existing drainage facilities and would not create significant hazards involving hazardous materials or wildland fires. The project is not located within a site compiled pursuant to Government Code Section 65962.5, near an existing or proposed school, airport or airport land use plan. Although there would be temporary traffic delays during construction, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period. No mitigation is required.

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?			✓	
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?				✓
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;				✓
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;				✓
(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				✓
(iv) impede or redirect flood flows?				✓
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Regulatory Setting

The primary laws and regulations governing hydrology and water quality include:

- Federal Clean Water Act (CWA), 33 USC 1344
- Federal Executive Order for the Protection of Wetlands (EO 11990)
- State Sections 1600–1607 of the California Fish and Game Code (CFGC)
- State Porter-Cologne Water Quality Control Act, § 13000 et seq.

Environmental Setting

Hydrology

The project is in Mendocino County, California. The terrain of the project vicinity consists of east-west trending ridgelines and valleys that divide the area into numerous coastal drainage basins. Overall drainage patterns are from the headwaters in the hills and mountains to the east, flowing to the receiving water, the Pacific Ocean, in the west.

Between PM 84.3 and just north of PM 85.74, the ESLs are within the Hardy Creek watershed. This portion of SR 1 ascends in elevation along unnamed tributaries to Hardy Creek. The mainstem of Hardy Creek is located approximately 0.3 mile south of PM 84.3. Hardy Creek has three named tributaries: North Fork, Middle Fork, and South Fork. Hardy Creek discharges into the Pacific Ocean approximately 0.6 mile southeast of PM 84.3.

Continuing north from PM 85.74, SR 1 descends into the Cottoneva Creek watershed. Cottoneva Creek has eight tributaries. PMs 86.67 and 86.98 are located along an unnamed tributary to Rockport Creek. PM 88.95 is located along the mainstem of Cottoneva Creek within the Cottoneva Valley.

Table 10. Hydrologic Information

Route	Post Miles	Hydrologic Unit	Hydrologic Area	Hydrologic Sub-Area	Watershed	TMDL*
MEN 1	84.3 -88.95	Mendocino Coast	Rockport	Wages Creek (113.12)	Usal Creek-Frontal Pacific Ocean	N/A

Water Quality

Water quality objectives and beneficial uses are identified for all the water bodies in the North Coast Region in the Water Quality Control Plan for the North Coast Region (Basin Plan) (NCRWQCB 2018). Beneficial Uses for these waters include:

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Service Supply (IND)
- Groundwater Recharge (GWR)
- Freshwater Replenishment (FRSH)
- Navigation (NAV)
- Water Contact Recreation (REC1)
- Non-Contact Water Recreation (REC2)
- Commercial and Sport Fishing (COMM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)

Potential Beneficial Uses for these waters are Industrial Process Supply (PRO) and Hydropower Generation (POW).

The waters associated with this project are not on the 303(d) list or have any Total Maximum Daily Loads (TMDLs).

Discussion of CEQA Environmental Checklist Question 2.10—Hydrology and Water Quality

A "No Impact" determination was made for Questions b), c), d), and e) listed within the CEQA Environmental Checklist—Hydrology and Water Quality section. Determinations were based on scope, description, and locations of the proposed project, as well as the *Water Quality Assessment Memorandum for Rockport Culverts* (Caltrans 2021j), and *Floodplain Evaluation Report Summary* (Caltrans 2020). See below for further discussion of the "*Less Than Significant Impact*" determination made for Question a).

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The project has the potential to result in temporary impacts to water quality during construction activities, including earthwork and grading, concrete pours, and dewatering during excavations. Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment and other pollutants to adjacent waters and riparian areas. The amount of disturbed soil area (DSA) during construction is currently estimated to be 0.52 acre. Standard water quality BMPs discussed in Section 1.4 would minimize erosion and discharge of pollutants during construction.

The project is not anticipated to result in long-term degradation of water quality. Proposed temporary and permanent fill to jurisdictional waterways would be subject to USACE CWA Section 404 and NCRWQCB Water Quality Certification regulations and permitting. Impacts to Waters of the U.S. and State are discussed in Section 2.4.

The project is expected to address existing scour and the following water quality issues on-site. Currently, the culvert inlets at PMs 86.67 and 88.95 are corroded. There is significant scour observed at the failed inlet at PM 86.98. There was loose debris observed in the culvert at PMs 85.09, and 86.98. The culverts at PMs 85.09, 86.67 and 86.98 were observed to have rusted and have failed. Increasing the diameter of culverts is anticipated to improve the channel condition by reducing the occurrence of upstream flooding and decreasing water velocities culvert outlets. This will decrease erosion of the bed, bank and channel both upstream and downstream of the culverts. The down drain extensions at PMs 85.09 and 86.98 are intended to reduce the erosion of the bed, bank and channel.

Minor realignments of the drainage systems at PMs 85.74 and 86.67 would avoid impacts to redwood and Douglas-fir trees. Hydromodification resulting from the alteration of flow

patterns from changing the hydraulic line, grade, or capacity of culverts is not anticipated. The amount of new impervious surface area would be minor and would be addressed with post-construction treatment BMPs required by the NCRWQCB 401 Certification.

Permanent impacts to water quality would be prevented by adhering to the required permit conditions (Permits 404 and 401), and the incorporation of Design Pollution Prevention (DPP) BMP strategies, including prevention of downstream erosion, stabilization of disturbed soil areas, maximization of vegetated surfaces, and consideration of downstream effects related to potentially increased flow. Permanent treatment BMPs may include biostrips, bioswales, and Design Pollution Prevention Infiltration Areas (DPPIAs).

Given that potential impacts would be temporary and minimized with the implementation of standard BMPs, the project is not anticipated to violate any water quality standards or waste discharge requirements or substantially degrade surface or ground water quality; therefore, a "*Less Than Significant Impact*" determination was made for Question a).

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?				✓
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 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 as the proposed project would not divide an established community or conflict with a land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project, which involves the improvement and maintenance of existing drainage systems, does not conflict with existing zoning, plans, and land use controls. No mitigation is required.

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?				✓
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 Impact" determinations in this section are based on the scope, description, and location of the proposed project. There are no designated mineral resource areas of state or regional importance in the project area, and the project would not impede the extraction of any known mineral resources (Division of Mine Reclamation 2016). Therefore, the project would have no impact on mineral resources and no mitigation is required.

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?				✓
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
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 Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Noise Analysis for the Rockport Culvert Project dated May 5, 2021 (Caltrans 2021b). 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 not result in a substantial increase in ambient noise levels in the vicinity of the project. There are no residences or buildings in the project vicinity and the designated land use is Forest Land, with no exterior noise compatibility standard (County of Mendocino 2009). No mitigation is required.

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)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to population and housing are not anticipated because the project involves rehabilitation or replacement of existing drainage facilities and would not induce unplanned population growth in the area by constructing housing or creating new employment, nor would it induce population growth by providing new access or opening a new area to development. The proposed project would not involve acquisition of land occupied by homes or residences and would not result in displacement of people or housing. No mitigation is required.

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?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

"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 project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period. The project would rehabilitate culverts and would not result in an increased demand for fire or police protection or increased demand for space in schools, parks, or public facilities in the area. As such, potential impacts on public services are not anticipated. No mitigation is required.

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?				✓
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project would involve the rehabilitation or replacement of existing drainage facilities and would not result in an increased demand for park resources that could cause deterioration of existing parks or recreational facilities. Additionally, the proposed project does not include the construction of park resources or recreational facilities or the expansion of such facilities. Therefore, potential impacts on recreation are not anticipated. No mitigation is required.

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?				✓
Would the project: b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?				✓
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)?				✓
Would the project: d) Result in inadequate emergency access?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to transportation and traffic are not anticipated because the proposed culvert replacement and rehabilitation would not represent a change to the layout or facility and the roadway would remain a two-lane rural highway. The project is not likely to lead to a substantial increase in vehicle miles traveled. Although there would be temporary traffic delays on SR 1 during construction, there would not be any permanent changes to transportation or traffic. A Transportation Management Plan (TMP) would be developed and construction traffic would be scheduled and routed to reduce congestion. There are no public transit facilities within one half-mile of the project. During construction, bicycles would be accommodated through the construction area. All emergency response agencies in the project area would be notified of the project construction schedule and would have access SR 1 throughout the construction period. No mitigation is required.

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 substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: 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 § 5020.1(k), or				✓
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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Cultural Screening Memo for Rockport 9 Culverts (Rockport Culverts Project) dated May 7, 2021 (Caltrans 2021e). No cultural materials were observed during archaeological surveys and no known cultural resources are recorded within the project area of potential effects. No tribal cultural resources have been identified in the project area that are listed in the California Register of Historical Resources (CRHR) or in a

local register and there are no known tribal cultural resources determined to be significant to a California Native American Tribe. Native American Consultation was initiated by Caltrans archaeologist Marisol Espino and Jackie Farrington. In February 2019, letters were sent to tribal representatives of the Cloverdale Rancheria, Coyote Valley Rancheria, Hopland Rancheria, Cahto Tribe of the Laytonville Rancheria, Manchester Point Arena Band of Pomo Indians, Pinoleville Pomo Nation, Round Valley Indian Tribes, and Sherwood Valley Band of Pomo. No responses have been received to date. Project updates have been provided by Caltrans archaeologist Jackie Farrington at quarterly meetings with the Mendocino County Tribes. Caltrans will continue to consult with interested tribes throughout the life of the project. Potential impacts to Tribal Cultural Resources are not anticipated and no mitigation is required.

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?				✓
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?				✓
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?				✓
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?				✓
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project would rehabilitate and replace existing drainage facilities and would not result in 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. No mitigation is required.

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?				✓
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?				✓
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 may result in temporary or ongoing impacts to the environment?				✓
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?				✓

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Environmental Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high fire hazard severity zones.

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project corridor is located within State Responsibility Area (SRA). The project area is within lands classified as high fire hazard severity zones (CALFIRE 2020). The project would rehabilitate or replace existing drainage facilities and would not require new infrastructure that would exacerbate fire risks.

All emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period. 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. No mitigation is required.

2.21. Mandatory Findings of Significance

Does the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				✓
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.)				✓
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project.

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." The analysis indicates the activities associated with the proposed project do not have the potential to have a "significant" direct, indirect, or cumulative impact 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. This chapter summarizes the results of efforts by Caltrans 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.

Coordination with Resource Agencies

Table 11. Agency Coordination and Professional Contacts

Date	Personnel	Notes
January 31, 2019	Tracy Walker, Caltrans Biologist; Stephanie Frederickson, Caltrans Senior Resource Specialist; Gregory Schmidt, USFWS	Caltrans presented information to USFWS to discuss levels of impact and habitat suitability for MAMU and NSO
February 14, 2019	Tracy Walker, Caltrans Biologist; Stephanie Frederickson, Caltrans Senior Resource Specialist; Gregory Schmidt, USFWS	Caltrans presented updated information to USFWS to discuss levels of impact and habitat suitability for MAMU and NSO
February 13, 2020	Tracy Walker, Caltrans Biologist; Stephanie Frederickson, Caltrans Senior Resource Specialist; Scott Burger, Environmental Coordinator; Elena Meza, NMFS	Caltrans presented information to NMFS to discuss applicability of the PBO.
March 19, 2020	Tracy Walker, Caltrans Biologist; Stephanie Frederickson, Caltrans Senior Resource Specialist; Scott Burger, Environmental Coordinator; Jennifer Olson, CDFW	Meeting with CDFW liaison to discuss resources present and level of consultation, particularly for Section 1602 resources.
November 24, 2020	Tracy Walker, Caltrans Biologist; Stephanie Frederickson, Caltrans Senior Resource Specialist; Jennifer Olson, CDFW	Discussed 1602 permitting needs for the project.
December 11, 2020	Tracy Walker, Caltrans Biologist; Stephanie Frederickson, Caltrans Senior Resource Specialist; Gregory Schmidt, USFWS	Discussed whether to include Humboldt marten in analysis of federally listed species that could occur within the BSA; confirmation

Date	Personnel	Notes
		of using the Programmatic Letter of Concurrence (PLOC) for NSO and MAMU.
January 14, 2021	Tracy Walker, Caltrans Biologist; Andrea Poteet, Caltrans Revegetation Specialist; Jennifer Olson, CDFW	Discussed onsite riparian revegetation options for the project.
May 20, 2021	Tracy Walker, Caltrans Biologist; S. Frederickson, Caltrans Senior Resource Specialist; Jennifer Olson, CDFW	Provided CDFW with updates about number of culverts on the project and revegetation efforts.
May 21, 2021	Tracy Walker, Caltrans Biologist; S. Frederickson, Caltrans Senior Resource Specialist; G. Schmidt, USFWS	Discussed use of the PLOC for NSO and MAMU.
July 15, 2021	Tracy Walker, Caltrans Biologist; Jennifer Olson, CDFW S. Frederickson, Caltrans Senior Resource Specialist; Amanda Lee, Environmental Coordinator	CDFW Office Hours discussion for input on revegetation strategies to offset impacts to riparian habitat

Coordination with Property Owners

Permits to enter were obtained in 2019 to access several properties within the project Environmental Study Limits to perform environmental studies.

A copy of the Initial Study/Mitigated Negative Declaration will be sent to owners and occupants of properties within and adjacent to the project area, including Mendocino Redwood Company.

Coordination with Tribes

Native American Consultation was conducted by Caltrans archaeologist Jackie Farrington. In February 2019, letters were sent to tribal representatives of the Cloverdale Rancheria, Coyote Valley Rancheria, Hopland Rancheria, Cahto Tribe of the Laytonville Rancheria, Manchester Point Arena Band of Pomo Indians, Pinoleville Pomo Nation, Round Valley Indian Tribes, and Sherwood Valley Band of Pomo. No responses have been received to date. Caltrans will continue to consult with interested tribes throughout the life of the project.

Circulation

A draft of this document circulated for public review between November 29, 2021 and January 3, 2022. No comments were received during this period.

Chapter 4. List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation, District 1

Amanda Lee	Associate Environmental Planner (Coordinator)
Barbara Wolf	Senior Environmental Planner (Greenhouse Gas, Climate Change)
Benson Liang	Transportation Engineer (Lead Project Engineer)
Brandon Larsen	Supervising Environmental Planner (Environmental Office Chief)
Celeste Redner	District Hydraulic Engineer (Hydraulics and Floodplains)
Jackie Farrington	Associate Environmental Planner (Archaeologist)
Karen Radford	Associate Governmental Program Analyst (Technical Editor)
Kim Floyd	Transportation Engineer (Project Manager)
Liza Walker	Senior Environmental Planner (Branch Chief)
Mark Melani	Associate Environmental Planner (Hazardous Waste)
Oscar Rodriguez	Stormwater Coordinator (Water Quality)
Ryan Pommerenck	Transportation Engineer (Air, Noise, Greenhouse Gas, Energy)
Tracy Walker	Associate Environmental Planner (Biologist)
Valerie Jones	Landscape Associate (Aesthetics)

Consultant 1

Jordan Mayor	ICF Botanist/Wetlands Ecologist
Lisa Webber	ICF Botanist/Wetlands Ecologist

Consultant 2

Culyer Stapleman	WRECO Senior Environmental Scientist (Botanical)
Scott Elder	WRECO Associate Environmental Scientist (Botanical, Wetlands)

Chapter 5. Distribution List

Federal and State Agencies

California Transportation Commission
1120 N Street, MS 52
Sacramento, CA 95814

Daniel Breen, U.S. Army Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, CA 94103

Greg Schmidt, U.S. Fish and Wildlife Service
1655 Heindon Road
Arcata, CA 95518

Jennifer Olson, California Department of Fish & Wildlife
619 Second Street
Eureka, CA 95501

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

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

Regional/County/Local Agencies

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

Utilities, Service Systems, Businesses, and Other Property Owners

Mendocino Redwood Company LLC
PO Box 996
Ukiah, CA 95482-0996

Chapter 6. References

Antos, J. A., and D. B. Zobel. 1984. Ecological implications of below ground morphology of nine coniferous forest herbs. Botanical Gazette, Vol. 145(4):508-517.

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley.

Bash, J., Berman, C. and Bolton, S. 2001. Effects of turbidity and suspended solids on salmonids. University of Washington Water Center.

Bormann, F. H., and G. E. Likens. 1979. Pattern and Process of a Forested System. Springer-Verlag, New York. 253 pp.

Brown, C. R. 1997. Purple Martin (*Progne subis*). In The Birds of North America, No. 287 (A. Poole and F. Gill, eds.) The Birds of North America, Inc., Philadelphia.

Buehler, D. A. 2000. Bald Eagle (*Haliaeetus leucocephalus*). In The Birds of North America, No. 564 (A. Poole and F. Gill, eds.). The Birds of North America Online, Ithaca, New York.

Bull, E. L., and Collins, C. T. 1993. Vaux's Swift (*Chaetura vauxi*), in The Birds of North America (A. Poole and F. Gill, eds.), No. 77. Acad. Nat. Sci., Philadelphia.

Calfish. 2020a. Coho salmon (*Onchorhynchus kisutch*). http://www.calfish.org/FisheriesManagement/SpeciesPages/CohoSalmon.aspx

_____. 2020b. Steelhead trout (*Onchorhynchus mykiss*). https://www.calfish.org/FisheriesManagement/SpeciesPages/SteelheadTrout.aspx

Calflora. 2020. Leafy-stemmed Mitrewort (*Mitellastra caulescens*). Retrieved November 2020 from: https://www.calflora.org/app/taxon?crn=11852

California Air Resources Board (CARB). 2020. California Greenhouse Gas Emissions Inventory–2020 Edition. https://ww3.arb.ca.gov/cc/inventory/data/data.htm. Accessed: November 18, 2020.

_____. 2020. California Greenhouse Gas Emission Inventory Graphs. https://ww2.arb.ca.gov/ghg-inventory-graphs. Accessed: July 2, 2020.

California Department of Fish and Game (CDFG). 2004. Recovery Strategy for California Coho salmon. Report to the California Fish and Game Commission. Sacramento, CA.

_____. 2008a. Stream Inventory Report "Cottaneva Creek". Accessed on November 24, 2020 from <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=Fisheries--StreamInventoryReports>.

_____. 2008b. Stream Inventory Report "South Fork Cottaneva Creek". Accessed on November 24, 2020 from <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=Fisheries--StreamInventoryReports>.

_____. 2008c. Stream Inventory Report "Rockport Creek". Accessed on November 24, 2020 from <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=Fisheries--StreamInventoryReports>.

_____. 2009. Stream Inventory Report "Hardy Creek". Accessed on November 24, 2020 from <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=Fisheries--StreamInventoryReports>.

California Department of Fish and Wildlife [CDFW]. 2018. Protocols for Surveying and Evaluating Special Status Native Plant Populations and Natural Communities. Website https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline [accessed April 2020].

_____. 2020. California Natural Community List. Website https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline [accessed August 6, 2020].

_____. 2021. California Natural Diversity Database [CNDDB]. RareFind 5. California Department of Fish and Wildlife. Website https://www.wildlife.ca.gov/Data/CNDDB [last accessed April 26 2021].

California Department of Forestry and Fire Protection (CALFIRE) Fire and Resource Assessment Program (FRAP). 2020. *FHSZ Viewer*. https://egis.fire.ca.gov/FHSZ/. Accessed (April/2021).

California Department of Transportation [Caltrans]. 2016. *Technical Guidance for Assessment and Mitigation of the Effects of Highway and Road Construction Noise on Birds*. June. (Contract 43A0306.) Sacramento, CA. Prepared by ICF International,

Sacramento, CA, Robert Dooling, Gaithersburg, MD, and Arthur Popper, Silver Spring, MD.

_____.2018. *Standard Specifications*. https://dot.ca.gov/-/media/dot-media/programs/design/documents/2018-std-plns-for-web-a11y.pdf Accessed: April 13, 2021.

_____. 2019a. Caltrans Climate Change Vulnerability Assessments. District 1 Technical Report. December. Prepared by WSP. https://dot.ca.gov/programs/transportation-planning/2019-climate-change-vulnerability-assessments.

_____. 2019b. Initial Site Assessment.

_____. 2019c.Westport Culverts Project Aquatic Resources Delineation Report.

_____. 2019d. Westport Culverts Project Botanical Resources Report.

_____. 2020. Floodplain Evaluation Report Summary.

_____. 2021a. 01-49620 MEN 01 PM 84.30/88.95 Hydrology Computations and Hydraulics Analysis.

_____. 2021b. Air Quality and Noise Analysis for the Rockport Culvert Project.

_____. 2021c. California Transportation Plan 2050. February. https://dot.ca.gov/programs/transportation-planning/state-planning/california-transportation-plan. Accessed: March 3, 2021

_____. 2021d. Caltrans 2020-2024 Strategic Plan. https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/sp-2020-16p-web-a11y.pdf. Accessed: May 19, 2021.

_____. 2021e. Cultural Screening Memo for Rockport 9 Culverts (Rockport Culverts Project).

_____. 2021f. Paleo scoping memo.

_____. 2021g. Rockport Culverts Project Natural Environment Study.

_____. 2021h.Rockport Culverts Project Natural Environment Study Addendum: Updates to Project Description, Impacts Assessment

_____. 2021i. Visual Impact Assessment Memorandum.

_____. 2021j. Water Quality Assessment Memorandum for Rockport Culverts.

California Environmental Protection Agency. 2015. California Climate Strategy. https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Climate-Documents-2015yr-CAStrategy.pdf. Accessed: April 28, 2021.

California Geological Survey. 2010. Fault Activity Map of California (2010). http://maps.conservation.ca.gov/cgs/fam/. April 13, 2021.

_____.2015. The California Landslide Inventory. https://maps.conservation.ca.gov/cgs/lsi/app/. Accessed: April 13, 2021.

California Herps. 2020a. "Coastal Tailed Frog – *Ascaphus truei*." URL: http://www.californiaherps.com/frogs/pages/a.truei.html.

_____. 2020b. "Foothill Yellow-Legged Frog - Rana Boylii." URL: http://www.californiaherps.com/frogs/pages/r.boylii.html.

_____. 2020c. "Northern Red-legged Frog - Rana Aurora." URL: http://www.californiaherps.com/frogs/pages/r.aurora.html

_____. 2020d. "Red-bellied Newt – Taricha rivularis." URL: http://www.californiaherps.com/salamanders/pages/t.rivularis.html.

_____. 2020e. "Southern Torrent Salamander – Rhyacotriton variegatus. " URL: http://www.californiaherps.com/salamanders/pages/r.variegatus.html

_____. 2020f. "Western Pond Turtle – Emys Marmorata " URL: http://www.californiaherps.com/salamanders/pages/e.marmorata.html

California Invasive Plant Council [Cal-IPC]. 2011. Cal-IPC inventory. Website https://www.cal-ipc.org/plants/inventory [Accessed May 2020]

Consortium of California Herbaria. 2019. Consortium of California Herbaria (CCH) (URL: https://ucjeps.berkeley.edu/consortium/. [Accessed December 3, 2020].

County of Mendocino. 2009. *General Plan*. https://www.mendocinocounty.org/government/planning-building-services/plans/mendocino-county-general-plan. Accessed: April 13, 2021.

Division of Mine Reclamation. 2016. Mines Online. Available: https://maps.conservation.ca.gov/mol/index.html. Accessed: April 12, 2021.

Environmental Laboratory. 1987. Wetland Delineation Manual. Waterways Experiment Station, Wetlands Research Program Technical Report Y-87-1. Vicksburg, MS.

Federal Geographic Data Committee [FGDC]. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Federal Highway Administration [FHWA]. 2017. Construction Noise Handbook. Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors. Website http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm [accessed December 3, 2020].

_____. 2019. *Sustainability*. https://www.fhwa.dot.gov/environment/sustainability/resilience/. Last updated February 7, 2019. Accessed: August 21, 2019.

_____. No date. *Sustainable Highways Initiative*. https://www.sustainablehighways.dot.gov/overview.aspx. Accessed: August 21, 2019.

Gutierrez, R. J., A. B. Franklin, and W. S. LaHaye. (1995). Spotted owl (*Strix occidentalis*). *In* A. Poole and F. Gill, editors. The Birds of North America 179. Washington, D.C., USA.

Hunter, J. E., Fix, D., Schmidt, G. A., and Power, J. C. (2005). Atlas of the Breeding Birds of Humboldt County, California. Redwood Region Audubon Soc., Eureka, CA.

International Union for Conservation of Nature (IUCN). 2016. The IUCN Red List of Threatened Species. URL: http://www.iucnredlist.org/. [Accessed December 10, 2020].

Jackman, R. E. and J. M. Jenkins. 2004. Protocol for evaluating bald eagle populations and habitat in California. U. S. Fish and Wildlife Service, Endangered Species Branch, Sacramento CA.

LaHaye, W. S., and R. J. Gutierrez. 1999. Nest sites and nesting habitat of the northern spotted owl in northwestern California. Condor 101:324-330.

Mendocino Council of Governments. 2018. *2017 Mendocino County Regional Transportation Plan*. Final. Adopted February 2018. Prepared by Davey-Bates Consulting. Available: https://www.mendocinocog.org/2017-regional-transportationplan-adopted. Accessed: April 2021.

NCRWQCB 2018 (June). *Water Quality Control Plan for the North Coast Region (Basin Plan)*. https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/basin_plan_documents/

National Marine Fisheries Service [NMFS]. 2012. Final Recovery Plan for Central California Coast Coho Salmon Evolutionarily Significant Unit. National Marine Fisheries Service, Southwest Region, Santa Rosa, California.

_____. 2016. Coastal Multispecies Final Recovery Plan. National Marine Fisheries Service, West Coast Region, Santa Rosa, California.

Pacific Fishery Management Council [PFMC]. 2016. Appendix A to the Pacific Coast Salmon Fishery Management Plan, as modified by Amendment 18 to the *Pacific Coast Salmon Plan: Identification and description of essential fish habitat, adverse impacts, and recommended conservation measures for salmon*. Pacific Fishery Management Council, Portland, OR. September 2014. 196 p. + appendices.

Sawyer, J. O., T. Keeler-Wolf, and J. Evens. (2009). A Manual of California Vegetation. 2nd edition. Sacramento, CA: California Native Plant Society.

Scott, J. M., and D. S. Wilcove, 1998. Improving the Future for Endangered Species. Bioscience, 48, 579-580.

State of California. 2018. *California's Fourth Climate Change Assessment*. http://www.climateassessment.ca.gov/. Accessed: August 21, 2019.

Taylor, Daniel A. R. 2006. Forest Management and Bats. Bat Conservation International, National Fish and Wildlife Foundation, USDA Natural Resources Conservation Service.

U.S. Army Corps of Engineers [USACE]. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). Eds. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Transportation (U.S. DOT). 2011. *Policy Statement on Climate Change Adaptation*. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.

U.S. Environmental Protection Agency. 2021a. Fast Facts 1990-2019. EPA 430-F-21-011. April. https://www.epa.gov/sites/production/files/2021-04/documents/fastfacts-1990-2019.pdf.pdf. Accessed: April 28, 2021.

U.S. Environmental Protection Agency. 2021b. Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2019. EPA 430-R-21-005. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019. Accessed: May 5, 2021.

U.S. Environmental Protection Agency. 2021c. Sources of Greenhouse Gas Emissions. https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions. Accessed: May 5, 2021.

U.S. Fish and Wildlife Service [USFWS]. 1997. Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. Portland, Oregon. 203 pp.

_____. 2006. Transmittal of Guidance: Estimating the effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California. U.S. Fish and Wildlife Service District Office, Arcata, CA.

_____. 2011. Revised Recovery Plan for the Northern Spotted Owl, *Strix occidentalis caurina*. U.S. Fish and Wildlife Service District Office, Arcata. CA.

_____. 2018. Programmatic informal consultation for the California Department of Transportation's Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2. File No. AFWO-12B0001-12I0001. Arcata Fish and Wildlife Office.

U.S. Global Change Research Program (USGCRP). 2018. *Fourth National Climate Assessment*. https://nca2018.globalchange.gov/. Accessed: August 21, 2019.

Western Regional Climate Center [WRCC]. 2020. Western U.S. Climate Historical Summaries. Climatological Data Summaries: Period of Record Monthly Climate Summary (05/01/1895 to 06/09/2016). Wheeler, CA (049612). Available: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9612. Accessed: February 25, 2020.

Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White, eds. 1990. California's Wildlife. Vol. Ill. Mammals. Calif. Dep. Fish and Game, Sacramento. 407 pp.

PERSONAL COMMUNICATIONS

Sean Gallagher, Fisheries Biologist, California Department of Fish and Wildlife, Caltrans Biologist Lori McIntosh: technical assistance for Caltrans project "Pudding Creek Bridge Widening and Bridge Rail Upgrade Project", July 2016

Greg Schmidt, Wildlife Biologist, U. S. Fish and Wildlife Service, Caltrans Biologist Tracy Walker: Communication regarding *Martes caurina* presence in project BSA, December 2020

This page left intentionally blank.

Appendix A. Project Layouts

This page left intentionally blank.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	Route 1	85.0/89.0	1	5

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

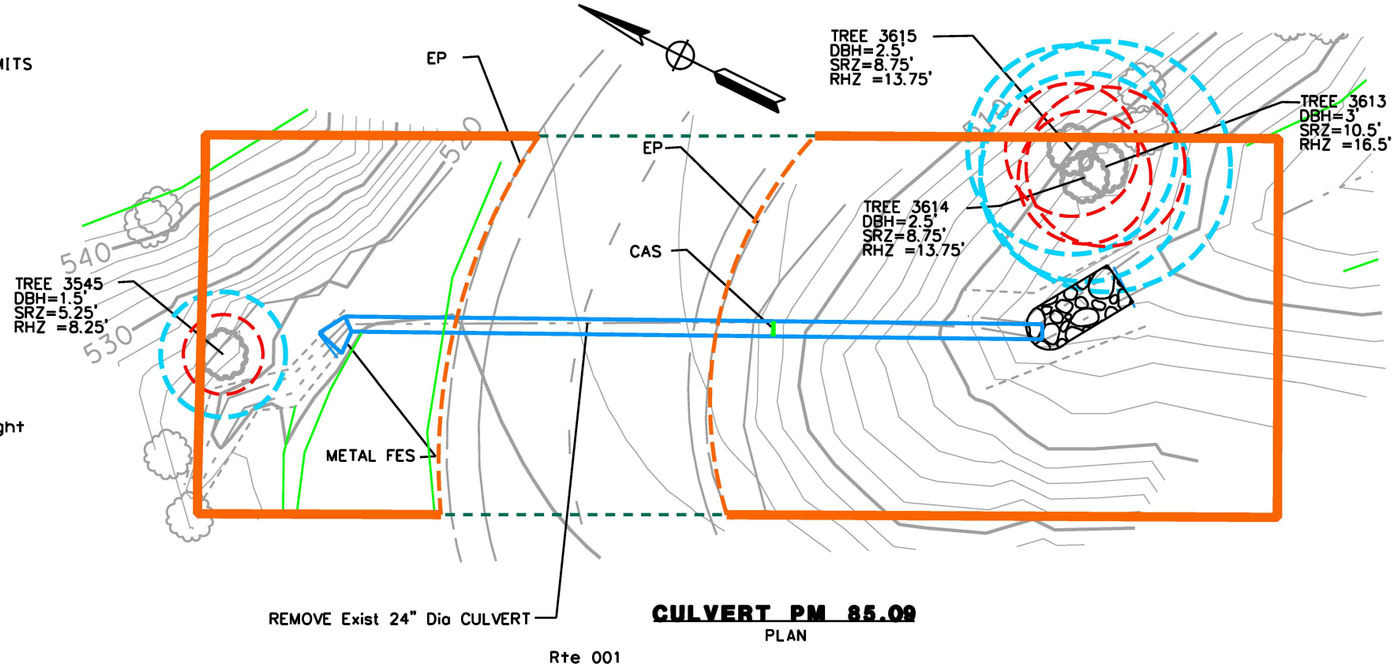
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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.

LEGEND:

- ENVIRONMENTAL STUDY LIMITS
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- MINOR Conc (PCC)
- GRAVEL BACKFILL
- SRZ = Structural Root Zone (can damage tree stability)
- RHZ = Root Health zone (can affect tree health)

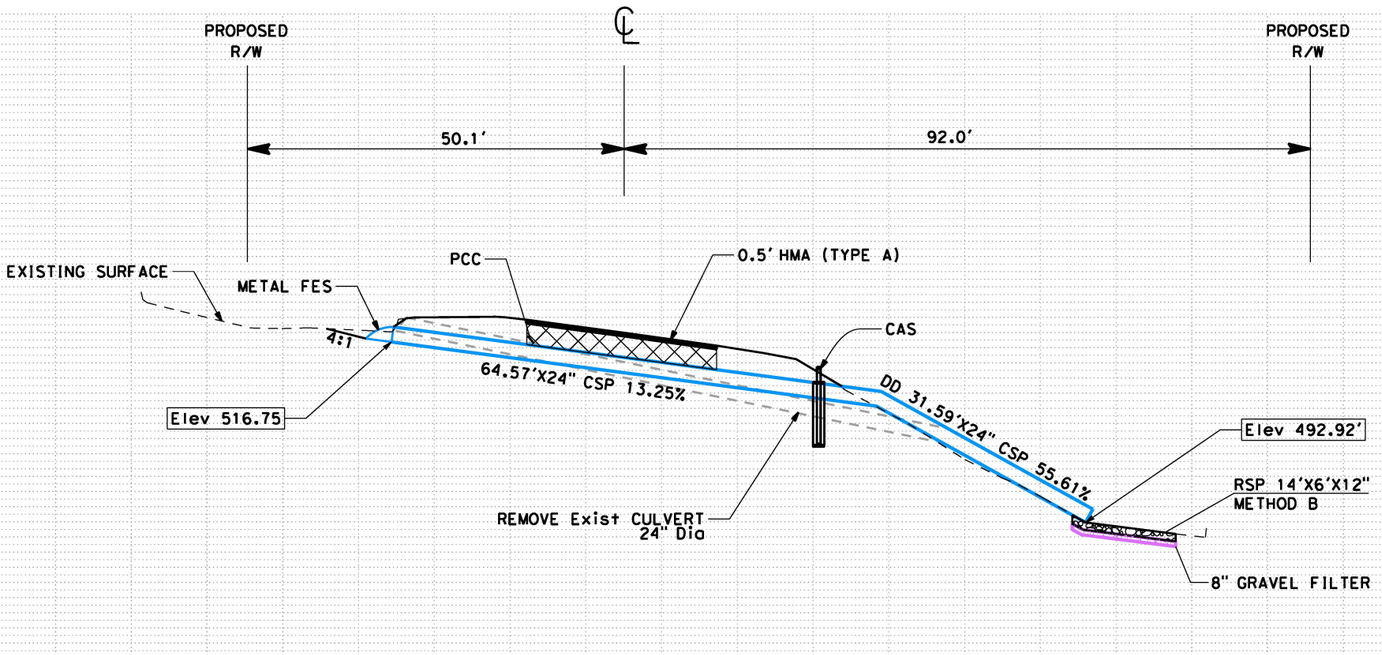
SRZ Radius = 3*(DBH) + DBH/2
RHZ Radius = 5*(DBH) + DBH/2
DBH = Diameter at Breast Height
CAS = CABLE ANCHORING SYSTEM
FES = FLARED END SECTION
RSP = ROCK SLOPE PROTECTION
EP = EDGE OF PAVEMENT



CULVERT PM 85.09

PLAN

Rte 001



CULVERT PM 85.09

PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

D-1

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 9/17/2021 | TIME PLOTTED => 11:17:41 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Sheets\0149620ea01.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

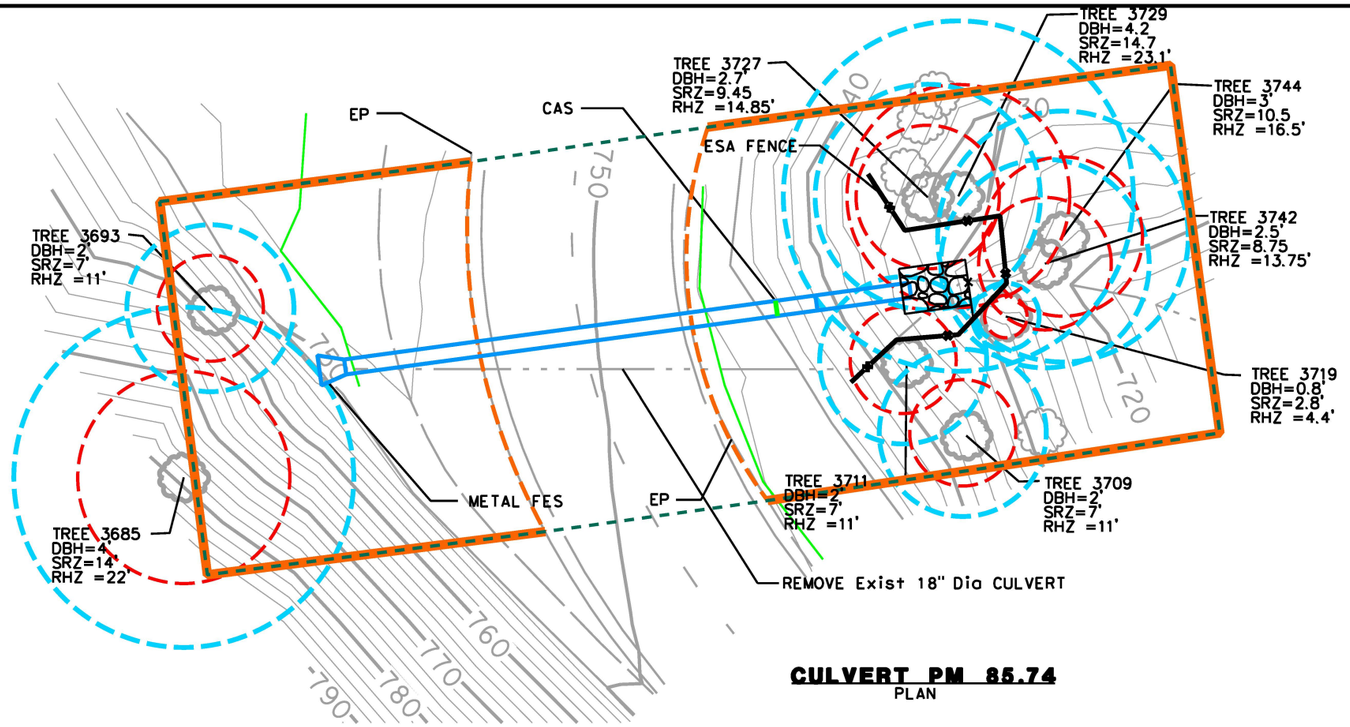
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	Route 1	85.0/89.0	2	5

REGISTERED CIVIL ENGINEER DATE

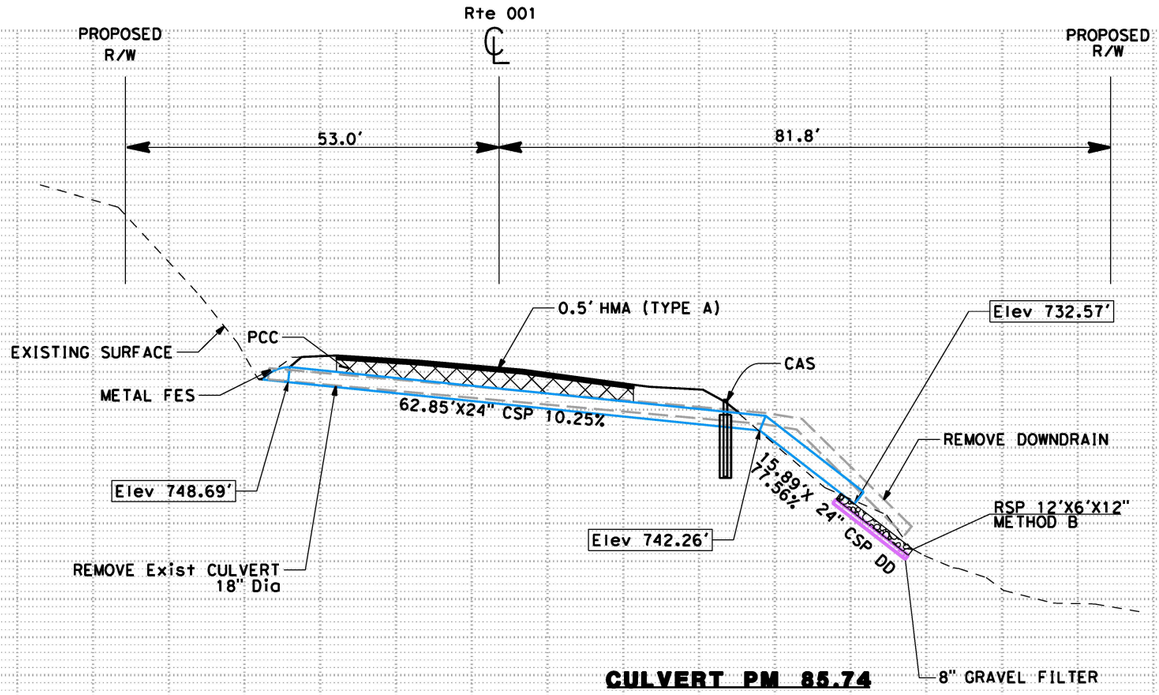
PLANS APPROVAL DATE

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.



CULVERT PM 85.74
PLAN



CULVERT PM 85.74

PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

D-2

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 9/17/2021 | TIME PLOTTED => 11:21:11 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Sheets\0149620ea02.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	Route 1	85.0/89.0	3	5

DESIGN STUDY

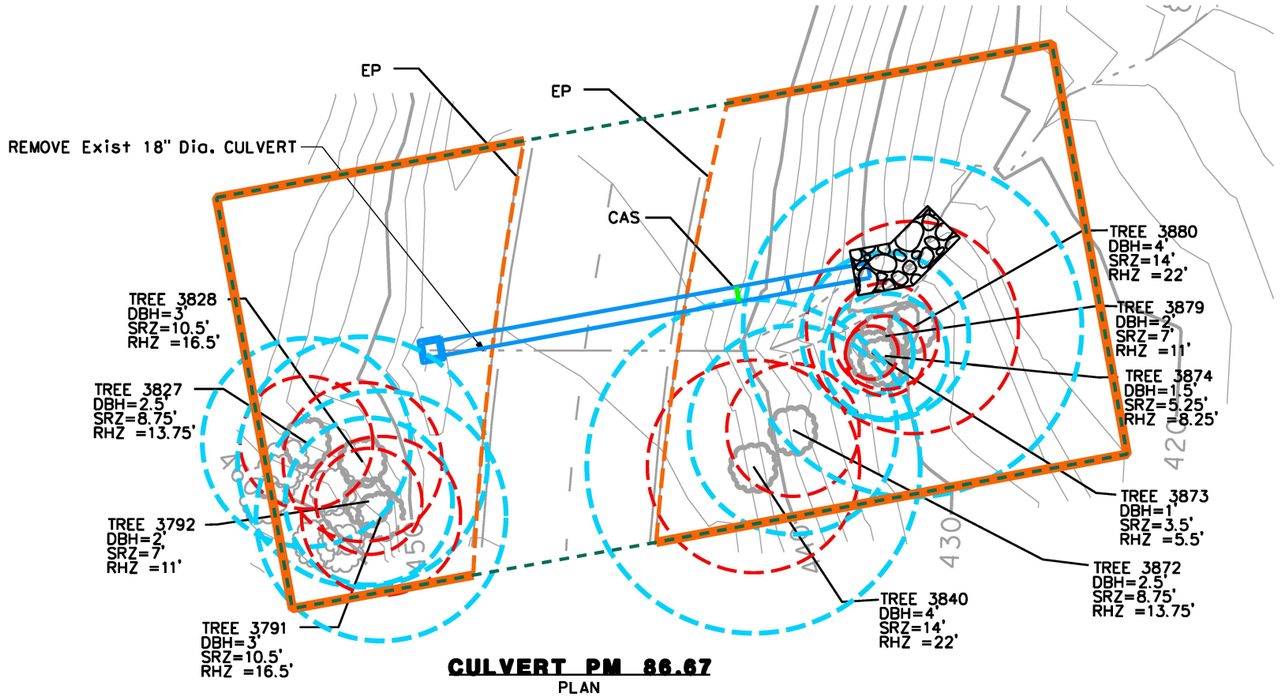
REGISTERED CIVIL ENGINEER DATE

ONLY

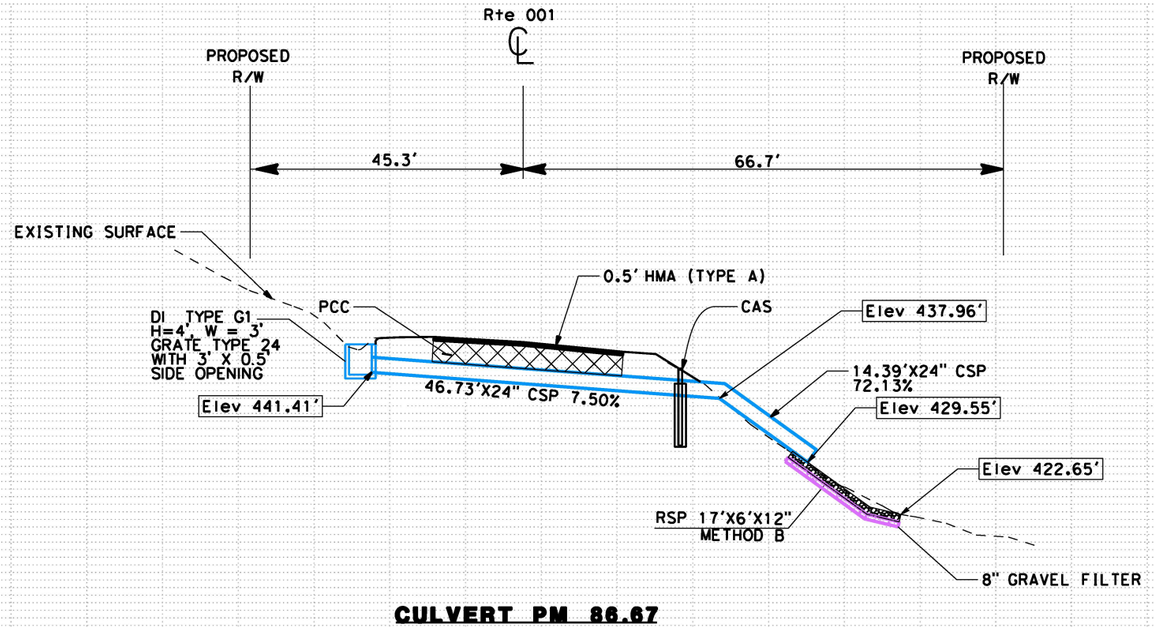
PLANS APPROVAL DATE

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.



CULVERT PM 86.67
PLAN



CULVERT PM 86.67

PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

D-3

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 9/17/2021 | TIME PLOTTED => 11:22:55 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Sheets\0149620ea03.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0350 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	Route 1	85.0/89.0	4	5

DESIGN STUDY

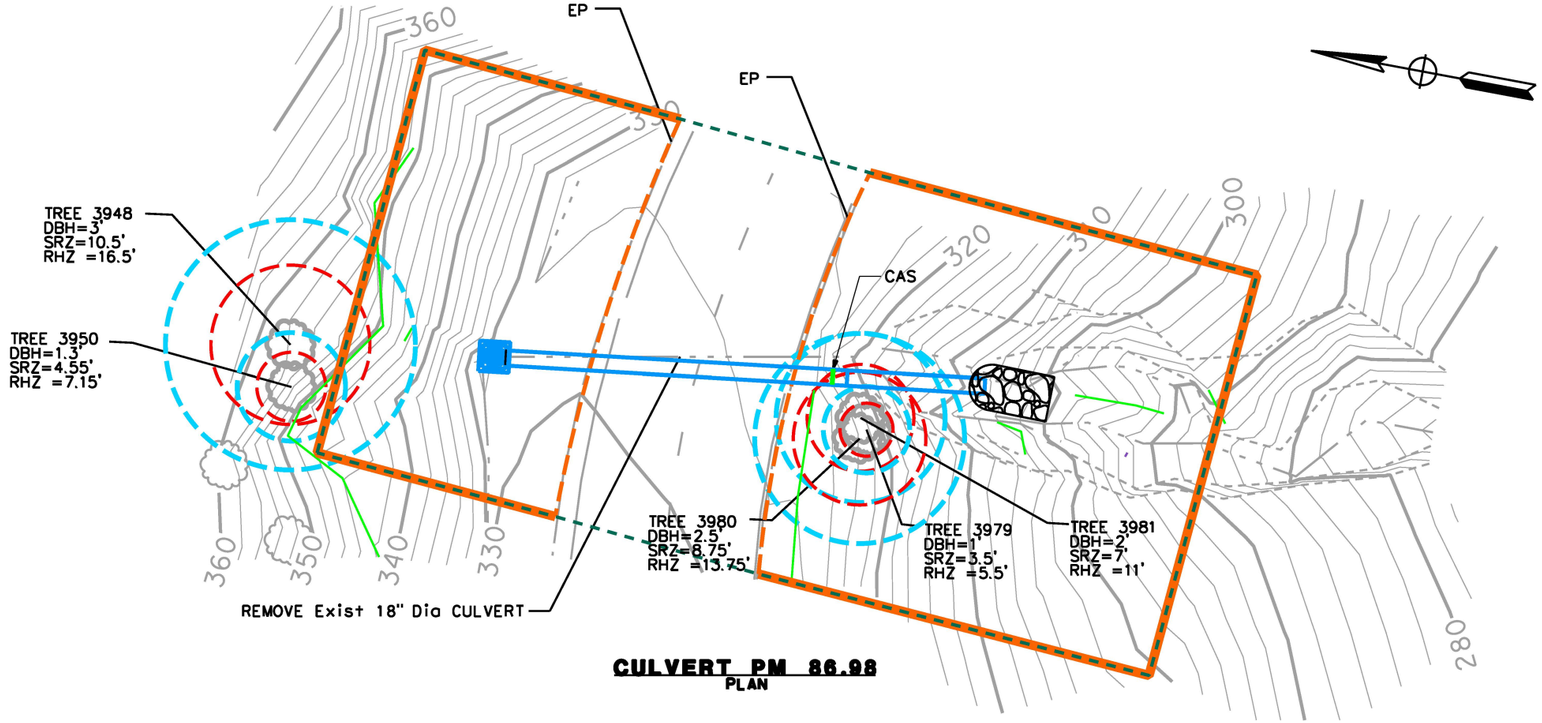
REGISTERED CIVIL ENGINEER DATE

ONLY

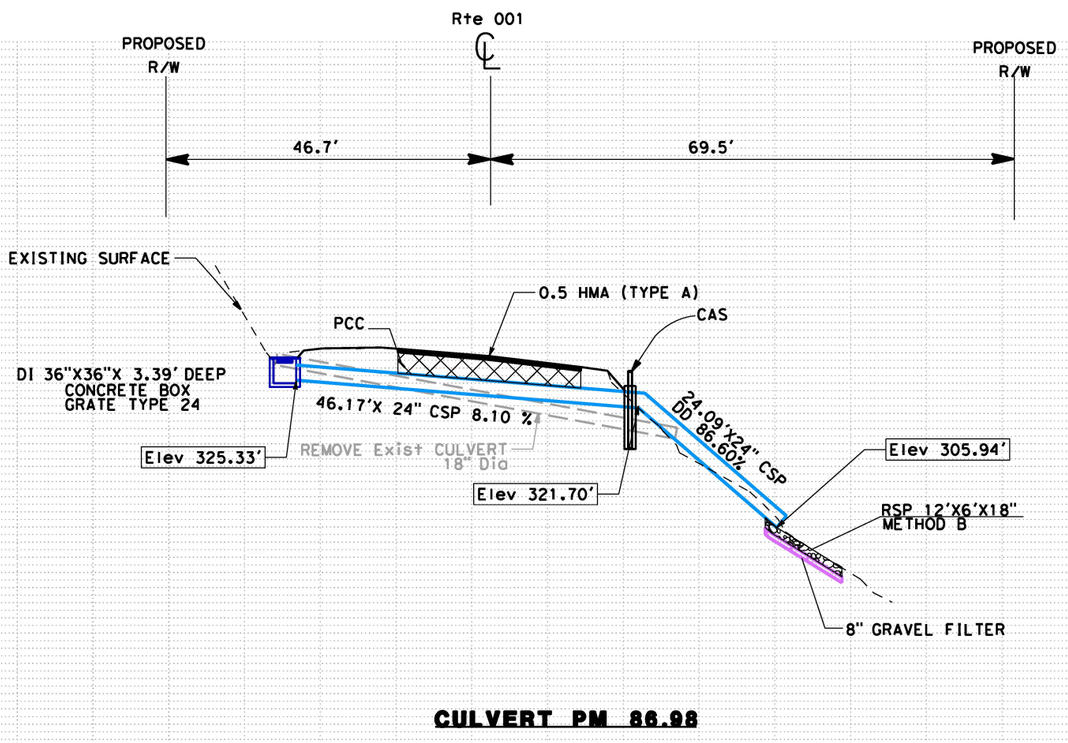
PLANS APPROVAL DATE

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.



CULVERT PM 86.98
PLAN



CULVERT PM 86.98

PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

D-4

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 9/17/2021 | TIME PLOTTED => 11:24:00 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Sheets\0149620ea04.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	Route 1	85.0/89.0	5	5

DESIGN STUDY

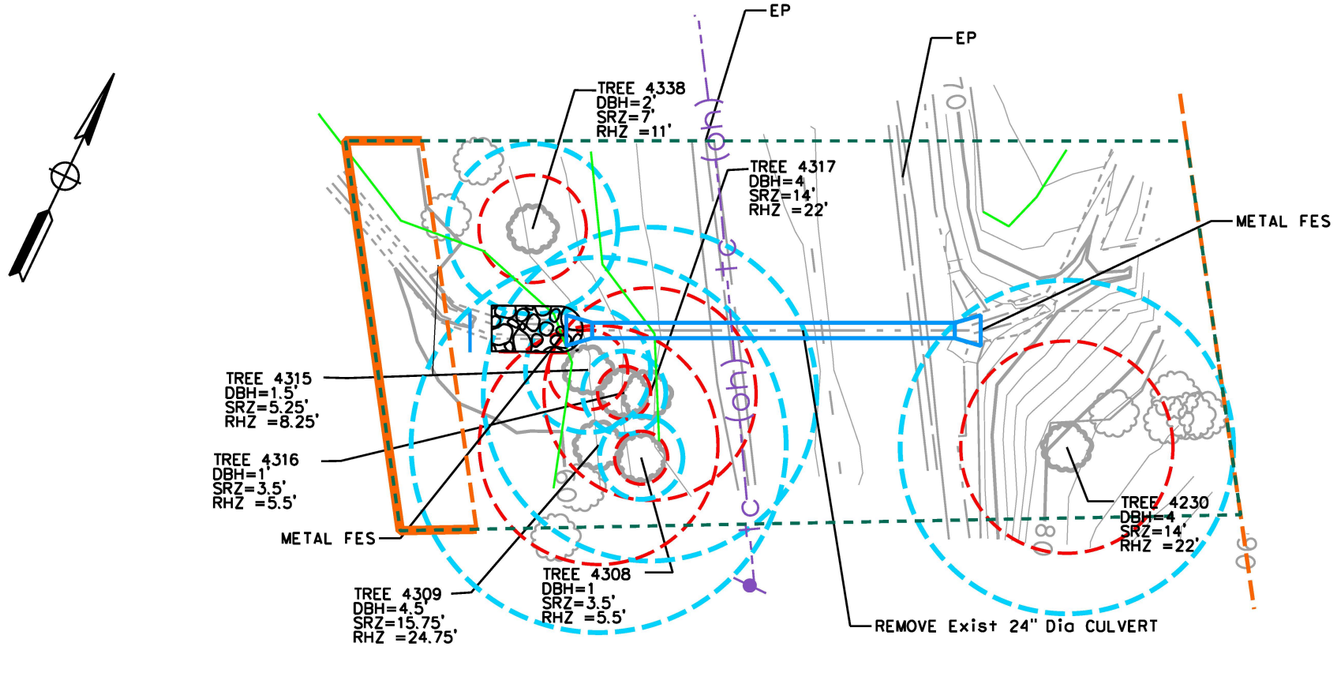
REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

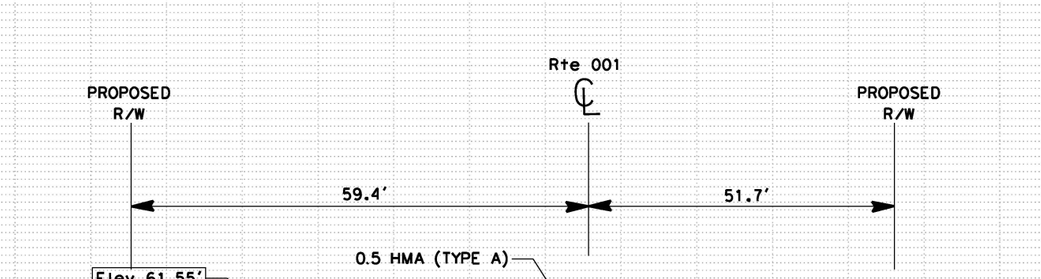
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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.



CULVERT PM 88.95

PLAN



CULVERT PM 88.95

PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

D-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 9/17/2021

TIME PLOTTED => 11:24:52 AM

BORDER LAST REVISED 7/2/2010

USERNAME =>

DGN FILE => ...\Sheets\0149620ea05.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Appendix B. Title VI Policy Statement

This page left intentionally blank.

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, CNPS, Species Lists

This page left intentionally blank

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:
Project Code: 2022-0007242
Project Name: Rockport Culverts

February 14, 2022

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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 Code 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
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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

Project Code: 2022-0007242
Event Code: None
Project Name: Rockport Culverts
Project Type: Drainage Project
Project Description: Culvert repair and replacement along Hwy 1 from PM 84.30 north to PM 88.95
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.73572705435871,-123.81284744338078,14z

Counties: Mendocino County, California

Endangered Species Act Species

There is a total of 13 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

Mammals

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* 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/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) 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/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

Flowering Plants

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

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Black Oystercatcher *Haematopus bachmani* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31

NAME	BREEDING SEASON
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Turnstone *Arenaria melanocephala* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

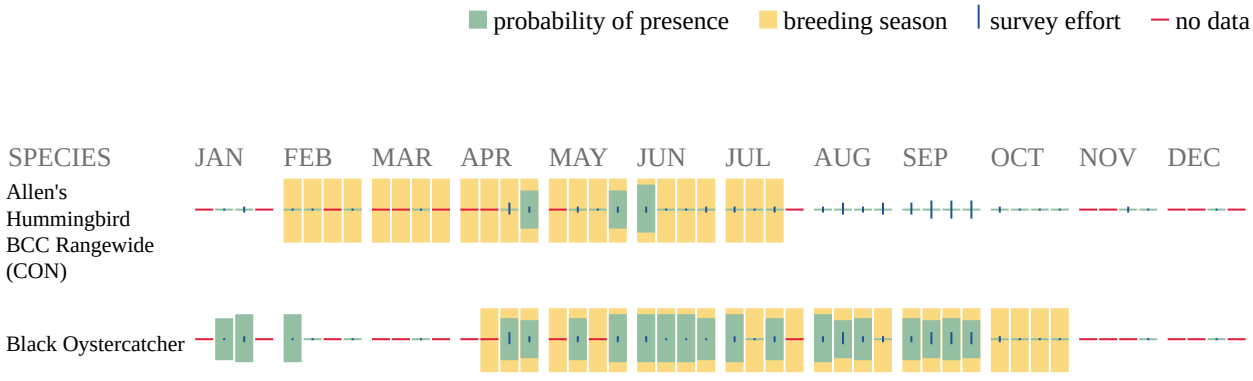
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

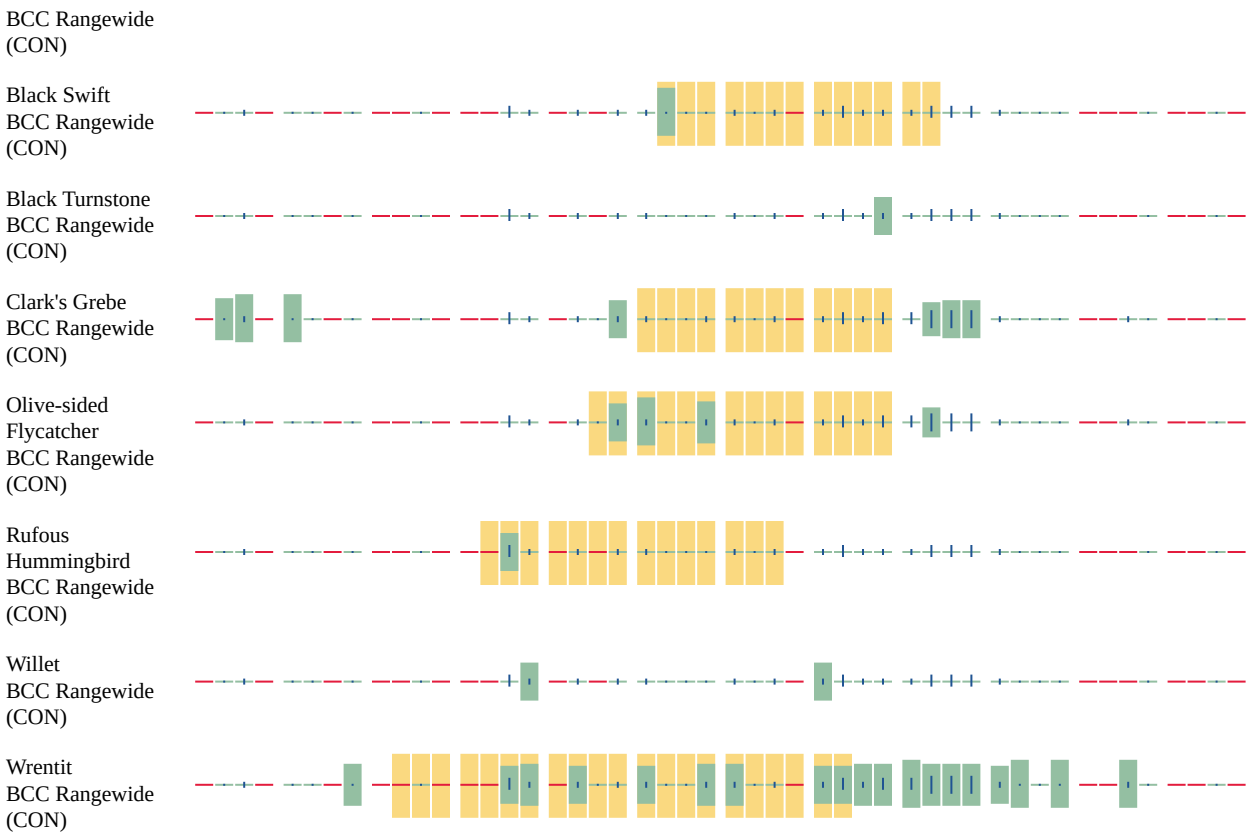
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits

may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities,

should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A
- PFO1C

RIVERINE

- R3UBH
- R4SBC

IPaC User Contact Information

Name: Tracy Walker
Address: 1656 Union St
City: Eureka
State: CA
Zip: 95001
Email tracy.walker@dot.ca.gov
Phone: 7074456432

Quad Name **Westport**
Quad Number **39123-F7**

ESA Anadromous Fish

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

Quad Name **Hales Grove**
Quad Number **39123-G7**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
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 - **X**
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 (Piercy (3912387) OR Inglenook (3912357) OR Westport (3912367) OR Dutchmans Knoll (3912356) OR Lincoln Ridge (3912366) OR Bear Harbor (3912388) OR Hales Grove (3912377) OR Leggett (3912376) OR Noble Butte (3912386))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
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 catchfly *Silene bolanderi*	PDCAR0U2L0	None	None	G2	S2	1B.2
California floater *Anodonta californiensis*	IMBIV04220	None	None	G3Q	S2?	
coast fawn lily *Erythronium revolutum*	PMLIL0U0F0	None	None	G4G5	S3	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 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	
coho salmon - southern Oregon / northern California ESU *Oncorhynchus kisutch pop. 2*	AFCHA02032	Threatened	Threatened	G5T2Q	S2	
Cooper's hawk *Accipiter cooperii*	ABNKC12040	None	None	G5	S4	WL
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	None	G3G4	S1S2	
dark-eyed gilia *Gilia millefoliata*	PDPLM04130	None	None	G2	S2	1B.2
deceiving sedge *Carex saliniformis*	PMCYP03BY0	None	None	G2	S2	1B.2
Fen *Fen*	CTT51200CA	None	None	G2	S1.2	
Fisher *Pekania pennanti*	AMAJF01020	None	None	G5	S2S3	SSC

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
fringed myotis *Myotis thysanodes*	AMACC01090	None	None	G4	S3	
globose dune beetle *Coelus globosus*	IICOL4A010	None	None	G1G2	S1S2	
Grand Fir Forest *Grand Fir Forest*	CTT82120CA	None	None	G1	S1.1	
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
green yellow sedge *Carex viridula ssp. viridula*	PMCYP03EM5	None	None	G5T5	S2	2B.3
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G3G4	S4	
Howell's spineflower *Chorizanthe howellii*	PDPGN040C0	Endangered	Threatened	G1	S1	1B.2
Humboldt County milk-vetch *Astragalus agnicidus*	PDFAB0F080	None	Endangered	G2	S2	1B.1
Kellogg's buckwheat *Eriogonum kelloggii*	PDPGN083A0	None	Endangered	G2	S2	1B.2
leafy reed grass *Calamagrostis foliosa*	PMPOA170C0	None	Rare	G3	S3	4.2
leafy-stemmed mitrewort *Mitellastra caulescens*	PDSAX0N020	None	None	G5	S4	4.2
Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0	None	None	G5	S3	2B.2
maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0	None	None	G3	S3	4.2
McDonald's rockcress *Arabis mcdonaldiana*	PDBRA06150	Endangered	Endangered	G3	S3	1B.1
Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0	None	None	G2	S2	1B.2
Mendocino gentian *Gentiana setigera*	PDGEN060S0	None	None	G2	S2	1B.2
Menzies' wallflower *Erysimum menziesii*	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
Methuselah's beard lichen *Usnea longissima*	NLLEC5P420	None	None	G4	S4	4.2
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
North Central Coast Fall-Run Steelhead Stream *North Central Coast Fall-Run Steelhead Stream*	CARA2631CA	None	None	GNR	SNR	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
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 Interior Cypress Forest *Northern Interior Cypress Forest*	CTT83220CA	None	None	G2	S2.2	
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
oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080	None	None	G4G5	S3?	2B.3
Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6	None	None	G5T3	S2	1B.2
Pacific lamprey *Entosphenus tridentatus*	AFBAA02100	None	None	G4	S3	SSC
Pacific tailed frog *Ascaphus truei*	AAABA01010	None	None	G4	S3S4	SSC
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	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 horkelia *Horkelia marinensis*	PDROS0W0B0	None	None	G2	S2	1B.2
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
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	PDERI041G2	None	None	G3T2	S2	1B.1
Red Mountain catchfly *Silene greenei ssp. angustifolia*	PDCAR0U0A2	None	Endangered	G5T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Red Mountain stonecrop *Sedum eastwoodiae*	PDCRA0A0L1	None	None	G5T2	S2	1B.2
red-bellied newt *Taricha rivularis*	AAAAF02020	None	None	G2	S2	SSC
robust false lupine *Thermopsis robusta*	PDFAB3Z0D0	None	None	G2	S2	1B.2
round-headed Chinese-houses *Collinsia corymbosa*	PDSCR0H060	None	None	G1	S1	1B.2
seaside bittercress *Cardamine angulata*	PDBRA0K010	None	None	G4G5	S3	2B.1
short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011	None	None	G4T3	S3	1B.2
Sonoma tree vole *Arborimus pomo*	AMAFF23030	None	None	G3	S3	SSC
southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020	None	None	G3G4	S2S3	SSC
steelhead - northern California DPS *Oncorhynchus mykiss irideus pop. 16*	AFCHA0209Q	Threatened	None	G5T2T3Q	S2S3	
Steller sea lion *Eumetopias jubatus*	AMAJC03010	Delisted	None	G3	S2	
summer-run steelhead trout *Oncorhynchus mykiss irideus pop. 36*	AFCHA0213B	None	Candidate Endangered	G5T4Q	S2	SSC
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	
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
Upland Douglas Fir Forest *Upland Douglas Fir Forest*	CTT82420CA	None	None	G4	S3.1	
Vine Hill ceanothus *Ceanothus foliosus var. vineatus*	PDRHA040D6	None	None	G3T1	S1	1B.1
western bumble bee *Bombus occidentalis*	IIHYM24250	None	None	G2G3	S1	
western pearlshell *Margaritifera falcata*	IMBIV27020	None	None	G4G5	S1S2	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
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
Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	PDONA05025	None	None	G5T1	S1	1B.1
Wolf's evening-primrose *Oenothera wolfii*	PDONA0C1K0	None	None	G2	S1	1B.1
Yuma myotis *Myotis yumanensis*	AMACC01020	None	None	G5	S4	

Record Count: 87

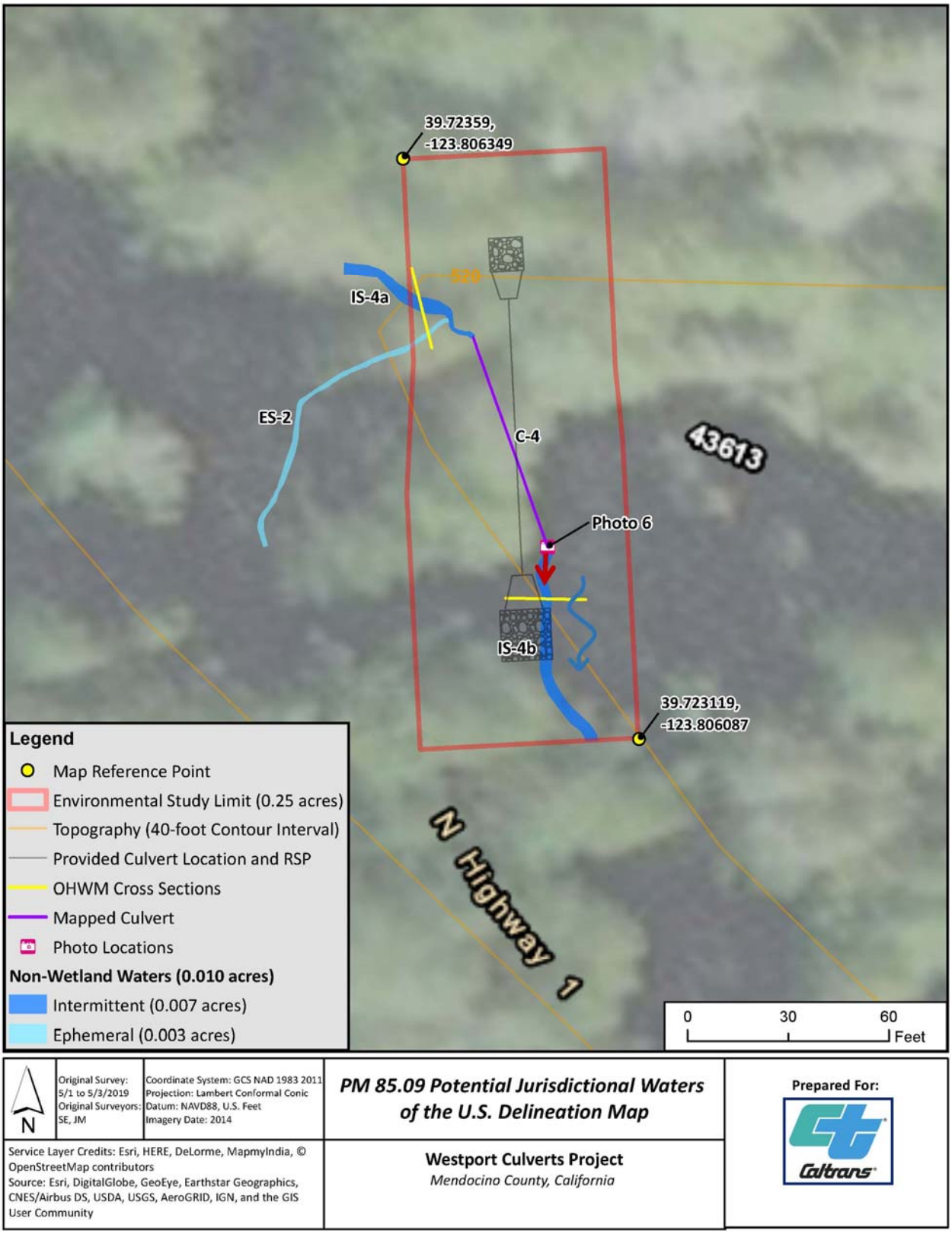
California Native Plant Society Rare Plant Inventory Project Query Results

ScientificName	CommonName	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	BloomingPeriod
Campanula californica	swamp harebell	Campanulaceae	perennial rhizomatous herb	1B.2	G3	S3	None	None	Jun-Oct
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	1B.1	G2	S2	CE	None	Apr-Sep
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	perennial herb	4.3	G4T4	S4	None	None	Apr-Jul
Calamagrostis bolanderi	Bolander's reed grass	Poaceae	perennial rhizomatous herb	4.2	G4	S4	None	None	May-Aug
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	2B.1	G3Q	S2	None	None	May-Aug
Calamagrostis foliosa	leafy reed grass	Poaceae	perennial herb	4.2	G3	S3	CR	None	May-Sep
Castilleja latifolia	Monterey Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	4.3	G4	S4	None	None	Feb-Sep
Castilleja mendocinensis	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	1B.2	G2	S2	None	None	Apr-Aug
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	G3T1	S1	None	None	Mar-May
Chorizanthe howellii	Howell's spineflower	Polygonaceae	annual herb	1B.2	G1	S1	CT	FE	May-Jul
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	Onagraceae	annual herb	1B.1	G5T1	S1	None	None	Jun-Aug
Epilobium septentrionale	Humboldt County fuchsia	Onagraceae	perennial herb	4.3	G4	S4	None	None	Jul-Sep
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	G3	S3	None	None	(Mar)May-Sep
Eriogonum kelloggii	Kellogg's buckwheat	Polygonaceae	perennial herb	1B.2	G2	S2	CE	None	(May)Jun-Aug
Horkelia marinensis	Point Reyes horkelia	Rosaceae	perennial herb	1B.2	G2	S2	None	None	May-Sep
Lathyrus glandulosus	sticky pea	Fabaceae	perennial rhizomatous herb	4.3	G3	S3	None	None	Apr-Jun
Lilium maritimum	coast lily	Liliaceae	perennial bulbiferous herb	1B.1	G2	S2	None	None	May-Aug
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	G3	S3	None	None	Apr-Aug(Sep)
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	4.2	G5	S4	None	None	Feb-Jul
Silene greenei ssp. angustifolia	Red Mountain catchfly	Caryophyllaceae	perennial herb	1B.2	G5T1	S1	CE	None	May-Jun
Oenothera wolfii	Wolf's evening-primrose	Onagraceae	perennial herb	1B.1	G2	S1	None	None	May-Oct
Angelica lucida	sea-watch	Apiaceae	perennial herb	4.2	G5	S3	None	None	Apr-Sep
Lasthenia californica ssp. bakeri	Baker's goldfields	Asteraceae	perennial herb	1B.2	G3T1	S1	None	None	Apr-Oct
Lasthenia californica ssp. macrantha	perennial goldfields	Asteraceae	perennial herb	1B.2	G3T2	S2	None	None	Jan-Nov
Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	annual herb	4.3	G4	S4	None	None	Apr-Jun
Thermopsis robusta	robust false lupine	Fabaceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	May-Jul
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	2B.2	G4G5	S3	None	None	Mar-Jul(Aug)
Phacelia insularis var. continentis	North Coast phacelia	Hydrophyllaceae	annual herb	1B.2	G2T2	S2	None	None	Mar-May
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	4.2	G4G5	S4	None	None	(Mar-Apr)May-Aug
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	4.2	G4	S4	None	None	(Mar)Apr-Aug
Rhynchospora alba	white beaked-rush	Cyperaceae	perennial rhizomatous herb	2B.2	G5	S2	None	None	Jun-Aug
Rhynchospora globularis	round-headed beaked-rush	Cyperaceae	perennial rhizomatous herb	2B.1	G4	S1	None	None	Jul-Aug
Veratrum fimbriatum	fringed false-hellebore	Melanthiaceae	perennial herb	4.3	G3	S3	None	None	Jul-Sep
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	1B.2	G1	S1	None	None	Apr-Jun
Erigeron biolettii	streamside daisy	Asteraceae	perennial herb	3	G3?	S3?	None	None	Jun-Oct
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Asteraceae	annual herb	1B.2	G4T3	S3	None	None	Mar-Jun
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	4.2	G3	S3	None	None	(Mar)Apr-Aug
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	2B.2	G5	S3	None	None	Apr-Aug
Carex saliniformis	deceiving sedge	Cyperaceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	Jun(Jul)
Carex viridula ssp. viridula	green yellow sedge	Cyperaceae	perennial herb	2B.3	G5T5	S2	None	None	(Jun)Jul-Sep(Nov)
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	2B.2	G3	S3	None	None	Jun
Ceanothus gloriosus var. exaltatus	glory brush	Rhamnaceae	perennial evergreen shrub	4.3	G4T4	S4	None	None	Mar-Jun(Aug)
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	annual herb	1B.2	G5T3	S2	None	None	Apr-Aug
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	1B.2	G2	S2	None	None	Apr-Jul
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	4.2	G5	S4	None	None	(Mar)Apr-Oct
Sidalcea malviflora ssp. purpurea	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	G5T1	S1	None	None	May-Jun
Hemizonia congesta ssp. tracyi	Tracy's tarplant	Asteraceae	annual herb	4.3	G5T4	S4	None	None	(Mar)May-Oct
Agrostis blasdalei	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	May-Jul
Abronia umbellata var. breviflora	pink sand-verbena	Nyctaginaceae	perennial herb	1B.1	G4G5T2	S2	None	None	Jun-Oct
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Ericaceae	perennial evergreen shrub	1B.1	G3T2	S2	None	None	Feb-Apr

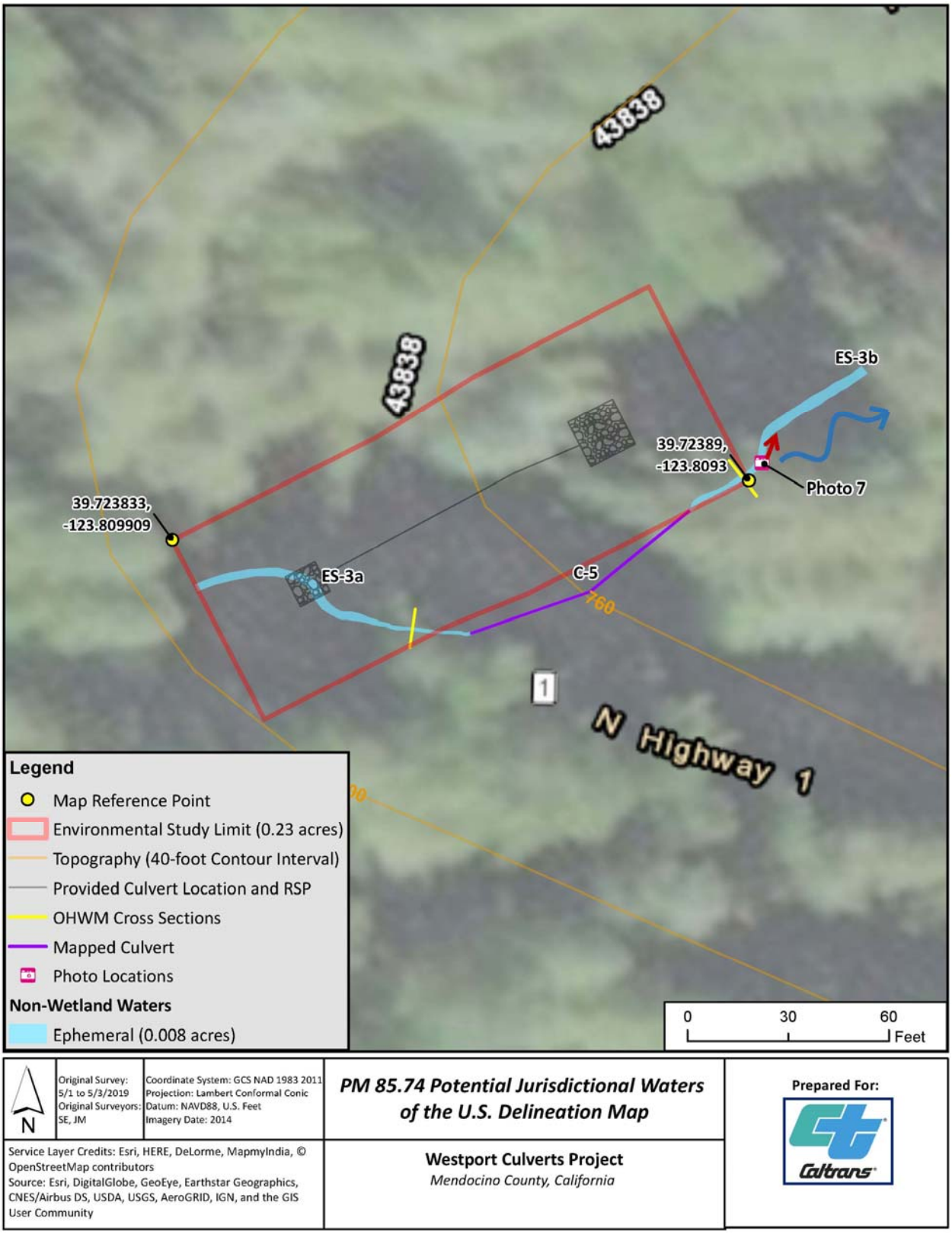
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	G4G5	S3?	None	None	May-Jun
Triquetrella californica	coastal triquetrella	Pottiaceae	moss	1B.2	G2	S2	None	None	Not available
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	4.2	G3G4	S3	None	None	Mar-Jul
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	4.2	G3	S3	None	None	Mar-May(Jun)
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	4.2	G4?	S3?	None	None	(Feb)Mar-May(Sep-Nov)
Cuscuta pacifica var. papillata	Mendocino dodder	Convolvulaceae	annual vine (parasitic)	1B.2	G5T1	S1	None	None	(Jun)Jul-Oct
Erysimum menziesii	Menzies' wallflower	Brassicaceae	perennial herb	1B.1	G1	S1	CE	FE	Mar-Sep
Erysimum concinnum	bluff wallflower	Brassicaceae	annual/perennial herb	1B.2	G3	S2	None	None	Feb-Jul
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	4.2	G4	S4	None	None	Not available
Micranthes marshallii	Marshall's saxifrage	Saxifragaceae	perennial rhizomatous herb	4.3	G5	S3	None	None	Mar-Aug
Silene bolanderi	Bolander's catchfly	Caryophyllaceae	perennial herb	1B.2	G2	S2	None	None	May-Jun

Appendix D. Aquatic Resources Delineation Maps

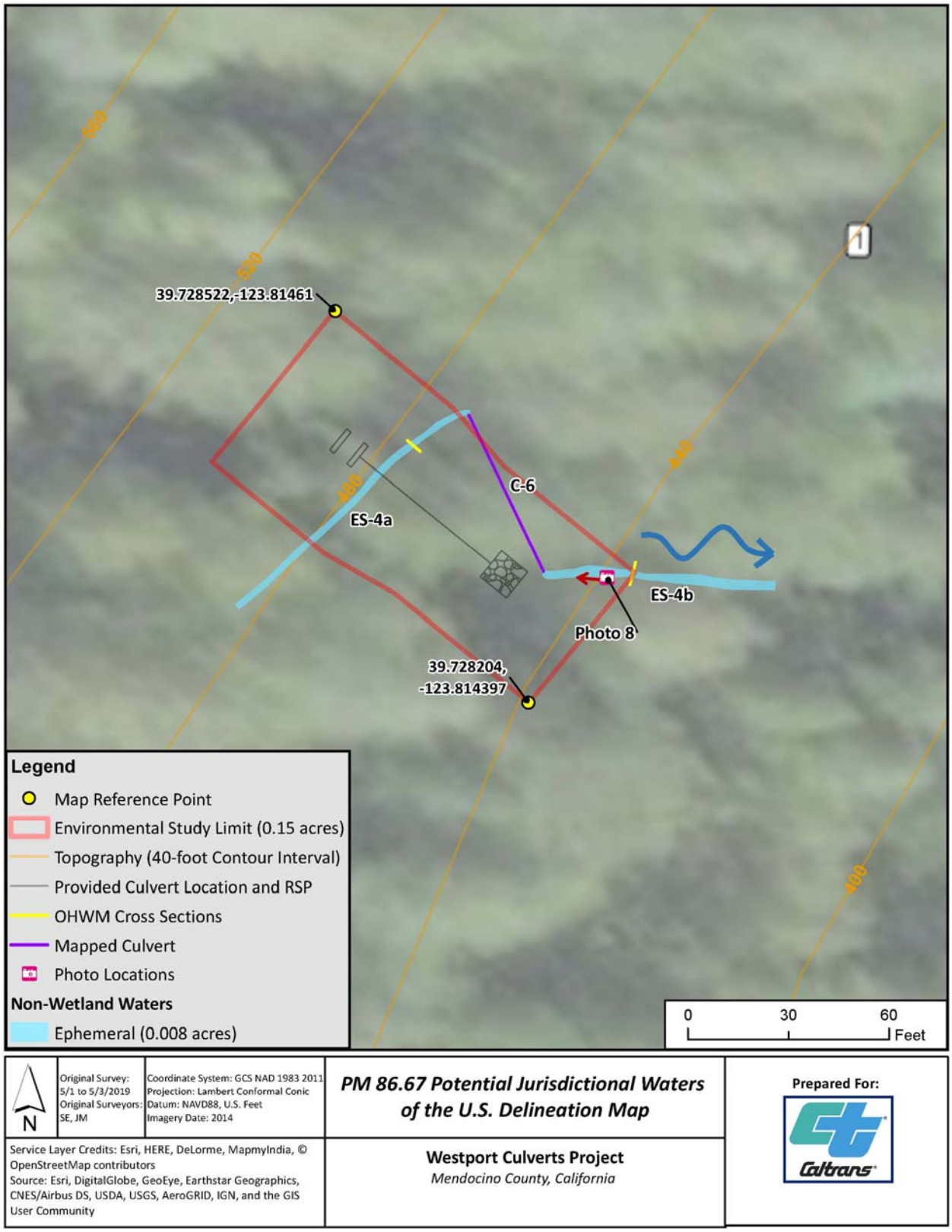
This page left intentionally blank.



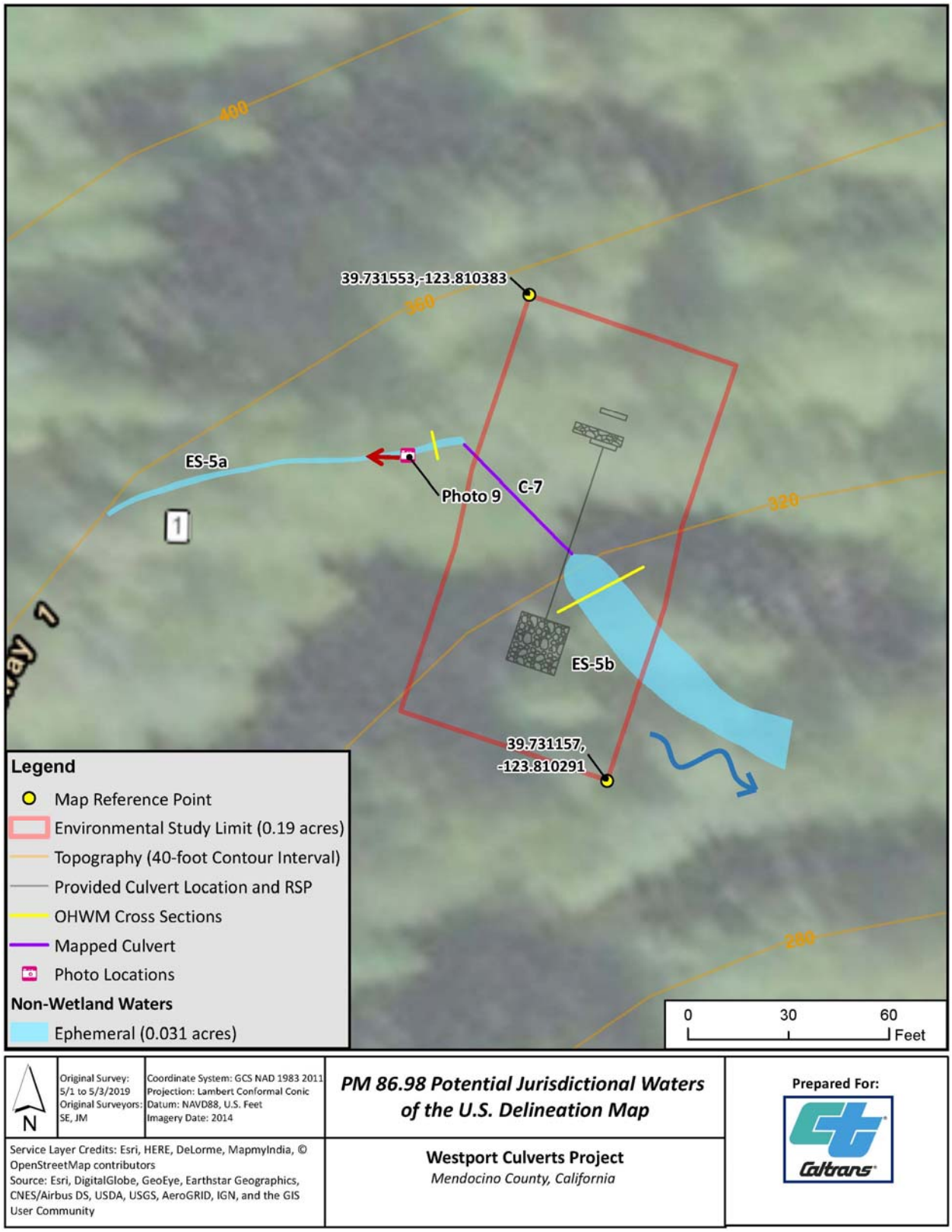
PM 85.09 Potential Jurisdictional Waters of the U.S. Delineation Map



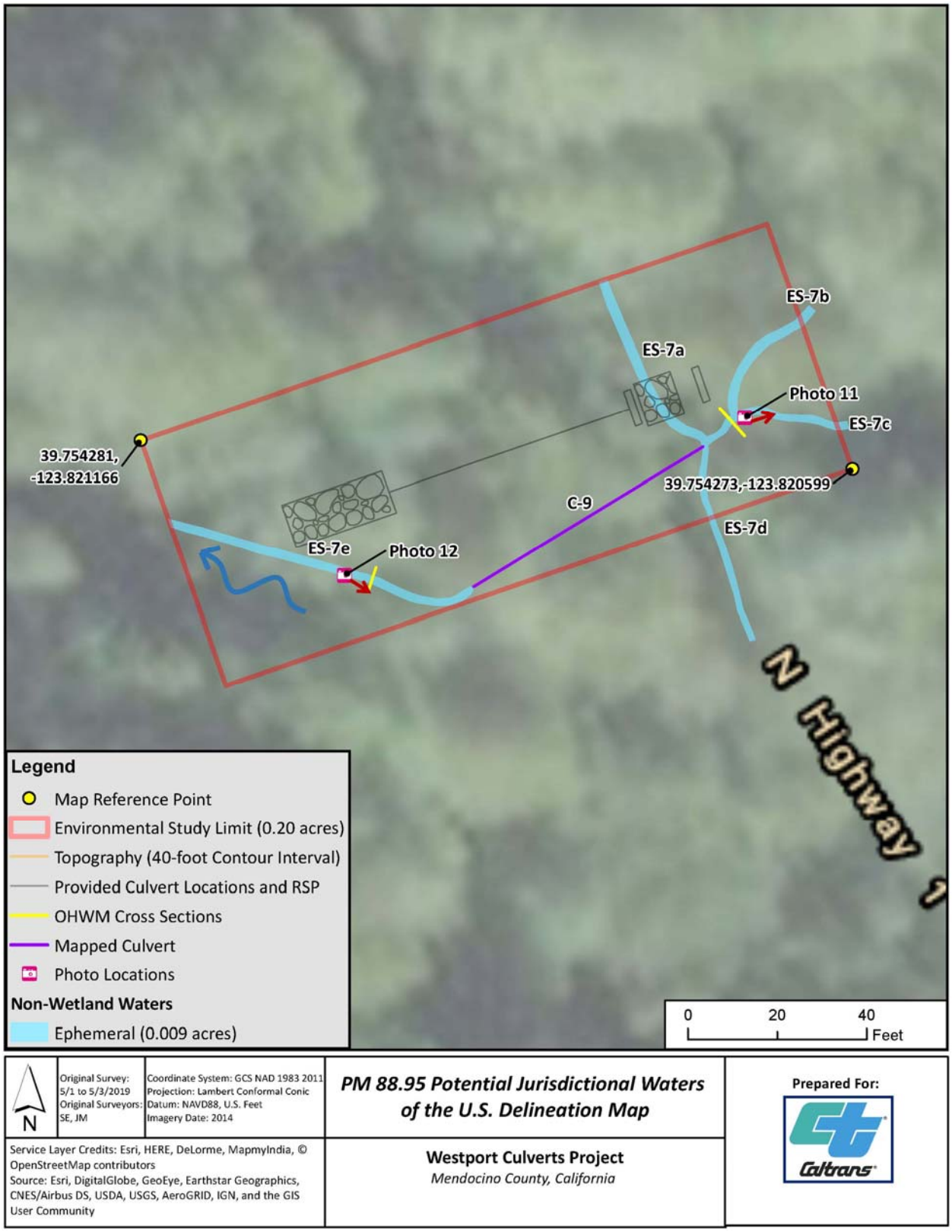
PM 85.74 Potential Jurisdictional Waters of the U.S. Delineation Map



PM 86.67 Potential Jurisdictional Waters of the U.S. Delineation Map



PM 86.98 Potential Jurisdictional Waters of the U.S. Delineation Map



PM 88.95 Potential Jurisdictional Waters of the U.S. Delineation Map

Appendix E. List of Plant Species Observed in the ESL

This page left intentionally blank.

Scientific Name	Common Name	Native	Conservation Status	Cal-IPC Rating	PM Location(s) Observed
Achlys triphylla	Vanilla leaf	Yes	None	None	85.74
Actaea rubra	Baneberry	Yes	None	None	88.95
Adenocaulon bicolor	American trailplant	Yes	None	None	88.95
Adiantum aleuticum	five finger fern	Yes	None	None	85.09, 86.67, 86.98, 88.95
Anthemis cotula	dog fennel	No	None	None	86.98, 88.95
Anthoxanthum occidentale	California sweet grass	Yes	None	None	85.74, 86.67, 87.62
Aquilegia sp.	Columbine	Yes	None	None	88.95
Asarum caudatum	creeping wild ginger	Yes	None	None	85.09, 85.74, 88.95
Athyrium filix-femina var. cyclosorum	western lady fern	Yes	None	None	85.09, 85.74, 86.98, 88.95
Blechnum spicant	Deer fern	Yes	None	None	85.09
Briza maxima	Rattlesnake grass	No	None	Limited	85.74
Cardamine californica	bitter cress	Yes	None	None	85.09, 85.74, 86.67, 86.98
Cardamine pachystigma	Rock toothwort	Yes	None	None	85.09, 85.74, 86.67, 88.95
Carduus pycnocephalus	Italian thistle	No	None	Moderate	86.98
Carex gynodynama	Olney's hary sedge	Yes	None	None	85.09, 85.74, 86.98
Ceanothus sp.	Ceanothus	Yes	None	None	86.98
Claytonia parviflora	Miner's lettuce	Yes	None	None	86.67, 86.98, 88.95
Claytonia sibirica	candy flower	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Clintonia andrewsiana	Red clintonia	Yes	None	None	86.67
Corylus cornuta	Beaked hazelnut	Yes	None	None	85.74, 86.67
Cyperus eragrostis	tall cyperus	Yes	None	None	85.09
Darmera peltata	Indian rhubarb	Yes	None	None	85.74
Digitalis purpurea	foxglove	No	None	Limited	85.09, 85.74, 86.67
Eleocharis sp.	spikerush	Yes	None	None	85.09
Epilobium sp.	Willow herb	Yes	None	None	88.95

Scientific Name	Common Name	Native	Conservation Status	Cal-IPC Rating	PM Location(s) Observed
Equisetum telmateia	Giant horsetail rush	Yes	None	None	85.09, 85.74, 86.98, 88.95
Festuca arundinacea	Reed fescue	No	None	Moderate	85.74, 86.67, 88.95
Festuca sp.	Fescue				85.74
Fragaria vesca	wild strawberry	Yes	None	None	85.09, 85.74, 86.67, 86.98
Galium aparine	Common bedstraw	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Garrya sp.	Silk tassel	Yes	None	None	86.98
Gaultheria shallon	salal	Yes	None	None	85.09, 86.98
Geranium dissectum	wild geranium	No	None	Limited	86.98
Geranium molle	Crane's bill geranium	No	None	None	85.74
Hedera helix	English ivy	No	None	High	88.95
Heracleum maximum	Common cowparsnip	Yes	None	None	85.09
Hypochaeirs radicata	Hairy cats ear	No	None	Moderate	85.74
Iris douglasiana	Douglas iris	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Juncus patens	common rush	Yes	None	None	85.09, 85.74
Juncus sp.	Rush	Yes	None	None	86.67
Lonicera hispidula	Pink honeysuckle	Yes	None	None	86.67, 86.98
Lysimachia latifolia	Pacific starflower	Yes	None	None	85.09, 85.74, 86.67, 86.98
Marah oregana	coast manroot	Yes	None	None	85.09, 88.95
Medicago polymorpha	California burclover	No	None	Limited	85.09, 85.74,86.67, 86.98, 88.95
Mentha pullegium	Pennyroyal	No	None	Moderate	85.74, 86.98
Mimulus aurantiacus	Sticky monkeyflower	Yes	None	None	85.09, 86.98
Mitellastra caulescens	leafy-stemmed mitrewort	Yes	CNPS 4.2	None	88.95
Morella californica	California wax myrtle	Yes	None	None	85.09

Scientific Name	Common Name	Native	Conservation Status	Cal-IPC Rating	PM Location(s) Observed
Myosotis discolor	Forget me not	No	None	None	85.09, 85.74, 86.98
Nemophila parviflora	Small flowered nemophila	Yes	None	None	85.09, 86.67
Notholithocarpus densiflorus	tanoak	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Osmorhiza berteroi	sweet cicely	Yes	None	None	86.67
Oxalis oregana	redwood sorrel	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Pentagramma triangularis	Gold-back fern	Yes	None	None	86.98
Petasites palmatus	Western coltsfoot	Yes	None	None	85.74, 86.98
Phacelia bolanderi	Redwood phacelia	Yes	None	None	86.98
Plantago lanceolata	English plantain	No	None	Limited	85.74, 86.67, 86.98
Poa annua	annual blue grass	No	None	None	85.74, 88.95
Poa pratensis	Kentucky blue grass	No	None	Limited	86.98
Poa trivialis	Rough bluegrass	No	None	None	85.74
Polystichum californicum	sword fern	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Prosartes smithii	Largeflower fairybells	Yes	None	None	85.09, 86.67
Prunella vulgaris ssp. vulgaris	Self-heal	No	None	None	85.74, 86.98
Pseudotsuga menziesii	Douglas fir	Yes	None	None	85.09, 85.74, 86.67, 86.98
Ranunculus californicus	California buttercup	Yes	None	None	88.95
Ranunculus parviflorus	few flowered buttercup	No	None	None	85.09
Rhododendron macrophyllum	California rose bay	Yes	None	None	85.74, 88.95
Rosa sp.	Rose	Yes	None	None	85.74
Rubus parviflorus	Thimbleberry	Yes	None	None	85.09, 85.74, 86.98, 88.95
Rubus ursinus	California blackberry	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Sambucus racemosa	red elderberry	Yes	None	None	85.09, 88.95
Sanicula crassicaulis	Pacific sanicle	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Scirpus microcarpus	Panicled bulrush	Yes	None	None	85.09
Scrophularia californica	Bee plant	Yes	None	None	85.09, 85.74

Scientific Name	Common Name	Native	Conservation Status	Cal-IPC Rating	PM Location(s) Observed
Sequoia sempervirens	coast redwood	Yes	None	None	85.09, 85.74, 86.67, 86.98, 88.95
Senecio jacobaea	Tansy ragwort	No	None	Limited	85.74, 86.98
Stachys ajugoides	Hedgenettle	Yes	None	None	85.09, 85.74, 86.67
Tellima grandiflora	fringe cups	Yes	None	None	85.09, 85.74, 86.67, 88.95
Tiarella trifoliata	Sugar scoop	Yes	None	None	86.67
Tolmiea sp.	Pig a back plant	Yes	None	None	88.95
Toxicodendron diversilobum	poison oak	Yes	None	None	86.67
Trifolium repens	white clover	No	None	None	85.09, 86.98, 88.95
Trillium ovatum	Western wakerobin	Yes	None	None	85.09, 86.67, 88.95
Trisetum cernuum	Nodding oatgrass	Yes	None	None	88.95
Urtica dioica	stinging nettle	Yes	None	None	85.09, 85.74
Usnea sp.	Old man's beard	Yes	None	None	86.67, 86.98, 88.95
Vaccinium ovatum	Evergreen huckleberry	Yes	None	None	85.09, 86.67, 86.98
Vaccinium parvifolium	red huckleberry	Yes	None	None	85.09
Vancouveria hexandra	Northern vancouveria	Yes	None	None	85.09, 85.74, 86.67, 88.95
Veronica serpyllifolia	Thymeleaf speedwell	Yes	None	None	85.09
Vicia sativa	common vetch	No	None	None	86.98
Viola sempervirens	redwood violet	Yes	None	None	85.09, 85.74, 86.67, 88.95
Whipplea modesta	whipplea	Yes	None	None	85.09, 86.67, 86.98

Appendix F. Special Status Species Table

This page left intentionally blank.

Special Status Species, Critical Habitat and Sensitive Natural Communities Potentially Occurring or Known to Occur within the BSA

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
AMPHIBIANS 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 Critical Habitat (CH) Absent	BSA is outside current geographic range. Hybrid zone with *Rana aurora* northern limit is Big River.
Foothill yellow-legged frog	*Rana boylii*	--/SSC in Northwestern California clade)	Creeks or rivers in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge.	Present	The species may disperse within and along edges of Cottaneva Creek and the tributaries leading to Hardy Creek.
Northern red-legged frog	*Rana aurora*	--/SSC	Usually found near ponds or other permanent water bodies with extensive vegetation.	Present	The species may disperse within and along edges of Cottaneva Creek and the tributaries leading to Hardy Creek.
Pacific tailed frog	*Ascaphus truei*	--/SSC	Cool, perennial, swiftly flowing streams in redwood, Douglas-fir, and yellow pine forests.	Present	The species may disperse within and along edges of Cottaneva Creek and the tributaries leading to Hardy Creek.
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	The species may disperse within and along edges of Cottaneva Creek and the tributaries leading to Hardy Creek.
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.	Present	The species may disperse within and along edges of Cottaneva Creek and the tributaries leading to Hardy Creek.

[1] Various buffers define the BSA for different species. A 600-ft buffer was used to define the BSA for all species using aquatic habitats, such as amphibians, reptiles, and salmonids. A 0.25-mi buffer was used to define the BSA for listed birds such as bald eagle, MAMU, and NSO.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
TERRESTRIAL REPTILES 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.	Present	The species may disperse within and along edges of Cottaneva Creek.
MARINE REPTILES 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 suitable habitat within the BSA.
Leatherback sea turtle	*Dermochelys coriacea*	FE/--	Mainly pelagic, but also forages in coastal waters. Nests in Indonesia.	Absent	The BSA is outside 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 suitable habitat within the BSA.
BIRDS 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.	Absent	No suitable nesting habitat.
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 suitable nesting habitat.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
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.	Present	Low potential for the species to nest in redwood and Douglas-fir snags and tops of trees within the BSA.
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.	Present CH Absent	Project BSA contains mature, coastal redwood and Douglas-fir habitat for nesting and nearby coastal water for foraging. The nearest known occurrence of murrelets is approximately 12 miles southeast of the project study area. Nearest critical habitat is approximately 6 miles east of the BSA.
Northern goshawk	*Accipiter gentilis*	--/SSC	Mature and old-growth coniferous and mixed forest stands above 1,000 ft.	Absent	BSA is outside of elevation range for this species.
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.	Present CH Absent	Known to occur in mature forested habitat within BSA at all culverts. Nearest critical habitat is approximately 6.5 miles east of the project study area.
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 suitable nesting habitat in the BSA. Occurrences may be limited to migrants or fly overs.
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	Low potential for the species to nest in cavities in redwoods and Douglas-fir in or adjacent to culvert sites within the BSA.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
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	The BSA is outside the range for this albatross, which begins farther west along the continental shelf margins of the Pacific Ocean.
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 suitable nesting habitat within the BSA.
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.	Present	Low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir.
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 CH absent	No suitable foraging or breeding habitat within the BSA. Nearest critical habitat is approximately 11.2 miles southwest at MacKerricher State Beach.
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 CH absent	No dense riparian multi-layered forests were detected for suitable nesting or foraging habitat within the BSA. Nearest critical habitat is approximately 92.4 miles east along the Sacramento River.
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.	Absent	No suitable nesting habitat detected within the BSA. Occurrences may be limited to migrants or fly overs.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
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 nesting habitat detected within the BSA. 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 nesting habitat within the BSA. Occurrences may be limited to migrants or fly overs.
FISH Chinook salmon, California Coastal ESU	*Oncorhynchus tshawytscha*	FT/-	Ocean and coastal streams.	Absent CH Absent	Not known to occur in any of the drainages within the BSA.
Coho salmon, Southern Oregon/Northern California Coast ESU	*Oncorhynchus kisutch*	FE/ST	Cool, freshwater streams and rivers; requires sand and gravel for spawning. Streams, rivers between Cape Blanco, OR, and Punta Gorda, Humboldt County, CA.	Absent CH Absent	Not known to occur in any of the drainages within the BSA.
Coho salmon, Central California Coast ESU	*Oncorhynchus kisutch*	FE/SE	Cool freshwater streams and rivers, require sand and gravel for spawning.	Present CH Present	Suitable and occupied EFH habitat is present within Cottaneva Creek, approximately 120 feet downstream of the culvert at PM 88.95. Suitable foraging and rearing habitat are present, however spawning habitat is not present.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
North American 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 CH Absent	Not known to occur in any of the culverts or drainages within the BSA, as it is over 1 mile inland, beyond the limit of critical habitat for this species.
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	Not known to occur in any of the drainages within the BSA.
Steelhead, Northern California DPS (pop. 16)	*Oncorhynchus mykiss*	FT/--	Cool freshwater streams and rivers, require sand and gravel for spawning.	Present CH Present	Suitable and occupied EFH habitat is present within Cottaneva Creek, approximately 120 feet downstream of the culvert at PM 88.95. Suitable foraging and rearing habitat are present, however spawning habitat is not present.
Steelhead, Northern California DPS (pop. 36)	*Oncorhynchus mykiss*	FT/SE	California coastal streams south to Middle Fork Eel River. Within range of Klamath Mountains province DPS and Northern California DPS. Cool, swift, shallow water and clean loose gravel for spawning and suitably large pools in which to spend the summer.	Absent CH Absent	The BSA is outside the range of this species.
Tidewater goby	*Eucyclogobius newberryi*	FE/--	On bottom or existing on submerged plants in shallow weedy areas of coastal lagoons and estuaries.	Absent CH Absent	No suitable foraging, rearing, or spawning habitat is present within the BSA.
INVERTEBRATES Crotch bumble bee	*Bombus crotchii*	--/SCE	Open grasslands and meadows. Generalist foragers.	Absent	No Impact. No suitable habitat in project area.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
Western bumble bee	*Bombus occidentalis*	--/SCE	Generalist foragers. Nest in underground cavities and in open west-southwest slopes.	Absent	No Impact. No suitable habitat within the BSA.
TERRESTRIAL MAMMALS Fisher, West Coast DPS	*Pekania pennanti*	FC/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	BSA is outside the range of this species, with the closest known range over 100 miles north in the Klamath Mountains in Del Norte and Humboldt counties.
Pacific marten	*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	BSA is outside the current range of this species (Personal communication, 2020, with Gregory Schmidt, USFWS).
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.	Present	Low potential for the species to roost in basal hollows of redwoods within the BSA.
Ring-tailed cat	*Bassariscus astutus*	--/FP	A mixture of forest and shrubland in close association with rocky areas or riparian habitats. Dens in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests at low to middle elevations. Usually not found more than 0.6 mile (1 km) from permanent water.	Present	Low potential for the species to den in downed logs or basal hollows of redwoods within the BSA.
Sonoma tree vole	*Arborimus pomo*	--/SSC	Coastal forests in mature, old-growth forests of Douglas-fir, redwood, or montane hardwood-conifer species. Prefers larger trees with greater canopy cover and wide limbs to support nests.	Present	Low potential for the species to nest in broken tree tops and base of limbs of Douglas-fir trees within the BSA.
Townsend's big-eared bat	*Corynorhinus townsendii*	--/SSC	Caves, mines, tunnels, large old-growth trees with large cavities, bridges, buildings along coast.	Present	Low potential for the species to roost in basal hollows of redwoods within the BSA.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
Western red bat	*Lasiurus blossevillii*	--/SSC	Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Present	Low potential for the species to roost in basal hollows of redwoods within the BSA.
MARINE MAMMALS 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 suitable habitat within the BSA.
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 suitable habitat within the BSA.
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 suitable habitat within the BSA.
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 suitable habitat within the BSA.
North Pacific right whale	*Eubalaena japonica*	FE/--	Coastal or shelf waters; sometimes deep waters.	Absent	No suitable habitat within the BSA.

Common Name	*Scientific Name*	Status Federal/State	General Habitat Description	Habitat Present/Absent/ Critical Habitat[1]	Rationale
Sei whale	*Balaenoptera borealis*	FE/--	Open ocean whales, not often seen near the coast.	Absent	No suitable habitat within the BSA.
Southern Resident killer whale	*Orcinus orca*	FE/--	North Pacific Ocean. Winter range may extend south to central California. Consume salmon.	Absent	No suitable habitat within the BSA.
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 suitable habitat within the BSA.

Status Definitions:

Federal

-- = No status definition.
FE = Endangered under the Federal Endangered Species Act (FESA).
FT = Threatened under FESA.
FC = Candidate for listing under FESA.
DL = Delisted.

State

-- = No status definition.
SE = Endangered under the California Endangered Species Act (CESA).
ST = Threatened under the CESA.
SC = Candidate for listing under CESA.
FP = Fully protected.
SSC = Species of Special Concern